Associate Students in transition from college to university: a sociocultural study

Julia Fotheringham

(1425741)

University of Stirling

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Abstract of Thesis

It is important to understand students' experience of transition from college to university if institutional and national targets to widen participation in higher education are to be achieved. The Associate Student Project (ASP) funded by Scottish Funding Council, supports dual matriculation for Associate Students. This study explores the sociocultural experience of 23 Associate Students from four Scottish colleges who transitioned as direct entrants into the third year of engineering degree programmes at a post-92 university. Further it illuminates these students' participation in the communities that they encountered during their first year at university.

First the analysis draws from Cultural Historical Activity Theory (CHAT) to offer a system-wide perspective of the ASP enacted in the colleges. This illustrates how the subjects (students) and the sociocultural context co-evolve to meet the object and outcomes of the system. Next, findings highlight the contradiction of being matriculated in both institutions yet the university was largely absent during the college years. Skills workshops position the Associate Students as in deficit and needing support despite being viewed by college lecturers as amongst the most academically able.

The micro-perspective of direct entry students' participation at university is framed by Wenger-Trayner and Wenger-Trayner's (2015) landscapes of practice. Student participants preferred to remain at the periphery, engaging with former college peers at the expense of engaging with new social networks or academic support provided by the university. Findings further suggest that Associate Students' transition to university is mediated as much by spatial mobility and an individual's personal circumstances as it is by transition support.

This study contributes to knowledge about the transition of students from one educational sector to another, and about their engagement as they gain access to university through flexible routes. Without these, some of them would have been unable to go to university at all.

Copyright and Declaration

Copyright

Declaration

I declare that I have composed this thesis myself and that it embodies the results of my own research. Where appropriate, I have acknowledged the nature and extent of work carried out in collaboration with others included in the thesis.

Signed

Julia Fotheringham

(1425741)

Related Publications

Fotheringham, J. & Alder, E. (2012) 'Getting the Message : supporting students ' transition from Higher National to degree level study and the role of mobile technologies', *Electronic Journal of eLearning*, 10(3), pp. 262–272.

Smith, I., Young, H. & Fotheringham, J. (2016) Easing the Learners' Transitional Journey From College To University, *EDULEARN16 Proceedings*, pp. 3444–3453.

Meharg, D., & Fotheringham, J. (2016). Partnership and preparation: a new model of transition from college to university. In *Equality and diversity in learning and teaching in higher education : Papers from Equality Challenge Unit and Higher Education Academy joint conferences*, pp 102–112.

Fotheringham, J. (2019) Assessment as a Key Mediating Artefact for Students in Transition from College to University, *All Ireland Journal of Teaching and Learning in Higher Education (AISHE-J)*, Vol 11, (2)

Presentations

June 2016 - "Potato Heads and Poker Chips: Exploring students transitions from college to university", presentation at BERA Postgraduate symposium

May 2019 – "Transition support for direct entrants to University: welcomed or dismissed?", presentation at Staff and Educational Developers Association (SEDA)

October 2019 – "Making transitions from college to University: how do 'the guys' from college engage with the 'Uni boys' and student life on campus?" Presentation at RAISE conference

December 2019 – "You'll remember we did this last year". Small changes bring big benefits". Presentation at Scottish Higher Educational Developers (SHED) residential conference

January 2020 – "Associate Students' experience of transition: direct entrants and the 'uni-boys'", Keynote presentation at Learning and Teaching Conference at University of Highlands and Islands

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Abbreviations, acronyms and definitions

AS – Associate Student - students who are jointly enrolled at college and University while studying for HN Qualifications

ASP – Associate Student Project - funded by Scottish Funding Council to provide a route to university from college in order to promote widening participation in degree level study at university

BERA – British Educational Research Association

CHAT – cultural historical activity theory - a theoretical perspective adopted in this study to explore the relationship between cognitive development and activity in its sociocultural context.

EQF – European Qualifications Framework for Lifelong Learning - a framework of qualifications expressed as learning outcomes at each of eight levels of proficiency making qualifications more understandable across European countries

ESRC – Economic and Social Research Council

HN(Q) – higher national (qualifications) provide theoretical and practical skills needed for employment at technical or craft level

HNC/D – Higher National Certificate/Diploma

QAA – Quality Assurance Agency - the independent body that monitors and reports on standards and quality in universities throughout UK

SCQF – Scottish Credit and Qualifications Framework - a framework of Scottish qualifications expressed as learning outcomes which enables credit transfer between different educational sectors

SFC – Scottish Funding Council - allocates public funding to universities and colleges in Scotland

SIMD – Scottish Index of Multiple Deprivation - a relative measure of deprivation across small areas (data zones) of Scotland which can show areas of poverty, and highlight inequality of access to resources such as education, skills and employment

UCAS – Universities and Colleges Admissions Service - provides data on applicants and their applications to universities in the UK and on the outcomes of the application process

Key to abbreviations referring to the data set

ASP – Associate Student Project

ASP Students – Associate Student Project student participants

DE Students – Direct Entry students (entering 3rd year at University)

UTSC – University Transition Support Co-ordinator participants

Key to colours used in figures and tables

College

University

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Chapter 1   Introduction and rationale for study

1.1   Graduation from university

Graduating from university is an occasion typically marked by celebration and congratulations. Pictures of triumphant groups of graduates hurling their mortar boards in the air playfully represent the sense of relief, the camaraderie and the optimism that accompany success in higher education. Such a degree of shared optimism is associated with the acknowledgement that higher education benefits society in its production of public goods (Marginson, 2014), and "well-being and economic prosperity" (Smith, 2011, p994). It is also associated with the "universal desire for betterment through education" (Marginson, 2016, p414). There is an expectation that an individual holding a degree can expect superior outcomes across a range of life domains (Sosu, Smith, Santoro, & McKendry, 2018). These outcomes could include greater employment opportunities, higher life-time earnings, (Riddell, 2006) better health and longevity (Barltey, 2017) and even, better marriage prospects (Oreopoulos & Salvanes, 2011).

Given this range of potential societal and financial benefits that may be gained from participating in higher education, efforts to distribute these opportunities equally throughout all groups of society have been described as 'both necessary and morally appropriate' (Harwood et al., 2017, p72). Promoting equality of access to higher education forms a strand of policy, research and debate which seeks to tackle the complexity of a range of interconnected inequalities including housing, health and employment. These concerns are manifest nationally and internationally, contributing to a social justice agenda in which higher education institutions play an essential role (Hall, 2012). Different national and international policies to promote equality in higher education have each sought to reconcile different concerns. For example, in India the focus has most recently been on inequalities relating to caste, in the US racial inequalities have predominated (Burke, 2012), and in the UK and Australia the unequal representation of different of social classes and socioeconomic background continues to be understood as an important source of social inequality in higher education. This study is based in Scotland which since 1800 has had a different education system from the rest of the UK, and a Parliament which since 1999 has had fully devolved education powers. While its focus is shaped by the policies and structures which frame the local context, the findings contribute to local, national and international debates in respect of the opportunities that are made available for students who would otherwise be unable

to access the potential benefits of higher education. The students who feature as participants in this study made their way from college to university in Scotland during 2015 in order to enhance their employment prospects. Specifically, they sought to graduate in order to enhance their prospect of gaining well paid employment in the engineering industry (Section 6.3 provides further information). How did engineering students from four of Scotland's colleges end up in a thesis that draws from sociocultural theory in its exploration of students' transitions?

The Associate Student Project (ASP) is one of the ways of connecting colleges and universities through a process known in Scotland as articulation. Articulation is "the movement of students from Higher National Qualifications (HNQs) at college into second or third year of a university degree" (Scottish Funding Council, 2016a, p1). This is in contrast from the more traditionally understood route of transitioning from school-based qualifications directly to first year of university. At the outset of this investigation it appeared that there was no research evidence looking at this specific articulation route. This was unsurprising given the recency of the ASP initiative, but the absence of evidence provided momentum for this study and for the research questions which are stated in Section 1.3.

Since 2011 I have engaged with groups of students and their experience of transition from a college background into university. Further to making a suite of student-narrated podcasts about the experience of transition from college to university (Fotheringham & Alder, 2012), I became aware of the multifaceted nature of the students' experiences of transition (Jindal-Snape & Ingram, 2013). I was also surprised at the singularity of each person's transitioning experience, both good and bad (Taylor & Harris-Evans, 2016). As a result of that project, I decided to undertake this investigation into student transitions in order to understand more about the complex process of making the transition from college into second or third year of university.

1.2   Route from college to university: Associate Student Project

The ASP enables Scottish-domiciled students to become Associate Students of a university while they are studying for HNQs at college. Associate Students spend either one or two years at college before articulating to university into either the second or third year of an Honours degree. At the end of the four-year period successful students will have achieved both their HNQ and an honours degree. Figure 1 offers an example of a route from college to university, referred to by the SFC as a "2+2-type model of

articulation" (Scottish Funding Council, 2013). Although the students have taken a flexible route to university, they will finish their degrees in the same time as it would take for students who attend University from first year.
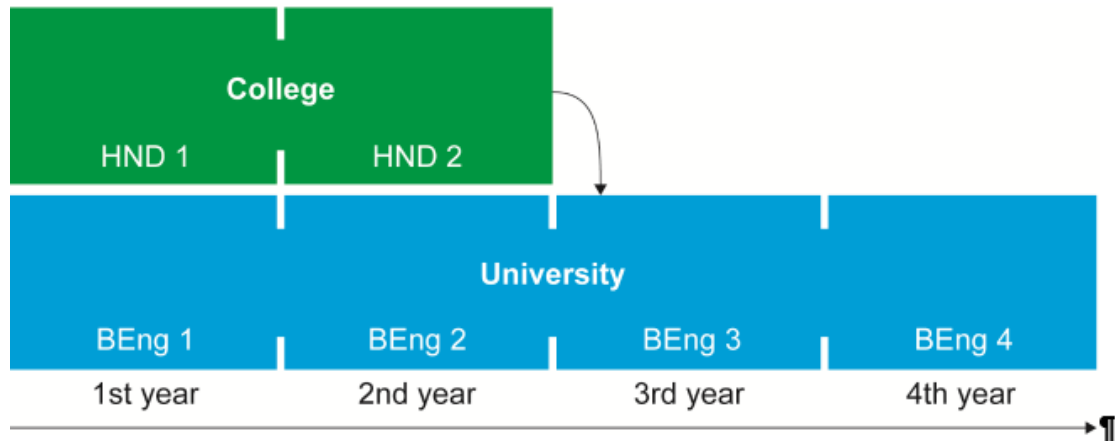
Figure 1 2+2-type model of articulation

1.2.1   ASP and policy context

The Associate Student Project (ASP) was launched in 2012 by the Scottish Funding Council (SFC). In that year (and each year since), the SFC distributed 1020 additionally funded places for students amongst fifteen Scottish universities. The aims of the scheme continue to be threefold:

- To enhance the contribution that articulation could make to meeting national skills needs
- to increase the number of articulating students
- to develop more coherent partnership working between universities and colleges in order to ensure better outcomes for students (Scottish Funding Council, 2016a).

Guidance from the Scottish Funding Council (2013) suggests that this articulation pathway should be felt by its students to be "a university route whilst at college" (ibid., p4). To achieve that experience for students, close partnership between colleges and universities is essential. The Associate Student route is distinct to each university although there are some common features:

- dual matriculation with college and university

- a guaranteed offer into second or third year of study which is subject to entry requirements (typically success at HN level)
- the offer of transition support
- funding mechanisms between SFC, university and their partner colleges.

All participating universities are expected to pass 75% of the funding they receive from SFC for each Associate Student to their partner college. The remaining 25% of allocated funding is to be used for collaboration with college partners and to provide Associate Students with transition support while they are still in college. Decisions are made annually about: the number of places that are available to each college, the degree subjects of the guaranteed offer that Associate Students will receive, and the year of entry to university. The expected benefits of Associate Student status (such as access to library on campus) and any learning and teaching support that the university will provide is also agreed at the start of each academic session. However, at the outset of this project there appeared to be no peer reviewed literature discussing whether the Associate Student Project had met its aims.

The ASP appears to create a normative expectation that HN students should be encouraged to make successful journeys to university through pathways framed by national and institutional policies. Such expectation may shape the ways in which HNQs are perceived by students and employers in future. In 2015, the SFC reported that little was known about the impact of the additionally funded places since data was at that point "largely anecdotal" (Scottish Funding Council, 2016a). This study provides a timely investigation into the Associate Student experience, contributing to the body of knowledge that is needed to inform future policy and practice in relation to flexible routes to university for students who might otherwise be excluded from university.

- Research aims

There were two main aims of this study: to explore and understand the experience of Associate Students' articulation to university, and to explore how former Associate Students participate as direct entrants at university. The study's objectives were thus:

- to engage with related literature in related fields
- to secure access to participants in four colleges and one university to allow an exploration of students' articulation experience

- to adopt a sociocultural approach which expands the research focus beyond the individual students to include their social context and surrounding institutional practices at college and then at university
- to generate data through interviews and object-oriented focus groups from the perspectives of students, lecturers and transition support co-ordinators
- to analyse the data using concepts drawn from cultural historical activity theory (CHAT) (Engeström, 1987) and landscapes of practice (Wenger-Trayner & Wenger-Trayner, 2015).

This project was conducted over a period of six years of part time study as a PhD student, exploring the opportunities for students who, without flexible routes to university, would not have graduated.

1.3   Thesis summary

This thesis is divided into 10 chapters.

Chapter 1 explains the rationale for the research into students from college educational backgrounds who make the transition to university as direct entrants. An overview of the Associate Student Project (ASP) is provided and the research aim and objectives are outlined.

Chapter 2 sets out an overview of policy, with a particular focus on the UK and Scotland, intended to resolve existing inequalities in access to higher education. The contribution of Scotland's colleges and the role of articulation and of the Scottish Credit and Qualifications Framework (SCQF) to the achievement of national and institutional outcome agreements in relation to widening participation in higher education is explained.

Chapter 3 reviews the literature on sociocultural theories and related concepts that are used as analytical devices in the study. Empirical studies of student transition are synthesised and literature on academic literacies as well as pre- and post-entry study support are reviewed. At the end of this chapter, the research questions shown below are discussed in more detail.

Main question	How does the Associate Student Project shape the transition experience of Associate Students from college to University?
1	How do staff, students and artefacts interact at university and college in order to achieve the local objectives of the Associate Student Project?
2	How are transition support practices enacted and valued in the transition space between college and university?
3	In what ways do former Associate Students engage in the landscape of practice as direct entrants into third year at university?

Table 1 Research Questions

Chapter 4 explores the methodology of this study. It begins with an explanation of the articulation routes which connect courses in four colleges with undergraduate study at the University. A rationale is offered for the use of ethnographic approaches, and of the sociocultural theories that frame the study. The ethical considerations which guided this research are presented in this chapter although my ethical stance is heard throughout the thesis.

Chapter 5 presents the research methods. These build on the methodological approaches outlined in the previous chapter and they explain the efforts to avoid positioning students as mere objects of a research study. The first Section (5.2) presents the breadth and scope of the study by introducing the study's participants and the sequence of data generation in the two phases of the study. Section 5.4 sets out and justifies the use of object-oriented focus groups and interviews which deploy creative visual methods. Section 5.3 explains the use of observations and reflects on my own position as a researcher in the field. The final section (Section 5.5) outlines the approach to data analysis and introduces the coding structure.

Chapters 6, 7 & 8 show findings of this project in a temporal structure. In each of these chapters, the quotations for participants, staff and students, are central to the analysis. The set of codes and sub-codes deployed in the analysis is introduced at the start of each of these chapters. Chapters 6 & 7 relate to the first phase of the study while chapter 8 refers to the second phase. The findings in Chapter 6 are organised to correspond with the main elements of the Associate Student Project activity system. The four elements align respectively with the perspectives of subjects (Section 6.2), rules (Section 6.3), community (Section 6.4) and roles and responsibilities (Section 6.5).

Chapter 7 analyses the enactment of the three forms of transition support provided by the university for Associate Students: campus visits, skills-focussed workshops and support enacted in the classroom. The analysis illuminates the different ways in which the three forms of transition support are valued by the various members of the Associate Student Project community.

Chapter 8 analyses findings from the second phase of the study, using concepts from Wenger's landscapes of practice in its analysis. It features findings which characterise direct entrants' interactions with each other and with three of the communities at university: peer group, the rest of the traditional-entry cohort and lecturers. Section 8.2 depicts how direct entry (DE) Students interact first of all with one another in their peer group and then in Section 8.3 how they support one another with their academic activities. Sections 8.3 broadens the analytical focus as it investigates the DE Students' boundary encounters on campus with their classmates who are traditional-entry students. Finally, Section 8.5 presents findings which interpret DE Students' engagement with lecturers and their attempts to seek help from them. The findings from chapters 6, 7 and 8 are discussed in Chapter 9.

Chapter 9 contains the main arguments of the thesis. It draws together concepts from the methodology and material from the literature with findings from the three previous chapters. The structure of this chapter corresponds with the three research questions which frame this study. The first two sections (9.2 and 9.3) address the first research question about interactions amongst Associate Students, their college and the university. Visual representations of these interactions are included (Figure 11, Figure 12 and Figure 13). The next two sections discuss the students' response to the enactment of transition support. The final section relates to the third question about the students' participation at university. It offers a characterisation of their identification with the landscape of practice as ongoing (Section 9.6.1), peripheral, (Section 9.6.2) and marginal (Section 9.6.3).

Chapter 10 states the conclusions. In Section 10.1 answers are offered to the three research questions. Section 10.2 makes recommendations for practice. In Section 10.3, the contribution to knowledge made by this thesis is argued. In Section 10.4 the limitations of the study are discussed and finally, in Section 10.5 further areas of research are suggested.

1.4 Thesis contribution

In order to meet national and international targets to redress inequalities of access to higher education, further knowledge is required which reveals the complexities for students making the transition to higher education from widening participation backgrounds. This study contributes to this field, particularly in relation to the transition of students from one educational sector to another. It offers new insights into the singularity of students' experiences even amongst those who come from the same socioeconomic background and have similar career ambitions. Students' expectations of university, their experience of transition support and their eventual engagement at university are shaped not only by institutional factors such as curriculum and geographical location, but also by their own personal circumstances and commitments at home. There is no doubt that the route through college to university such as that provided by the Associate Student Project shapes the students' experience of transition, but it also gives rise to contradictions which if unresolved may militate against students' achievement of their ambitions. The findings from this study are significant not only to policy makers and practitioners in higher education but also to those who seek to challenge the injustice associated with the under representation of certain social groups in universities.

Chapter 2 Background and policy context – widening participation in higher education

2.1 Introduction

In this section I trace the key developments relating to UK government priorities to widening access to university. Major policy initiatives in the UK and internationally are outlined and their success reviewed. I consider the contribution made by colleges to the recruitment of students from widening participation backgrounds into higher education. The processes involved in articulation between college and university are defined and qualifications frameworks are introduced and critiqued as key mechanisms that enable flexible routes to undergraduate study at university.

2.2 Persisting inequalities of access to higher education

Societal inequalities relating to difference and diversity have been implicated in the uneven distribution of university places throughout the world. This inequality of opportunity leaves certain social groups in society either less well represented, or in some cases entirely unrepresented (Kettley, 2007). The discourse in this thesis refers to these groups as being of 'low socio-economic status (SES)' or 'disadvantaged' or 'non-traditional' or from 'widening participation backgrounds'. In so doing, I recognise that I re-inscribe that disadvantage by stating it (Harwood et al., 2017, p21) but I have found the use of these terms to be unavoidable. The concept of the non-traditional students does not have a standard definition (Gilardi & Guglielmetti, 2011, Trowler, 2015) and has "been used uncritically in the literature for several decades, often as a shorthand marker for those seen as the intended beneficiaries of widening participation-type policies" (Trowler, 2015, p298). Leathwood and O'Connell, (2003) refer instead to 'new students', referring to those from widening participation backgrounds. For the purposes of simple description, I use the term non-traditional students to refer to those whose background is different from the majority going to university. The difference may relate to one or more of the following factors: age of enrolment, ethnicity, socio-economic status, educational background and being the first in their family to attend university. I refer to those who enter university in first year as traditional-entry students irrespective of their background. National governments and international bodies believe that there are strong economic reasons to widen the constituency that higher education serves and to include students from different backgrounds from those that have previously benefited from university education.

Attempts to widen participation in higher education have been prominent in the UK national policy agenda since 1963 when Professor Sir Lionel Robbins and his committee (Committee on Higher Education, 1963) challenged the elite status of national higher education. A significant part of Robbins' investigation was a series of surveys: of students in higher education, of university teachers, and of people born in 1940 – 41. Analysis of the results revealed that members of the professional class were 33 times more likely to enter HE than their counterparts from semi-skilled and unskilled backgrounds (Kettley, 2007). However, institutional and governmental policies which created bridges for certain groups of society and barriers for others were not analysed in that study (Kettley, 2007). Consequently, a full picture of the reasons for such differential participation was never fully drawn. The emphasis instead was upon the potential participants and their characteristics and deficits, rather than on the system of higher education with which these potential students were not engaging. The Committee on Higher Education (Committee on Higher Education, 1963) recommended significant expansion in the number and types of higher education institutions. Robbins' findings indicated that participation in higher education was influenced by social position rather than by academic potential. His findings also introduced the idea that school qualifications on their own are not necessarily effective indicators of suitability for study at university. Willetts' (2013) reflection on Robbins' principles offers commentary on the extent to which the ideals espoused in the 1960s still have resonance for contemporary learning and teaching contexts in universities. He stated that the Robbins report "set the course for British higher education for years to come" (Willetts, 2013, p9). Indeed, Robbins' findings resulted in the establishment of new universities, an increase in student numbers and improved financial support for undergraduates. Moving forward almost sixty years, despite the increase in student numbers and the ability afforded through Universities and Colleges Admissions Service (UCAS) to monitor the socioeconomic and educational background of applicants to university, the central phenomenon of inequality of access to higher education to which Robbins drew attention, still persists (Wolf, Dominguez- Reig, & Sellen, 2016).

Modern widening participation polices in the UK and elsewhere have sought to address such concerns about inequality of access to higher education. In its Education Framework for Action 2030, UNESCO (2015) currently presents education as one of its 17 sustainable development goals (SDG). This goal includes priorities in respect of access, equity and inclusion, gender equality, quality of education and lifelong-learning. The framework recognises education as a public good; a fundamental right and a basis for guaranteeing the realisation of other rights. The European Union's (EU) Bologna

Process refers to the shared pursuit of social justice (Riddell, Weedon & Minty, 2016). National signatories to the process have sought to expand higher education participation rates with a target set in 2010 of 40% for participation in higher education in all EU countries. Yet despite widespread recognition of the value of the economic and social justice arguments associated with addressing inequalities in education, Bologna associated policies are voluntary and not binding. The European Commission's Eurydice Brief (European Commission, 2014) indicates that in Europe few countries have sufficiently developed and implemented policy initiatives, strategies or targets for measuring and improving access to education for people from under-represented groups. Voluntary initiatives, such as Erasmus+ are open to 'third countries' so it may be that in a post-Brexit Europe, the UK may still be able to contribute to the development and monitoring of these initiatives.

Despite international, national and local attempts to increase applications from school leavers to university from socioeconomically disadvantaged people, progress has not been as rapid as governments intended. This source of social injustice persists. The following section discusses the question of who has access to university today.

2.3   Participating in higher education today

UNESCO measures the Gross Tertiary Enrolment Rate (GTER[1]), indicating that currently, worldwide, "one third of the nominal school leaver age participates in higher education" (Marginson, 2016, p414). Not everyone who enrols in tertiary education will graduate or even participate in their course. We can see from UNESCO's data the scale of participation in higher education and the extent to which the social and financial benefits of higher education are sought. It is hardly surprising that the opportunity to attend university is not distributed equally across the globe. In the 30% lowest income countries participation in higher education is very low. There are gaps in the GTER data so a more precise figure is not available. However, there are 60 education systems in the world where GTER exceeds 50% of the school leaver cohort, with South Korea surpassing the global norm at 98.4% (UNESCO 2018).

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[1] Gross Tertiary Enrolment Rate (GTER) counts tertiary enrolment in programmes of two or more years duration

In the UK, since the year 2000, there has been a reasonably steady pattern of increase in university participation (UCAS, 2016). The exception was in the years from 2012/13 and 2013/14 which is understood to be related to the introduction of student tuition fees in England, Wales and Northern Ireland. In 2017, the application rate for young people (this term comprises seventeen, eighteen and nineteen year olds) going to university was 45% in England and 39% in Scotland. UCAS data on the Scottish picture of participation in higher education is incomplete since it does not include data about students undertaking higher education in Scotland's colleges. In 2017 UCAS reported that there were 465,000 young people from the UK who began their first year at University as 18/19 year olds directly from school (UCAS, 2017). An increasing number of other students arrived at University not as school leavers, but from a diverse range of educational and employment backgrounds. These diverse routes to degree programmes create opportunities for those coming from college. These can be for people with completely different experience and qualifications from those that have typically been the entry requirements for university. Of specific relevance to this thesis are students who come to university through Scotland's colleges where they have studied for Higher National Certificates (HNC) or Higher National Diplomas (HND). Colleges in Scotland are distinct from their counterparts in the rest of the UK in their policy context and structures (Cannell & Thomson, 2010,Gallacher, 2009) and in their long tradition of partnership working with universities. In the section which follows, I look at the working of that partnership from the perspective of the Scotland's colleges.

2.4   Colleges' role in higher education in Scotland

The differences in history, culture, purpose and structure between colleges and university systems are expressed in many ways. These include the methods of funding, employment terms for staff, quality assurance mechanisms, entry requirements and learning progression routes for students. Nevertheless, academic systems both in college and university are concerned, at least in part, with developing the skills and knowledge perceived to be necessary for employment and ultimately with economic growth and competitiveness. The election of different governments has brought about major shifts in the policy landscape. Through funding mechanisms and political and employment sector alliances, colleges and universities serve as vehicles for delivering government targets in these policy areas. Despite this, colleges and universities share ideologies and policy discourses in some areas including social mobility, lifelong learning and widening participation. It is the policy area of widening access to higher education which is of particular significance to this study.

In 1993 under the auspices of the "Further and Higher Education (Scotland) Act" colleges in Scotland ceased to be under the management of education authorities. Instead, 43 individual colleges, run by Boards of Management, were established. These remained largely unchanged in terms of governance and infrastructure until the Post-16 Education (Scotland) Act 2013 which introduced a programme of mergers. This established a regional structure of colleges with the intended benefits of better outcomes for students, consolidated provision, and cost savings. As a result of the mergers, Scotland now has 26 much larger colleges, each comprising a network of distributed campuses, organised across 13 regions. Each college provides a blend of vocational and non-vocational tertiary level courses to a wide range of learners, and as such, are "expected to be all things to all people" in their region (Towler, Woolner & Wall, 2011, p502). In their evaluation of the merger process, the SFC (2016b) hailed the initiative as successful. They did however recognise the operational and financial issues still faced by some colleges as a result of the mergers. Despite cautious optimism of Audit Scotland's report on Scotland's colleges (Audit Scotland, 2018), there is evidence consistent with the earlier SFC evaluation (SFC, 2016b) suggesting that although colleges make a significant economic and social contribution, they continue to face economic constraints. These have led to particularly challenging financial circumstances with some colleges reporting deficits. Despite the cuts in funding and the precarious financial circumstances of some colleges, they continue to make a strong contribution to the widening access to university agenda. Blackburn et al (2016) attribute 90% of the growth in entry to higher education in Scotland since 2006, to students entering university from college.

In 2016-17, there were 235,737 students studying in colleges in Scotland (Audit Scotland, 2018). Of those students, around 20% are studying at HE level, mostly for HNC/D qualifications (Audit Scotland, 2018). Higher National Certificate (HNC) and Higher National Diploma (HND) courses offer practical skills and theoretical knowledge in occupational areas, often for employment at intermediate and craft levels. They can also be used as transitioning qualifications (Ingram & Gallacher, 2011) where credits achieved can be used to transfer into second or third year of university, through a process known as articulation. Although this was defined in section 1.1, a more detail definition of this route to university is included here. Articulation is defined by the SFC. as a route whereby a student gains "entry into second year of a degree with a Higher National Certificate (HNC) gained at college, or into third year with a Higher National Diploma (HND) gained at college" (SFC Scottish Funding Council, 2016a, p2). Gallacher (2017) observes a shift in the function of HN qualifications and notes the

increasing number of students using HNs as transitioning qualifications to enable articulation to further study at degree level. He observes that this is not the original purpose for which they were designed (Gallacher, 2017). The ASP provides an example of dual purposing of HND programmes. In this case HNDs in engineering provide the basis for articulation to university into the third year of corresponding degree programmes. The most recently available Destination of College Leavers report (Scottish Funding Council, 2017a) illustrates the balance between learners who use HN for entry to the labour market and those who use it for educational progression. 69% of HN qualifiers progressed to further study compared with 26% entering employment. Colleges therefore appear to make a significant contribution to the higher education landscape in the UK. In 2016-17 HNC/D enrolments in colleges accounted for 28% of all HE entrants in Scotland (Audit Scotland, 2018).

Students participating in higher education in colleges are more likely than university students to be from deprived areas. In 2017-18, students from the 20% most deprived areas in Scotland accounted for 23% of higher education entrants to Scotland's colleges, but for only 12% of higher education institutions (Audit Scotland, 2018). During that same period, (2017-18) 26% of first degree entrants went to university from college (Scottish Funding Council, 2019). This is because the most socioeconomically disadvantaged people in Scotland are more likely to enter full time higher education from colleges than they are to go directly to university (Commissioner for Fair Access, 2017). One of the Scottish Government's intended benefits of the regionalisation of colleges was to improve student outcomes by way of increased opportunities for articulation to undergraduate study at university. This was to be through routes established on the basis of strong partnerships with universities (Scottish Government, 2011). The strategic aim for HN qualifiers to have opportunities to study at university is underpinned by a belief in the economic and social benefits of holding a degree level qualification (Marginson, 2016). This is despite evidence which suggests that for students from disadvantaged backgrounds, the individual benefits discussed in Section 1.1 may not be realised, and the wage increase could be minimal (M David, Bathmaker, Crozier, & Davis, 2009). Accepting that the benefits of higher education may be limited for some graduates, without articulation routes between college and university, these benefits may be even further out of reach. The section which follows explores the policies and mechanisms which support articulation.

2.5 Articulation from college to university

Articulation from college to university lies at the heart of the Scottish Government's ambitions for the "efficient, flexible learner journeys" (Scottish Government, 2011, p13) of the post-16 education landscape. In the paper "Putting Learners at the Centre" which preceded the Post-16 Education (Scotland) Bill of 2013, there were nineteen distinct references to articulation and many of these were preceded by adjectives such as 'effective', 'strengthened', 'coherent', 'successful' and 'guaranteed'. The aim was not just to have more articulation activity, but that it should be linked to positive student outcomes, namely graduation with a three or four-year degree. Prior to 2016, despite efforts to track articulating students (Osborne & McLaurin, 2006, Howieson & Croxford, 2011, and Ingram & Gallacher, 2011) little was known in quantitative terms about the extent of progression from college to higher education in the UK. This was due to the lack of any centralised admissions system for colleges and the absence of a unique identifier to track students in their progression from college to degree level study. But as an example of the progress that is being made supporting articulation in Scotland, the new National Articulation Database (Scottish Funding Council, 2019) is able to report annually on the progression of HNC/D qualifiers to Scottish universities. It also provides detail about the academic credit that students gain from universities for their HN qualifications.

Not all students coming from college with HNs are given offers from their chosen university to begin their undergraduate careers in second or third year. 'Progression' refers to the situation where no academic credit is given for prior study at HN level (Scottish Funding Council, 2016a) but where entry to the course at first year is offered. 'Advanced standing' as this process is known, describes a form of articulation in which full credit is given for prior study at HN level. And 'advanced progression' refers to partial credit being given in recognition of HN study. The first report from the National Articulation Database was published in 2019 (Scottish Funding Council, 2019)), and showed that in 2017/18, 51.4% of college students articulated from college with advanced standing, 10.1% articulated with advanced progression, but 38.5% of HN qualifiers were given no credit for their previous study. This means that students will have been required to repeat at least one year of a particular level of study. Articulation agreements between any university and its college partners stipulate the entry point at which HN qualifiers can enter to the corresponding degree programme. HN qualifiers applying to degree programmes must apply through the UCAS system. At this point, applicants are frequently guided by college staff towards universities that are most

likely to recognise their HN qualification and to offer entry with advanced standing (Gallacher 2017).

In 2008, the SFC sought to further develop articulation activity by establishing five regional articulation hubs. Their remit was not only to grow the numbers of students articulating, but also to strengthen collaboration between partners and to improve outcomes for students. The funding for the hubs, originally intended as a five- year allocation, was extended to eight years. Regional infrastructure and networks between colleges and universities were established with the expectation that partners would continue to work together in order to fulfil the 10-year plan for articulation in Scotland. The plan was to grow articulation activity from 49% of HN qualifiers to 75%. The Scottish Government target for 2019/20 is for 5500 students to articulate with advanced standing, and since that target has very nearly been met (4021 students in 2018) (Scottish Funding Council, 2019) there is room for some optimism in that regard. Not all universities in Scotland engage equally with that percentage of students progressing to university from college. The numbers are differentiated by degree subject and university status.

In the UK, any university's place in the status hierarchy can be described in terms of the date of its founding (Raffe & Croxford, 2015). 'Old' universities established before 1992, commonly referred to as research-intensive, represent a higher stratum. These universities have high entry tariffs which refer to the numerical value assigned to grades that an applicant must achieve for entry to that institution. The new universities (former technical colleges and polytechnics) place less emphasis on research and post-graduate study and were established as the result of expansions or mergers. These newer universities are commonly referred to as post-92 universities (Smith, 2007) and are said to be amongst those that are "perceived to be low status" (Reay, 2018, p531). In Scotland, three groups of universities can be identified because the 'old' universities are further divided into the four elite 'ancients' which were established before the year 1600, and the 'olds' established in the late 1960s following the Robbins report (to which I referred in Section 2.2). This latter group emphasise the recruitment of "younger traditionally qualified" applicants (Gallacher, 2009, p397). The third group comprises the post-92 universities which attract a higher proportion of working-class and mature students than the other two categories (Blackburn et al., 2016). College students with HNCs and HNDs are an important source of applicants to post-92 universities (Gallacher, 2009), and although degree programmes in most subjects are available at these institutions, there are still some subjects such as medicine, dentistry

and some modern languages which are available only at the older universities (Raffe & Croxford, 2015). In a study of employers in England, Morley and Aynsley (2007) conclude that the stratification of universities is reproduced in employment opportunities. For the most prestigious employment opportunities, employers favour graduates from elite universities on the basis of their reputation, performance in league tables and also on the basis of "prejudice against new universities" (Morley & Aynsley, 2007, p229).

These distinctions between the status various universities and the employer perceptions of them are significant in understanding the experience of students coming from college. In Scotland, 70% of those coming from college go to the post-92 universities and only 7% gain access to the ancient elite universities (Gallacher, 2017). These differentiations amongst Scottish universities amplify the inequalities which play out for their students. From the above it would appear that despite more than 50 years of successive government and policy initiatives, the opportunity to attend a university, and particularly an elite university, is still distributed unequally throughout the population (Sosu et al., 2018).

Articulation between colleges and university in Scotland depends upon educational institutions and students understanding the relationship between the qualifications that can be gained in different educational sectors. The Scottish Credit and Qualifications Framework (SCQF) serves as a mechanism which enables connections to be made between HNQs and degree programmes by making their similarities and differences more transparent than would otherwise be the case. The SCQF is one amongst many other national and international examples of qualifications frameworks.

2.5.1   Scottish Credit and Qualification Framework (SCQF)

National qualification frameworks are both political and social constructs whose purposes vary between countries according to national political agendas and priorities. For example, some of the earliest and most embedded qualifications frameworks are in Australia, England, France, Malaysia, New Zealand, Scotland and South Africa. These were developed in response to perceived weaknesses in education and training (Raffe, 2011). In Scotland, the Scottish Credit and Qualifications Framework (SCQF) also serves as a leverage for lifelong learning and social mobility. In the context of the study outlined in this thesis, it is of central importance as a mechanism with the potential to widen participation and improve access to higher education.

The SCQF is expressed in terms of three categories of qualifications, credit points and twelve levels of study. Level 1 is the least complex level and level 12 is the most advanced level of study. The levels are based on a set of descriptors which outline "what learners should be able to do or demonstrate at a particular level" (SCQF, 2012, p2). The three qualification categories are Scottish Qualifications Authority (SQA) qualifications (typically gained at school and college), degree level study (typically, but not exclusively gained at university) and workplace qualifications such as apprenticeships and SVQs (awarded by employers, professional bodies and community learning organisations). Credit points indicate the average time taken to complete a qualification. Table 2 SCQF and EQF levels, years and places of study (adapted from Smith, Young & Fotheringham, 2016)

 (below) draws from the SCQF's own representation of the relationship between qualifications and levels of study in order to provide a more contextualised view of the engineering qualifications involved in articulating from college to university. It also illustrates how the SCQF aligns with the European Qualifications Framework, although given the wording which defines each of the levels in the two different frameworks, the matching is not exact (SCQF, 2019). The Table (below) shows the level of study, the corresponding stages in each programme of study, and the place where that year or stage of study is typically undertaken.

EQF level	SCQF Level	Year or stage of study	Place of study
1–2	1–4	Senior year 1 – (4th year)	High (Secondary) School
3	5	Senior year 5 – (5th year)	High School
		Foundation apprentice year 1	College provision in High School
4	6	Senior year 6 – (6th year)	High School
		Foundation apprentice year 2	College provision in High School
5	7	HNC or HND 1	College
		BEng or MEng 1	University
	8	HND 2	College
		BEng or MEng 2	University
6	9	BEng or MEng 3	University
	10	BEng or MEng 4	University
7	11	MEng 5 or MSc	University

Table 2 SCQF and EQF levels, years and places of study (adapted from Smith, Young & Fotheringham, 2016)

Levels 7 and 8 represent opportunities for articulation where a student can move from college to university without any loss of time. The representation of qualifications in Table 2 SCQF and EQF levels, years and places of study (adapted from Smith, Young & Fotheringham, 2016) (above) makes it possible for its stakeholders (educational institutions, employers and students) to talk about how different qualifications and levels of study correspond with one another. However, it does not take any account of how the same levels of study are enacted differently in the different sectors. Further, it does not examine the assumptions about learning transfer which underpin the assertion that what is learned in one year of study can unquestioningly be brought into play at a different institution.

In the context of this study, the focus is on the transition of students from HND level study at college (levels 7 & 8 as shown in Table 2 SCQF and EQF levels, years and places of study (adapted from Smith, Young & Fotheringham, 2016)) to undergraduate study as direct entrants to third year at university (levels 9 & 10 also show in Table 2 SCQF and EQF levels, years and places of study (adapted from Smith, Young & Fotheringham, 2016)). Unit statements and outcome descriptors that make up the HND framework are referred to by Bloomer (1997) as the prescribed curriculum. The logic of the SCQF infers that for all students following a particular HND programme, in other

words a common prescribed curriculum, learning is assumed to be equivalent. Miller, Edwards, & Priestley (2010) challenge the assertion of learning equivalence at different sites, given the degree of translation and contextualisation in the classroom during the teaching and learning process. They (ibid.) use the term the 'enacted curriculum' to refer to the texts, tools and teaching practices which are brought to bear in the classroom and beyond as students are taught in college and in university. For learners planning a pathway up through the levels and across the qualification types of the framework, the transition from one type of qualification to the next looks logical and reasonably straightforward. But the simplicity of the SCQF (as presented in Table 2 SCQF and EQF levels, years and places of study (adapted from Smith, Young & Fotheringham, 2016)) conceals the complexity of activity as learners move across the boundaries which both separate and conjoin the different sectors. The routes between sectors take no account of the fact that curriculum may be enacted differently in different academic contexts even within the same sector. So, even though learners from two different colleges have achieved the same HN qualification, and progress to the same undergraduate degree programme, they may present with very different experiences of higher national study. This may affect their practice as students. The prescribed curriculum (Bloomer, 1997) articulated in the framework as a qualification in terms of learning outcomes and credits, takes no account of the fact that the enacted curriculum is known to vary between classrooms across different sites (Edwards, 2011) and even between different teachers or lecturers on the same course. Furthermore, the expectation that a student achieving their intended academic outcomes as they transfer from one level in the SCQF chart to the next is informed by an individualistic cognitive-psychological view of learning transfer (Tuomi-Gröhn & Engeström, 2003). In this thesis I suggest that the transformation of knowledge, skill and identity across different social systems cannot be fully understood by taking such a narrow view of cognition (Beach, 1999). Instead, the focus in this study is on the social, cultural, historical and situative nature of transition. With this perspective we see that students' knowledge is embedded in particular situational contexts. Within this social construction of learning, the individual is seen as a participant in social practices where they interact with others and with the materiality of activity systems (Akkerman et al., 2007). Taking this view of learning into the transition space, I explore how learners at college develop their practice to become undergraduate students in the third year at university.

The SCQF may be understood as a mechanism which facilitates articulation. In so doing, it supports the achievement of targets for widening participation to higher

education. Outcome agreements which specify the contribution that each institution must make to these targets will be discussed next.

2.5.2   Outcome Agreements

Every university and college in Scotland, irrespective of its size and status is expected by Scottish Government to contribute towards Government targets for widening access to higher education. These targets include:

- By 2030, students from the 20% most deprived backgrounds should represent 20% of entrants to higher education. To drive progress toward this goal our aspiration is to achieve 15.5% by 2019-20 (CoWA,2016)
- By 2030, students from the 40% most deprived backgrounds should represent 40% of entrants to higher education.
- By 2021 students from the 20% most deprived backgrounds should represent at least 10% of full-time first degree entrants to every individual Scottish university (CoWA,2016)

To put these targets into their Scottish context, the Scottish Indicator of Multiple Deprivation (SIMD) is used by the SFC to report on student retention and success from neighbourhoods with low participation in higher education (Fernie & Pilcher, 2009). Indicators of multiple deprivation can provide an analysis of inequalities which illustrate that at local level, reinforcing factors such as income, health and housing are largely predictive of continuing socioeconomic disadvantage. SFC's targets for widening participation in higher education are expressed in terms of participations from SIMD 20 and SIMD 40 which means the requirement to recruit students into college and university from the 20% and 40% most disadvantaged areas of Scotland (Scottish Funding Council, 2016c). The rest of the UK uses the Participation of Local Areas indicator, known as POLAR and which is expressed in terms of five quintiles of deprivation (Riddell & Weedon, 2018). The Higher Educational Statistics Agency (HESA) uses this measure to provide reports equivalent to those of the SFC on the success of socio-economically disadvantaged students in their annual statistical report. A child who is born in one of the most disadvantaged geographical post codes in the UK will – and there are always exceptions - have less access to the resources which are vectors of opportunity and which could lead eventually to educational achievement (Tonks & Farr, 2003, and Danesh et al., 1999). A university's outcome agreement will be couched in terms of the contribution that their institution will make towards the

national targets in relation to access and retention of students from the most deprived areas, and also in respect of the Government's vision for a 'smarter, fairer, wealthier and greener Scotland' (Scottish Funding Council, 2018b, p1). Universities with the lowest rates of participation from students in the most deprived areas are the ones which are the least dependent on the teaching grants from the SFC. Consequently, the possibility of the SFC's claw-back of funding which could arise if a university did not meet its funding conditions (set out in the outcome agreement) would have far less impact on those universities which already engage in the least articulation activity (Liddell & Macpherson, 2013). But in the recent report which summarises progress towards the achievement of universities' outcome agreements, the Government noted that the responsibility for widening access and reducing barriers to higher education is a responsibility for all institutions, rather than "a niche activity for a few" (Scottish Funding Council, 2018b, p5).

The post-92 University referred to in the study outlined in this thesis has made a strategic target to recruit 13% of its students from the most disadvantaged areas of Scotland. It has a closely related target in its outcome agreement with the SFC. The Associate Student Project outlined in Section 1.2 is an example of the University's efforts to meet its targets by recruitment of students from college, giving their HND qualifications full recognition and by offering direct entry to the third year of undergraduate programmes.

2.6 Chapter summary

This Chapter has provided a background to the national and international interventions for widening access to higher education which have particular bearing on this thesis. Understanding the issues associated with widening access to higher education is not just a matter of improving opportunities for people to attend university at all, but it is also concerned with which institutions offer places to students, on what degree courses and how long the students spend on their journey to graduation. Scottish Funding Council targets are driving individual institutional efforts to encourage students from widening participation backgrounds to participate in university. Articulation plays a significant role in achieving these targets. Understanding student transitions and the challenges that students from widening participation backgrounds experience provides an evidence base for guiding policy and practice. The review of the literature in the chapter which follows synthesises studies where further research will make a useful contribution to the scholarship and practice relating to student transitions.

Chapter 3   Focus on student transitions

3.1 Introduction

In this chapter I review literature on theoretical perspectives and associated concepts aligned with student transitions in higher education. I focus, although not exclusively, on students from widening participation backgrounds and the work of the most widely cited scholars in the area. These are not always the most recently published. I carried out two separate literature searches each using the following databases: ERIC, British Education Index, PsychInfo, Education Abstracts and Educational Research. The key search terms that I used for the first search were 'widening participation', 'higher education' and 'transition' (plus alternatives for each of those terms), and for the second, 'student engagement', 'widening participation' and 'higher education' (plus alternative terms). I limited both searches to titles and abstract fields, and to dates in the period 1992–2019. For the first search I had 476 results and the second 132. I exported all sources into Mendeley (a digital reference manager) where I subdivided the papers into topic folders for ease of reference. Additionally, I followed up citations in papers and books that I have read throughout the years of scholarship that I have undertaken since the start of my PhD programme of study.

Section 3.2 introduces models which offer overarching ways of thinking and discussing students' transition and Section 3.3 explores key theoretical perspectives on student transitions. The challenges of researching students from widening participation backgrounds at university are explored in the empirical studies critically discussed in Section 3.4. The theme of student deficit surfaces in several areas in this review and is taken up in Section 3.5 on academic literacies and in Section 3.7 on university-led transition support. Concern about student retention underpins institutional efforts to manage students' transitions, particularly into first year and this forms the focus of Section 3.6. Section 3.8 identifies the contribution of this current study to the scholarship on students who are making the transition from one educational sector to another, and it also states the research questions which frame the study. Finally, Section 3.9 summarises the key concepts that form the conceptual framework of this study.

3.2 Models of student transition

There is widespread debate about the best way to understand and enable transitions, with different disciplines prioritising distinct aspects of the process. For example, in the field of psychology, transition studies focus on dissonance, identity and challenges to the self-concept, whereas in the field of change management the focus is upon the links between agency, structure and managing individuals' experiences (Fenwick, 2013). Models of transition provide a general overview of different perspectives on transition and they provide a useful starting point for this chapter prior to investigating in far more depth the theoretical concepts associated with sociocultural views of students' transitions (which are explored in Section 3.3).

3.2.1 Tripartite structures – a linear process

Van Gennep's focus was on the movement of people between age related transitions such as boyhood to manhood when he identified a three stage structure; separation (passage out of a previous phase), margin (an ambiguous time and space between fixed positions) and aggregation (re-entry in a new social position or period). The imprint of this tripartite structure, the anxious state and the conception of liminal spaces can be seen to underpin many contemporary accounts of life-course transition (Bridges 2004, Ecclestone et al, 2010) and of students' transitions into first year of university (Farenga, 2018). Cheng et al. (2015) provide an overview of six cognitive models of students' transition to university, three of which reflect Van Gennep's three-staged process of transition. They use stages as a way of understanding how new students make a developmental and transformational passage from the familiar to the unknown environment at university. The students' journey in these models is initially portrayed as a honeymoon phase (Risquez, Moore & Morley, 2008, Menzies & Baron, 2014) during which time students are excited and optimistic about the new environment, then follows a period of shock or liminality characterised by feelings of disillusionment, and even loss typically associated with a changing social environment and unfamiliar academic demands (Gale & Parker, 2014, Christie et al., 2008, Krause & Coates, 2008). Heightened levels of anxiety and stress at this stage can be understood in terms of students' recognition that their identity which was viable in their previous context, does not transfer to the practices and expectations of the new one (Ecclestone, 2009, Reay, Crozier & Clayton, 2010). The third stage is characterised as a period of adjustment during which time students become more motivated and develop new learning routines and a 'renewed sense of purpose' (Cheng et al., 2015, p9).

Models of transition which are presented as distinct stages depict transition as a one-time linear process. Students are represented as navigating institutional norms while also taking account of the "the processes of 'being' and 'becoming' "(Ecclestone, 2009, p12) a student. There is an implication that students establish one coherent student identity, whereas literature which investigates the widening participation students' experience at university suggests that this group constructs "multiple identities" (Ecclestone, 2009, p13). These identities struggle for predominance at different points in time and in different contexts such home, university and employment.

3.2.2   Transition as becoming, involving multiplicity of identities

Lawrence (2009) focusses on literacies and discourse rather than on identities, taking forward multiplicity as a central idea in the process of transitions. Her "New Learning Framework" (Lawrence, 2009, p109) depicts the students' new learning context as dynamic and embodying "a multiplicity of discourses/literacies". This view positions transitions into higher education as 'a journey of gaining familiarity and ultimately mastery of these discourses and literacies'" (Lawrence, 2009, p108). Taylor and Harris-Evans (2016) argue that concepts from Deleuze and Guattari, (assemblage, rhizome and becoming), enable a conception which emphasises transition as a different sort of becoming than that portrayed in the tripartite, staged process models described in the previous section. Gravett (2019) takes forward Taylor and Harris-Evans' (2016) discussion about transition as 'becoming', rejecting the dominant discourse which sees transition as a homogenous linear process during which all students eventually arrive at a fixed point. Gale and Parker's (2014) typology of conceptions defines 'transition as becoming' in terms of its being "a perpetual series of fragmented movements involving whole-of-life fluctuations in lived reality or subjective experience" (ibid., p4).

Instead of the "forward-moving conveyer belt", (Taylor & Harris-Evans, 2016, p3) associated with the developmental phases of transitioning, Taylor and Harris-Evans' (ibid) conception of transition is far more fluid, individual and unpredictable: "their becoming-other through self-differentiation is a praxis of becoming, a materialisation and sedimenting of time in a process of iterative becoming" (Taylor & Harris-Evans, 2016, p10). Transition from this perspective is one that involves the whole of a person's life rather than one confined to the new learning context, and it also involves contradictions involving becoming and unbecoming. Taylor and Harris-Evans (2016), Lawrence (2009) and Gravett (2019) offer perspectives on transitions that start from a position which recognises learners as being experienced and competent within their own communities. Furthermore, they recognise that transition to university is only one

aspect of an individual's identity and that in order to understand student transitions, it is necessary to understand the individual experiences of students.

This is the perspective that I have taken in this thesis where the first phase of data generation took place in the students' original community where I took time to explore practices in that context. The findings from that phase are explored in Chapter 6 and Chapter 7.

3.2.3   Transition as time-bounded and developmental

Large scale quantitative studies provide a national picture of students' transition and engagement in their first year at university. Kraus and Coates (2008) from the USA discuss engagement scales which enable institutions to establish a pattern of student engagement across a range of dimensions. The transition engagement scale (one of the seven explained in this paper) prioritises three dimensions of transition, two of which relate to institutional practices, and a third which takes a psychosocial perspective. The first dimension is connecting students to people and services to support their learning, the second is course advice and student decision making regarding subjects and units of study. The third is student identity and the question of whether their expectations of university have been met. Transition is seen as both time-bounded and developmental, unfolding throughout the first year.

Many first year transition studies acknowledge the contribution of Tinto's (1993) Longitudinal Model of Departure (McGhie, 2017, O'Donnell, Kean & Stevens, 2016, Holmegaard, Madsen & Ulriksen, 2014, Briggs, Clark & Hall, 2012, Scanlon, Rowling & Weber, 2007, Flaga, 2006, Wilcox, Winn & Fyvie-Gauld, 2005) which provides a way of conceptualising the relation between institutional efforts to support students' transition, students' efforts to integrate into the academic and social community, and the pre-entry attributes (such as family background, abilities and prior schooling) of the student. Tinto (2006) acknowledges the limitations of the earliest versions of his model and its relevance to the larger and more diverse student cohorts making their way to university than had been envisaged when first he began to address questions about student attrition during the 1980s. He acknowledges that his model, with its emphasis on student engagement in campus-based activities organised by the university, were relevant to a largely residential student population from more advantaged backgrounds, noting also his failure to emphasise the significance of informal interactions with academics within the classroom (Tinto, 2003). Further criticism, such as the concept of social integration having been insufficiently explained (Berger & Braxton, 1998), has

not prevented his model from being recognised as the point of departure for the very rich seam of literature which emphasises the importance of students' sense of belonging and engagement in the first year transition (Maunder, 2018, Tett, Cree & Christie, 2017, Bryson, 2014, Taylor, 2012, O'Donnell & Tobbell, 2007, and Reay, 2002).

The models of transition outlined in this section provide an overarching view of transitions which support general understanding, but some models promote a stereotypic understanding of student transitions (Gravett, 2019) which belies the complexity and singularity of student transitions. The theoretical concepts introduced in the next section are drawn from sociocultural perspectives which offer conceptual tools that enable a far more detailed analysis of transitions.

3.3   Theoretical perspectives on student transitions

3.3.1   Learning transfer

Learning transfer is a concept that has been used to describe how something learned in one context is applied in another. The focus of this study is on students' transitions from studying Higher National qualifications in college to an undergraduate degree programme in university, so ideas associated with learning transfer are of particular significance in this study. Literature relating to theories of learning transfer can be traced back to the very early twentieth century when Thorndike and Woodworth (1901) were amongst the first to re-examine long held assumptions about the value of different learning experiences and their potential to enable the transfer of learning into other environments. Thorndike's research is said to have been one of the earliest challenges to the 'doctrine of formal discipline' (Tuomi-Gröhn & Engeström, 2003) which held that studying subjects such as Latin and geometry improved students' minds by making them more logical and disciplined. Instead, Thorndike's cognitive-psychological view of learning transfer asserted that transfer depends on mental faculties such as memory, attention and judgement and that when in the presence of 'identical elements' learning transfer can take place almost automatically. Thorndike's studies represent some of the foundations upon which layers of educational history, practice and research have built, although contemporary situative and socio-material perspectives commonly adopted in educational research render Thorndike's individualised and purely cognitive views of learning outdated. Nevertheless, Thorndike's work is included here because it represents an important starting point upon which modern perspectives are built and there are still glimpses of these earlier ideas about learning transfer embedded in

interventions designed as pre-entry preparation for university study. An example of this can be seen in Section 7.3 which outlines academic skills workshops that were delivered to college students by way of preparation for their transition to university; a transition that would take place the following year.

Tuomi-Gröhn and Engeström (2003) provide a categorisation of current perspectives on transfer which are useful in this section because they exemplify the broad range of ideas which share the use of 'transfer' as a common metaphor. All of these describe a process of transition that may be more complex and less easily packaged than their compact summary suggests. First of all cognitive views of transfer offer schema which represent how information is organised in the memory. Dispositional theories are included in this category and these prioritise students' dispositions as key influences on whether or not what has been learned will actually be applied when the situation calls for it. Secondly, situated views of transfer draw the focus from the individual learner and place it upon the learning context and the patterns of participatory processes which are enabled by the environment. Thirdly, sociocultural conceptions which underpin this study provide a relational understanding of learning transfer in which the learner is enmeshed in the context, creating it and being shaped by it. This current study adopts sociocultural perspectives to analyse how students learn as they engage in social practices within their community and by working with resources that are embedded in specific practice settings (Ellis, Edwards, & Smagorinsky, 2010) such as are found in college or at university. These are discussed in more detail in sub-section 3.3.3.

Activity theoretical perspectives position learning transfer in the context of a collective activity system in which the individual's learning and engagement with the activity system give rise to contradictions which result in a change to that system (Tuomi-Gröhn & Engeström, 2003). Most of Tuomi-Gröhn and Engeström's accounts of learning transfer described above, prioritise the new context, 'the aggregation' to use Van Gennep's structure. This contrasts with Bransford & Schwartz (1999) whose focus is on the value of the initial learning experiences and the extent to which these enable learning transfer. Identifying evidence of learner transfer, or lack of it, is difficult. Bransford and Schwarz (1999) observe that literature on learning transfer is not sufficiently differentiated between direct application of learning, and preparation for future learning. Studies which try to identify the extent to which a learner can apply what they have learnt in a new situation (direct application) are more prevalent than those which focus on what has been learned previously (original learning). The study outlined in this thesis contributes to that latter category being one which seeks to

understand to what extent and in what ways students and their lecturers perceive the students' learning experiences in college have prepared them for university study. Similarly, Christie et al's (2006) small scale qualitative study explores how well undergraduates' previous study at college has prepared them for the learning, teaching and assessment regimes at university. Christie (ibid.) acknowledges that since she relies on the students' retrospective account of their learning rather than engaging with them in situ the study may therefore be subject to recall bias, however the expressed views still offer valuable insight into the students' experience.

Most studies of student transitions are qualitative, and Pampaka states "what seems to be missing is a serious engagement in the measurement of transition" (Pampaka, 2012, p1045). The design of quantitative studies which seek to measure learning transfer and the extent to which what was learned previously can be applied in the future, vary in their breadth, scope and depth. Brooman and Darwent (2014) measured changes in factors such as self-efficacy, autonomous learning and social integration. Their small-scale study was conducted in a single university with one cohort of law students surveyed in the first and fourth weeks of their first semester. Their study contrasts with Pampaka (2012) who drew a sample from students studying in STEM subjects in five universities in the UK and surveying them at three points over a two year period. Although these studies both seek to measure the outcomes of learning transfer, they do not articulate their conception of learning, although they resonate with the transfer metaphor with its overtones of one time one direction (Hager & Hodkinson, 2009), rather than with the concept of boundary crossing which reflects continuing interactions involving a multiplicity of participants (Akkerman & Baker, 2011). Establishing and measuring transfer of learning is, then, a hugely complex task.

3.3.2 Boundaries

Tuomi-Gröhn and Engeström (2003) suggest that 'boundary crossing' is a useful way to understand what I have until now referred to as learning transfer. Boundaries are not conceived of in sociocultural contexts as geographical or institutional phenomena. Rather, a boundary is a dynamic concept which delimits practices amongst those who have a shared history and understanding of what matters in their joint enterprise (Wenger, 2010). A boundary in sociocultural terms leads to "discontinuity in action or interaction" (Akkerman & Bakker, 2011, p133). In my study, the boundaries between college and university are simultaneously institutional, geographical and, for those who cross them, they represent a sociocultural transition. The concept of boundaries is closely associated with Cultural Historical Activity Theory and with situated learning

theory on communities of practice (Akkerman & Bakker, 2011). These perspectives together form the overarching conceptual framework of this study. A discussion of sociocultural conceptions of transition follows and this includes CHAT. This is followed by a section on communities of practice.

3.3.3   Sociocultural conceptions of transition – activity systems

In this sub-section I explain how activity systems are understood theoretically, and I provide examples from the literature of the use of activity systems in educational research. A further discussion of Cultural Historical Activity Theory and its application in this study is provided in Section 4.4 (Chapter 4 Methodology).

Sociocultural theories of transition illuminate the relationships between human thought and action, and the historical social and cultural situations in which the action occurs (Wersch, del Rio, & Alvarez, 1995). Bruner (1990) explains the sociocultural gaze on activity in another way when he asserts that 'culture and the quest for meaning within culture are the proper causes of human action' (Bruner, 1990, p20). At the heart of this relationship between cognition and culture lies the mediational role of signs and symbols, introduced as a concept by Vygotsky in series of lectures in the 1930s in Leningrad, Soviet Russia (Vygotsky, 1978, Daniels, 2012). The study outlined in this thesis adopts a sociocultural perspective which is based in Vygotskian thinking.

Cultural historical activity theory (CHAT) is a sociocultural theory which provides a method "for researchers to understand and describe the interaction between individuals and the environment in natural settings" (Yamagata-Lynch, 2010, p ix). In Postholm's (2015) exploration of methodologies within CHAT she asserts that "CHAT and socio-cultural theory … have the same origin, with both theories emphasising development and learning in social settings" (Postholm, 2015, p43). Whereas Vygotsky's focus was on complex mediated acts of individual subjects, CHAT's emphasis is on collective activity and shared objects of motivation. The development of CHAT may be distinguished in terms of three theoretical generations; Vygotsky's individual focus is the first generation, then Leont'ev (1978) and colleagues introduced the second generation which differentiated between an individual and collective focus on activity. Finally, Engeström's (1987, 2000) developed the third generation in which the basic model includes two interacting activity systems.

Activity systems are the foundational unit of CHAT which conceives of an activity system as the interrelationship, over time, amongst six core components. These are

typically represented in the literature as a multi-level triangle in which all of the components are influenced and shaped by each other. Figure 2 provides an example of an activity system design heuristic. The first three elements which feature in the top triangle represent Vygotsky's subject-object relation mediated by tools (Daniels, 2001). These elements are; subject (e.g. student), object (the orientation of collective action towards the desired outcome such as the accumulation of academic credit), and mediating artefacts (employed by the subject to act on the focal object such as lectures, classrooms, handouts). The components along the base of the triangle represent the socio-historical component that shapes the mediated activity in the triangle above. These bottom components are; community (people who share interests with the subject and involvement in the same object), division of labour (what is being done and by whom in relation to the object) and rules (which may be formal or informal and which regulate the subjects' actions towards an object). Figure 2 represents an activity system which is adapted from Engeström, 1987 showing the mediated relationship between the subject and object and the interaction amongst all of the components.
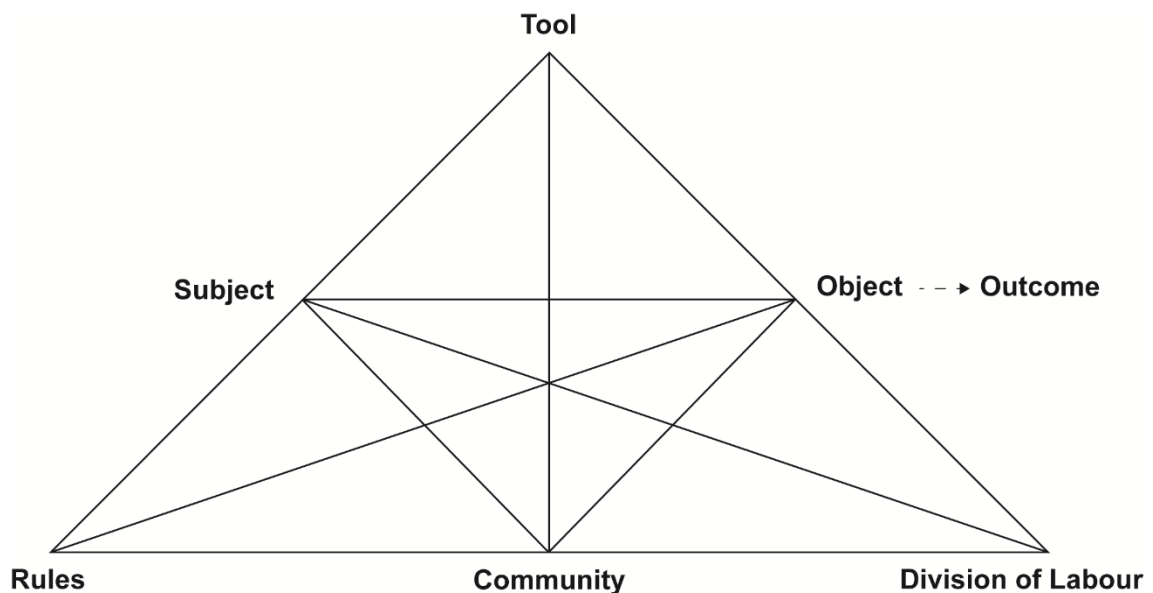
Figure 2 Activity system adapted from Engeström (1987)

The components all shape one another giving rise to a dynamic and contradictory set of relations. Researchers identify tensions in activity systems as being "when elements from one or more components pull the participants away from fulfilling the activity purpose" (Yamagata-Lynch, 2007, 456). Contradictions exist within and between human activities, and are said by Engeström, 2001 to be key to understanding the

process of human learning and development. I now provide two examples of empirical research that have deployed the use of CHAT in educational contexts, first Barab et al. (2002), then Yamagata-Lynch and Smaldino (2007).

Barab et al. (2002) used activity systems to understand the transition of undergraduate students' understanding of astronomical phenomena as they learned how to construct and use 3-D virtual reality (VR) models of solar systems. The subjects (students) in that study work together with teachers (members of the classroom community) on the modelling activity in a participatory learning environment. Barab et al. (2002) generated data through video footage, observations and interviews of students using VR modelling equipment and of conversation with their teachers over a two year period. His analysis identifies tensions which shape the development of the students' activity. First, tensions emerge between members of the community (professors) who see time spent by the subjects building the VR model as taking time away from the object, which is to develop understanding about astronomical phenomena. Secondly, tension was identified between teacher-centred pre-specified instructions intended to support students' learning and student-directed emergent learning that is a key characteristic of a participatory learning environment. There are some parallels that may be drawn between Barab et al. (2002) study and my own. Both studies use CHAT in an educational context where students are theorised as the subjects of an activity system, and where data is generated over two years using ethnographic approaches. Both make tensions and contradictions visible through analysis and these provide a focus for discussion and conclusions.

Yamagata-Lynch and Smaldino (2007) conducted a longitudinal study over two years, with an overarching aim to investigate how activity systems analysis can be applied to improve practice. They developed a communication tool based on the elements of CHAT, for evaluating, planning and implementing school and university partnership activities. By using the components of the activity system, they were able to identify and understand the systemic tensions that gave rise to contradictions during partnership activities. This enabled them to propose strategies which would improve partnership working. Yamagata-Lynch and Smaldino (2007) and Barab et al. (2002) both use CHAT and together they demonstrate how the results from activity theory research can have both research and practical implications (Yamagata-Lynch, 2010)

Beach (1999) proposes the concept of consequential transitions which explains how active construction of new knowledge involves the transformation (as opposed to

transfer) of something which has been learnt elsewhere, resulting in the development of identities, new ways of knowing and of positioning oneself in the world. Four types of consequential transition are identified by Beach (1999); lateral (predictable or desirable movement between two historically related activities), collateral (movement between historically related activities, but not necessarily developmental), encompassing (changing participant's activities, but within the same boundary) and mediational (simulated involvement in an environment that has not yet been experienced).

Beach's (1999) interpretation of transfer moves the discussion from being one about the individual and their cognitive development to one that is about relations between activity systems, such as those encountered in college and in university. Crafter and Maunder (2012) draw examples from primary, secondary and higher education research to explore transitions viewed through the sociocultural lenses of Beach's consequential transitions, Zittoun's symbolic transitions (Zittoun, 2008) and Wenger's communities of practice (Lave & Wenger, 1991). But Millman and McNamara (2018), using Mezirow's Transformational Learning Theory (Mezirow, 1981) and Bourdieu's Social Capital Theory (Bourdieu, and Passeron, 1990), caution against an overly pessimistic or deterministic view of students' transitions which sociocultural perspectives could be seen to suggest. In Millman and McNamara's (2018) study of students who made the transition either from college or from a university-based access programme into an Australian university, they assert that "changes to habitual cognitions are possible, and that with such change, new perceptions of self and place in the world are also likely to occur." (Millman & McNamara, 2018, p47). Within the conceptual framework of the current study, transitions are mediated through structure, individual agency and interactions with others (Cuconato & Walther, 2015).

3.3.4 Practice and participation in social systems

Amongst sociocultural theorists (Wenger 1998; Engeström 2000; Schatzki 1996; Nicolini et al. 2003) there is agreement that practice should be conceived as social participation located in particular material contexts. Nicolini proposes that various practice theories can be mobilised together in order to enrich our understanding of practice (Nicolini, 2012, p10), and so different traditions of practice theory offer sensitising concepts which support the different aspects of this study. Gherardi (2000), offers the concept of knowing-in-practice in which discursive practice (speaking and listening) is a fundamental element. Giddens' theorisation of practice refers to the significance of rules (generaliseable procedures that are not always explicitly acknowledged), routines and resources which together structure possibilities for actors.

Strati (2003) advocates the significance of tacit knowledge wherein many of the skills and processes involved in interactions are neither visible nor articulated although they are firmly embedded in organisational practice. Lave and Wenger " (Lave & Wenger, 1991) introduced the concept of legitimate peripheral participation in describing situated learning. This concept, discussed in the section which follows, is a "descriptor of engagement in social practice that entails learning as an integral constituent" (Lave & Wenger, 1991, p35). Their contribution to social practice theory provides one of the key theoretical foundations for this current study.

3.3.5   Participation in communities of practice

Wenger outlines three dimensions which explain the relation amongst participants in a community of practice and these are: mutual engagement, a joint enterprise and a shared repertoire (Wenger, 1998, p73). Legitimate peripheral participation was first used by Lave and Wenger when they introduced the concept of communities of practice in 1991 (Lave & Wenger, 1991). Newell, Tallman and Letcher, (2009) refer to legitimate peripheral participation as a form of encompassing transition. That study focuses on how a single participant navigates their undergraduate programme of teacher education and makes their way into the community of the high school where they teach English. Their study deploys a conceptualisation of transition which although not specifically defined by the authors as sociocultural, is closely aligned with such perspectives since it draws in its analysis upon concepts from CHAT, Beach's consequential transitions, and legitimate peripheral participation. Despite the obvious limitations of the use of only one research participant, this study provides a further example of the theoretical and methodological approach which has informed the study outlined in this thesis.

The concept of peripherality which denotes more or less-engaged ways of participating in a community is key to the findings of the current study. Transition from a communities of practice perspective involves participation amongst those in the community which evolves and develops over time.

3.3.6   Modes of identification in a landscape of practice

Wenger's landscapes of practice metaphor (Wenger, 1998, Wenger-Trayner & Wenger-Trayner, 2015) is conceived of as a complex system of communities of practice together with the boundaries that separate and conjoin them. The boundaries of these communities represent a discontinuity between those who share a sustained

period of learning and practice, values and perspectives with others in the community, and those who do not. Wenger suggests that "rather than hiding boundaries under an illusion of seamless applicability across contexts, it is better to focus on boundaries as learning assets" (Wenger-Trayner & Wenger-Trayner, 2015, p18). Instead of pursuing the Scottish Government's (2014) aim for students to experience a seamless transition through articulation arrangements between colleges and universities (outlined in Section 2.5), rather Wenger-Trayner and Wenger-Trayner (2015) encourage the explicit recognition of boundaries in order to exploit their potential for learning (Fenton-O'Creevy, Hutchinson, Kubiak, Wenger-Trayner, & Wenger-Trayner, 2015). In the current study, the Associate Students encounter the boundary between colleges and the University during campus visits and other transition support initiatives, and these are discussed in Chapter 7.

Wenger-Trayner and Wenger-Trayner (2015) suggest three distinct modes of identification in a landscape of practice; engagement, imagination and alignment which function inside practices and across boundaries that separate them. Engagement is essential in order to learn about the competence of the community, whether on a limited or visiting basis or as a full participant and it involves engaging in practices such as talking, solving problems and working together. Imagination in the landscape of practice involves creating a mental picture of yourself and imagining participating in the community and its practice. Alignment is the third mode of identification. In order to practice effectively in the community some degree of alignment is required in which there is co-ordination, or negotiation between the new participant and the practices of the community. Yet alignment does not necessarily mean acquiescence or simple compliance, and some negotiation between participants may be involved. The modes of identifications are used in Chapter 9 to discuss the findings and to represent the ways in which the direct entrants in this study locate themselves in the landscape of practice at university.

Fenton-O'Creevy, Brigham et al (2015) deploy landscapes of practice in their analysis of the transition experience of nursing students in practice-based education. Their students' trajectories cross multiple boundaries as they negotiate their identities in different communities that they encounter in the workplace and at university. Students' imagined trajectories form the focus for Fenton-O'Creevy, Brigham et al's study (2015), specifically whether or not students see themselves as moving towards full participation in a community, or "passing through with an endpoint outside" (Fenton-O'Creevy, Brigham, Jones, & Smith, 2015, p44). Fenton-O'Creevy, Brigham et al (2015)

characterise four types of imagined trajectories which each denote levels of participation (low or high), and the direction of travel (inside the community, or passing through it). The types of trajectory are:

- Marginal – low participation inside the community of practice
- Apprentice – high participation inside the community of practice
- Tourist – low participation passing through the community of practice
- Sojourner – high participation, passing through the community of practice

The sojourner's trajectory characterises the participation of direct entrants in the landscape of practice at university in this study, and is discussed in Chapter 9.

Hodge (1998) explores her own identification in a community of practice where she was a student on a teacher education programme. She dis-identifies with the heteronormative practices of becoming a teacher and asserts that marginality may be associated with a position of subordination and exclusion. Non-participation according to Hodge (1998) describes conflict in the space between activity and identity. In contrast, Fenton-O'Creevy et al., 2015 propose that marginality may reflect an active choice to resist the practices of the community. Transition for Hodge (1998) was positioned as problematic and this is a frequent perspective in the literature.

Transition as a struggle is also portrayed in empirical research which describes measures to ease or to smooth transitions which are seen as being potentially problematic (Barron & D'Annunzio-Green, 2009, Pike & Harrison, 2011). There is of course a danger of framing transition negatively by anticipating discord and difficulties when we know that many students give very positive accounts of the "life-changing" (Christie et al., 2005, p17) transitions to university. Furthermore, Ecclestone (2009, p23) observes that where transitions are excessively pathologised, educative aims involve managing transitions in ways that are intended to minimise the risk and anxiety for students and can potentially overlook the complexity of this process.

3.4 Transitions of students with widening participation backgrounds

Transition into the first year of higher education is now a well-researched area, although experience of those whose first year at university starts in 2nd 3rd or 4th is far less well researched (Christie et al., 2006). The relationship between transition and retention means that this area is significant not only to the students themselves, but also to universities due to the financial implications of students' non-completion. Student withdrawal is also significant to policy makers with national targets for graduate population profiles. This section is concerned with studies which together provide a focal point from which to view and understand the expectations and challenges that students, particularly those coming from widening participation backgrounds, face in transition to university. The literature reviewed here intersects with studies which focus on student engagement and institutional approaches for enhancement, but that is not a body of scholarship that I review in this chapter. Student engagement attracts an array of definitions and conceptualisations much broader than the narrower interpretation that I have used in this thesis. In this study I have used the term engagement as a sociocultural concept in respect of participation in activity systems in and communities of practice. A critical review of the scholarship on student engagement is beyond the scope of this thesis.

3.4.1   Challenges of researching students from widening participation backgrounds

The studies outlined in this section (and in Table 3 below) are those which are focussed on students with widening participation, ethnic minority or college backgrounds. Typically, the students are making the transition to universities with high inclusivity and widening participation missions, although there are some exceptions where elite universities provide the transition context. Many empirical studies of students' transitions are small scale (Briggs, Clark & Hall, 2012, Gill, 2019, Breeze, Johnson & Uytman, 2018). Others are criticised for their lack of theoretical depth. They are seen as uncritically deploying the concept of transition (Taylor & Harris-Evans, 2016) without overtly engaging with any of the theoretical perspectives such as those which I outline in Section 3.3. The scale and size of studies is often limited to one site and frequently a single academic programme. This is not unexpected, since as discussed in Section 2.4, only 26.1% of first degree entrants to university come from college backgrounds (Scottish Funding Council, 2019). Furthermore, given the opportunity for direct entry into first, second and third year, that percentage of students is spread across all the years of study at university. Their college background may not always be apparent to those who might want to include them in a study. This renders

direct entrants less visible at institutional level (Christie, Barron & D'Annunzio-Green, 2013).

There is an ethical challenge for research in the recruitment of students to take part in initiatives and empirical studies. The literature tells us that members of this group typically experience anxiety (McDonald, Brown & Knihnitski, 2018, Christie et al., 2006) due to feeling the pressure of jugging priorities in respect of timetable, family and part time work (Bowl, 2001, Fowle, 2018). By drawing attention to their status as non-traditional students or direct entrants, researchers may further inscribe that sense of 'otherness' (Millman & McNamara, 2018) that they may already have been experiencing. This was an issue which I prioritised in the planning of my study and it is discussed further in Section 4.5 (Ethical Considerations).

In the studies to which I refer in the remaining part of this section, I note that teaching academics' perspectives are less often heard. Kyndt et al. (2017) observe that although teachers make an essential contribution students' experience of higher education "their role seems to be ignored when investigating transitions between contexts" (Kyndt et al., 2017, p310). In the study outlined in this thesis, the voices of academics and of articulation support co-ordinators are heard in both phases of the longitudinal study. This is also the case in Ingram and Gallacher's (2013) exploration of direct entrants at Glasgow Caledonian University.

3.4.2   Student transitions: empirical studies

Ingram and Gallacher (2013) explored direct entrants' experience of coming from colleges on to nine different degree programmes in four subject areas at Glasgow Caledonian University. Data was generated through interviews and focus groups with students and relevant staff at university and in colleges. Many of the findings of their study are closely aligned with those from this current study. However, since the study at Glasgow Caledonian University is presented in the form of a report, it is an untheorised paper. Given the scale and scope of their study, the issues that were identified for students and the recommendations for curriculum matching for changes to teaching practices in colleges have implications beyond the institutions involved.

Much of the literature on student transitions concentrates on the initial year of study and especially on the induction period, and many studies identify similar transition issues. Although most are small scale, when taken together they provide a compelling

evidence base which strengthens understanding of the challenges that students from widening participation backgrounds face in their transitions to university.

Key transition issues and challenges	Authors
The gap between students' expectations and their experiences of undergraduate study which may lead to disengagement with the academic processes and a risk of under achievement.	Farrell, Brunton & Trevaskis, 2019, Leese, 2010 Tett, Cree & Christie, 2017 (Flaga, 2006)
Fitting in socially, making friends, developing relationships and making connections with peers and tutors. The fear of feeling isolated is included in this dimension.	(Farrell et al., 2019) Briggs, Clark & Hall, 2012 Harvey, Drew & Smith, 2006 Christie et al., 2005 Wilcox, Winn & Fyvie-Gauld, 2005 Christie et al., 2006 Barron & D'Annunzio-Green, 2009 Maunder et al., 2013 Flaga, 2006
Becoming an independent or autonomous learner, lack of preparation and knowing what to do.	Leese, 2010 Harvey, Drew & Smith, 2006 Krause & Coates, 2008 Christie, Barron & D'Annunzio-Green, 2013 Hockings et al., 2018
Managing and finding time for study and coping with increased workload and assessment	Leese, 2010 Meharg et al., 2017 Gill, 2019 Young et al., 2019
Developing study skills, deeper reading, notetaking	Donnell, Kean & Stevens, 2016
Impact of studying on students' lives (such as employment and family)	Farrell, Brunton & Trevaskis, 2019
The materiality and everyday logic of systems, processes and locations	Breeze, Johnson & Uytman, 2018 Flaga, 2006

Table 3 Dimensions of challenge (adapted from Trautwein & Bosse, 2017) identified in smaller scale empirical studies of students' transitions

In contrast to the small scale studies referred to above, Morgan's (2015) findings are based on a longitudinal study of the transition experiences of students based in nine dual-sector further education colleges in England. Progressing from two years of study on foundation degrees, students took direct entry to the third year of an early years honours degree programme in a post-92 university. The themes emerging from that study are not substantially different from those of the small scale projects in that they refer to the differences in study requirements that students found between foundation and honours degree level, the significance of relationships amongst peers and with

staff, and less commonly reported emotional aspects of transitions and identity formation. The degree of similarity between the key issues identified amongst studies is striking, but so too is the fact that similar themes have been repeating themselves for well over a decade.

Christie and colleagues offer a collection of empirical studies which are particularly relevant to my study. This is because they explore in sociocultural terms the experience of students from widening participation backgrounds who take up undergraduate places in higher education from access programmes or from college. Three key studies are of particular relevance to this thesis. First, there is a study of transition of students from widening access programmes into two contrasting universities. Secondly there is a study of students' transition from colleges into a research intensive university. The third study is of the transition of students with college qualifications who enter as direct entrants to a post-1992 university.

The first study reports (Christie et al., 2005) on interviews with 18 participants (predominantly female) who were from working class backgrounds and attending either one of the two universities. These participants who lived at home, saw themselves as 'day students'. Their engagement with the university could be compared more to a 9 to 5 structure than to the dominant, idealised model of student lives. The students' ongoing engagement with the university featured examples of resistance to stereotypical ideas about student life. They preferred instead to engage with the university on their own terms and in accordance with their motivation for attending university. This in turn was centred on future employment prospects rather than on developing a new student identity.

The next study conducted by Christie and colleagues (Christie et al., 2006) which speaks to my own investigation into students' transitions, relates to a sample of 35 students who entered a single research intensive university from college. Whereas there are criticisms of empirical research into transitions being under-theorised, Christie et al adopt a sociocultural position in this paper. They clearly depict the students' transition as an ongoing process. That process involves engaging with their previously formed expectations, with new cultural assumptions and with unfamiliar teaching and assessment approaches. All of this takes place over time. Although a normative definition of a 'successful student' is implied rather than defined, Christie et al (ibid) explain how becoming a successful student involves more than meeting institutional requirements. It is also about navigating through their experiences and establishing a

new identity. Interviews were carried out at five key points across the undergraduate years starting in first year, and then again at 10 years after the start of their degree programmes. This longitudinal design provides a rare opportunity to generate evidence with potential to enhance understanding about non-traditional students' experience of higher education in a research-intensive university. Furthermore, in subsequent studies, this data set is analysed to provided evidence about how the process and product of university study shaped their future careers (Christie, Cree, Mullins, & Tett, 2018).

One final contribution to this section comes from Christie working with a different group of colleagues. They report on a longitudinal study (Baron and D'Annunzio-Green's (2009) and explore students' transition from colleges as direct entrants into 2nd and 3rd year in a single department at a post-92 university (Christie et al., 2013). This paper builds on an earlier study (Barron & D'Annunzio-Green, 2009) which considered the differences between the needs and expectations of direct entrants compared to those starting university in first year. Barron and D'Annunzio-Green stated that direct entry students miss out on key developmental stages which those who started at university in first year have been able to benefit from. A significant observation from Christie et al in their 2013 paper (Christie et al., 2013) is that despite articulation routes from college to university being underpinned by the SCQF (this was referred to in Section 2.5.1), HN qualifications may not sufficiently prepare students for university study: "Students who transfer between sectors do, in theory, have the academic skills required to tackle the next level, however in practice they are often under-prepared for study at university" (Christie, Barron & D'Annunzio-Green, 2013, p625). This observation goes to the heart of the concerns of the student participants in my study about the extent to which their HN programme would prepare them for taking up their places on engineering degrees in third year.

One central aspect of the under-preparedness of direct entrants reported in Christie, Barron and D'Annunzio-Green's (2013) paper relates to independent learning. This produces challenges for students who have not been used to managing their study time and controlling their own learning without close tutor support, particularly when assessments are due. There are several common strands in Christie's papers, and in others outlined in this section. These include the significance of relationships between students and their peer group and tutors (Cree, Christie, & Tett, 2016). Students also need time to adjust and to assimilate to university and they need opportunities to do so. Christie et al (2013) ,characterise this adjustment as becoming "legitimate members of

the community by learning the 'new rules of the game'" (Christie, Barron & D'Annunzio-Green, 2013, p629).

A requirement for students to adjust to university places the emphasis on students from college adjusting to the norms of university, rather than universities adapting to the needs of these students. Their backgrounds place them at a disadvantage when compared to other students from more middle-class families. Despite the emphasis on students adapting to fit in, Christie also acknowledges that universities, having widened access, need to pay attention to "confronting their obligations to the students to whom they offer places" (Cree et al., 2016). Universities' obligations to students from widening participation backgrounds are also discussed when considering academic literacies and students support.

3.5   Academic literacies and student support

The academic literacies research outlined in this section takes a perspective which demonstrates how the expected ways of engaging with knowledge in higher education disadvantages students who are less prepared for this form of study at university. This section begins by outlining different interpretations of academic literacies.

3.5.1   Conceptions of academic literacies

Baker et al. (2019) explain that "writing has a gate-keeping function that helps to maintain hegemonic inequalities at the cultural-linguistic level" (ibid. p143). They assert that educational attainment in higher education depends on students' ability to access the tacit assumptions and hidden values associated with disciplinary language and practices. At its most basic, academic literacies is the study of texts and practices (Gibbons, 2009), but this conceptual field is complex, contested and nuanced. Explanations in the literature vary along a continuum which extends from decontextualised cognitive conceptions of language and skills development at one end (Cleary et al., 2018, Gibbons, 2009, Wingate, 2015), and critical, sociocultural understandings (Saltmarsh & Saltmarsh, 2008, Burke, 2012) at the other.

A skills discourse of writing is one that is independent of context (Haggis, 2006). Writing from the perspective of librarians, Cleary et al. (2018) conceive of information literacy and academic writing separately, although these are brought together with the concept of the "scholarly conversation" (ibid, p101). Mastery of skills such as citing and evaluating the work of others and creating information ethically are said by Cleary et al.

(2018) to be central to learner success. Richards and Pilcher (2018, p164) provide a summary of academic literacies literature. They draw attention to the predominance of text as the focus in the literature as opposed to other elements, such as visual and non-verbal communication components. Richards and Pilcher (2018), do not identify the basis for inclusion (or exclusion) in their collection of sources from the literature. However, their argument for the inclusion of non-text based literacies (such as image and emotion) is context-dependent and located in the academic disciplines. It thus extends the range of definitions of academic literacy. For the purposes of this review, I have drawn together ideas from scholars whose interpretation of academic literacies takes forward understanding about the ways in which reading and writing impact on students' engagement at university. These ideas also consider how lecturers' perception of some of these students as having bad study habits or lacking effort or ability can be better understood by adopting an academic literacies perspective.

Lillis and Scott (2015) encapsulate the relationship between academic literacies and student support when they assert that "language and literacy tend only to become visible institutionally when construed as a problem to be solved through additional or remedial support". Christie et al.'s (2013) findings about the need for direct entrants coming from college to learn the rules and practices of their discipline as part of becoming an independent learners, is aligned with the concept of academic socialisation (Lea & Street, 2006). This is concerned with students' acculturation, or ways of thinking, talking and writing, in subject-based disciplines. Academic literacies according to Lea and Street (2006, p369) is a more expansive concept since it not only denotes literary practices as being ongoing and situated, but it also encompasses intangible elements such as the pattern of power relations which exist at different levels in institutions (Haggis, 2006). Becoming 'academically literate' is seen by Archer (2008) as learning to read the academic culture with its "distinctive practices, values and styles of language" (Archer, 2008, p392). This type of socialisation in the discipline involves students in developing confidence and understanding of the epistemologies, discourse and conventions of the particular academic community (Wingate, 2015).

Saltmarsh and Saltmarsh (2008) offer a poststructuralist conception of academic literacies which like Archer (2008) and Lea and Street, (2006), reach beyond the acquisition of skills to include political, cultural and subjective processes. Their interpretation of academic literacy starts with notions of subjectivity, and the idea of self as being in a continual state or process of becoming. Academic literacies according to Saltmarsh and Saltmarsh's (2008) conception, comprises social practices through

which the identity of a literate social subject is negotiated and performed. The temporal nature of these situated sociocultural definitions of academic literacies are also significant in the context of the study outlined in this thesis. This is because the student participants arrive as direct entrants to the School of Engineering in the third year of the programme, leaving them little opportunities for the long and complex processes of becoming academically literate that is suggested by Archer (2008) and Wingate (2015).

Given these conceptions of academic literacy, direct entrants have far less opportunity to develop their academic literacy than those who begin their degree level study in the first year of the programme at university. Yet they are expected to begin to engage with reading of third year level texts from their very first week on campus. Wingate (2015) suggests that all students should be taught literacy skills by embedding inclusive support into the curriculum, making the requirements timetabled and credit-bearing in the first year. This would impact on direct entrants' experience only if this support was extended beyond first year or included in the curriculum at college. None of the authors reviewed in this section considers this option.

3.5.2   Reading in the context of higher education

Wingate (2015) observes that "reading remains largely invisible in higher education pedagogy" (2015, p2). Baker et al (2019) note that reading attracts far less research focus than writing. Mann (2000) draws a series of case studies of student readers to illustrate reading in its broadest sociocultural and political context. She explains that reading in an academic context is not a personal and private affair since it is made public and evaluated through academic tasks such as exams and assignments. For those who are less confident in their literacy practices in the context of university, reading becomes potentially threatening (Mann, 2000, p313). Saltmarsh and Saltmarsh (2008) also explore the difficulties that students experience in their engagement with journal articles and text books and the implications that this has for their learning and assessment practices. Their discussion points to the potential of assessment as a powerful tool with which to promote scholarly practices. These could include learning preparedness, critical thinking, scholarly writing and educational ethics. More typically though, assessment evaluates the outcome of a students' engagement with academic literacies. It does not tease apart components of discourse and practice in order to promote them. How then can arrangements of structures and processes intended to create a more inclusive system, provide support to students whose literacies and subjectivities vary significantly from those performed in the academic disciplines (Lawrence, 2009)? The sections which follow review concepts and initiatives relating to

study support which are intended to address such challenges, thus their relevance to the current study is significant.

3.5.3   Conceptions of study support

Hallet (2013) identifies three separate conceptions of study support, each of which positions staff and students in a different way. First, there are constructions which are largely skills focussed, secondly those that are predominantly learner focussed and thirdly those which focus on literacy practices. Skills and learner focussed study support relate to structures which are put in place to offer *additional* academic support. This is provision which goes beyond that which all students could expect as part of ongoing pedagogic practice and classroom interactions. Skills-oriented and learner focussed support is closely associated with remediation and a student deficit discourse (Ivanič, 2004). From this perspective, students are seen to be lacking some sort of resource which is necessary in order to function successfully at university.

Providing extra support for students coming from certain backgrounds runs the risk of "making those same students feel conspicuous in front of their class" (Barron & D'Annunzio-Green, 2009, p11). Furthermore, perspectives which position the difficulties as being located within the student, give rise to concerns that there will be a lowering of standards and some sort of "dumbing down" (Leathwood & O'Connell, 2003, p599) in order to accommodate this new constituency of learners.

Bartram, (2009) offers a different perspective on learner focussed support, referring instead to a humanistic approach to support which is characterised by efforts to build supportive and individual relationships with students to promote academic engagement as well as personal development. This pastoral perspective underpins personal tutoring which is a significant form of learner-centred support for students. Given the more diverse cohorts of students engaging in higher education, McFarlane (2016) and Young et al., (2019) both raise the question of the competence and confidence of academic staff to provide the sorts of support associated with well-being and study skills and 'not just subject knowledge' (Young et al., 2019, p11). Large class sizes and the complexity of issues to which students refer, may extend the matter of hitherto academic support, into areas which individual academics may be unable to respond without contribution from other professionals. Jacklin and Robinson (2007) explore students' conceptions of support, identifying four dimensions which apply to academic and welfare support, noting that students do not distinguish between academic and non-academic topics. Rather, they see support as "helping" (ibid, p117), irrespective of the nature and

context of that support. Academic support as a part of the provision of holistic student support, is positioned in terms of Hallet's (2013) three conceptions as being both skills focussed and to some extent learner focussed.

Skills focussed support structures, where interventions are provided by a specialist academic skills resource, tend to separate students' academic reading, writing and thinking from the disciplinary community to which the student is seeking access. Bartram (2009) refers to the instrumental view of student support which directs students away from academic staff and towards specialist study support services. Dobson (2019) explored the provision of study support for students with dyslexia. She refers to the 'additional support model' (ibid. p1190) contrasting it with approaches to modify in-class teaching and support materials to make them accessible for all students and not just those with additional learning needs. Study support that is delivered separately from other forms of timetabled classroom teaching may be understood by all students to be 'extra-curricular' (Dobson 2019). This type of support, delivered by study skills experts, position students as being problematic or in deficit (Smith, 2007), suggesting that there is a "superior group who function in a strong and unsupported way", (Haggis, 2006, p525). This has far-reaching implications for how students and academics perceive and engage with it. Findings in Chapter 7 explore how participants in this current study engaged with transition support, the delivery of which was aligned with the additional support model referred to in this discussion.

Independent learning and learner autonomy represent key ideas embedded in models of university learning (Haggis, 2006) since they represent academic practices that are valued and rewarded for assessment purposes. The need for the diverse constituency of students to be supported in developing sufficient independence and autonomy is commonly identified in the literature (Lowe & Cook, 2003, Leese, 2010, Harvey, Drew & Smith, 2006, Christie et al., 2006, Christie et al., 2005, Barron & D'Annunzio-Green, 2009, Wilcox, Winn & Fyvie-Gauld, 2005). An academic literacies perspective however suggests that rather than devising support solutions for students with difficulties, the question becomes one which examines which aspects of the higher education curriculum or its processes are preventing some students from accessing it (Leese, 2010).

3.5.4 The role of academics in developing academic literacy

The roles of teaching academics in study support with a literacies focus is of particular significance for this current study. Leese (2010) found that the students in her study

who were in the early weeks of transition to university experienced difficulties in understanding the language and vocabulary used by lecturers. The support that these participants valued the most was provided by the academics themselves during lectures and informal conversations. In this case, it was the disciplinary discourses and academic practices which were implicated in the students' failure to understand, rather than any deficit in the students. Instead of conceiving study support as being separate from the subject or discipline, for example being delivered in a central university unit (Cleary et al., 2018), a literacies view of study support is one which suggests that teaching academics have an important contribution to make (Wingate, 2015).

Hughes (2017) adds to the conversation about the role of academics and their contribution to the development of students' academic literacies, recognising the difficulties that teaching academics face in this regard given the typically large class sizes and student diversity. In a study based in two inclusive Australian teaching-intensive universities, Hughes (2017) notes the increase in workload for teaching academics, citing "neoliberalist agendas" (ibid, p22) and "structural changes" (ibid, p22) as the sources of their current overload. Participants from the two Australian Universities engaged in a series of transition pedagogy workshops (Hughes, 2017) which were designed to promote transparent, inclusive, collaborative teaching strategies. These recognise the differences in social capital between students who are first in family to attend university, and the academics who teach them. Hughes (2017) concludes from analysis of teaching academics' responses to these workshops that "despite the fiscal, discursive and structural changes made to universities by neoliberalism, it is possible to create classrooms where students do indeed learn to engage critically with their world." (Hughes, 2017, p22). Teaching academics' contribution then can be two-fold. First, they can better understand how their practices may be unfamiliar or intimidating (Burke, 2012). Secondly, academics can create opportunities for formal and informal interactions with their students since the optimum place for students' academic socialisation is in the disciplinary community itself (Wingate, 2015).

Conceptions of academic literacy as well as conceptions of transition impact on the design and delivery of academic support initiatives. The three-staged processes of transition outlined in Section 3.2 (specifically Risquez, Moore & Morley, 2008 and Menzies & Baron, 2014) suggest particular moments in the transition process when students most need support. This contrasts with Lawrence's (2009), New Learning Framework, with its focus on academic literacies which conceive of transition support

as being far less time-bound, more ongoing, individualised and situated. Farenga (2018) investigated the connection between students' engagement with a university wide programme of support based on social integration, skill development and development of an employability profile. During focus groups students made model representations of the ratio of academic, employability and social support that they felt they needed. Farenga (2018) concluded that students have individual conceptions of the sorts and timing and support that they would benefit from the most. Haggis (Haggis, 2006) notes that transition support that is generic, added on, or individualised may be helpful for some under-confident students. However, it may not be sufficiently far-reaching in its effect to make a difference on a scale necessary to address the difficulties being experienced by some students coming from widening participation backgrounds (Haggis, 2006).

There is no doubt that academic literacies support can make an important contribution to students' transition to university (Lillis & Scott, 2015, Lea & Street, 2006, Haggis, 2006, Wingate, 2015), particularly for those students who are coming from college backgrounds or access programmes. The nature, location, and timing of those sessions will influence the extent to which such a contribution is able to provide support for all students, and not just those coming to university in first year. In the section which follows, studies relating specifically to initiatives intended to support students as they make their transition are critically reviewed.

3.6   University-led transition support – a deficit model

In this section, I outline types of transition support by dividing the discussion into pre-entry and post-entry support initiatives. I discuss the implications of these initiatives which suggest a deficit model of students who for reasons of their background are perceived by university admissions departments as being insufficiently prepared to undertake their degree programme of choice. I point to literature which suggests that universities may be insufficiently prepared for the new constituency of students rather than the other way around. A discussion about induction and post-entry support follows which points to the challenges for institution-wide provision which may not meet the needs of the diversity amongst new entry students.

3.6.1   Pre-entry transition support

Pre-entry interventions are intended as support for students making the transition to university and to help them to build relationships with their prospective peers, tutors

and with the systems that they will encounter at university (Thomas, Hill, O'Mahoney, & Yorke, 2017). Some types of support and preparation for transition to university are embedded in programmes of study at institutions where students pursue qualifications other than those that are primarily designed to lead to an undergraduate degree. Support can take the form of university-based units of study (Pike & Harrison, 2011), skills focussed articulation focussed workshops (Hallett, 2013, Fotheringham, 2019). These approaches are intended to enable the student to acquire cultural capital as well as academic skills prior to transition (Leese, 2010, Scanlon, Rowling and Weber, 2007). Arrangements between institutions enable dual enrolment (An, 2013) allowing the student to obtain credits for higher level study normally only available at another institution. Further alternatives include foundation degrees which were introduced in England in 2001 as specialist vocationally-oriented qualifications which are often validated by universities. These programmes typically attract students from non-traditional backgrounds (Gill, 2019, Morgan, 2015, Sanders & Daly, 2012). In Scotland dual matriculation, sees students enrol on HN level college courses that, unlike many foundation degrees, are not developed in co-operation with universities. Dual matriculation involves being matriculated at university as an Associate Student as well as matriculated in college. Articulation agreements enable curriculum planning, transition support and progression on what Meharg et al. (2017) refer to as an 'enhanced route' from HN qualifications to undergraduate study.

Bridging courses, and other pre-entry programmes focus on students' abilities to adjust to higher education. This type of support is typically made available for students from widening participation backgrounds who due to their diversity in age, education ,class, socio-economic background, language and/or cultural backgrounds (Smit, 2012) are perceived to be in some way or other 'not up to the mark' for university level study. This type of support is based on the assumption that these students will require remedial support before they even begin. I could find no UK examples in the literature of pre-entry transition support interventions customised for students whose school qualifications met the entry requirements and who were not categorised as having any protected characteristics or other disadvantage. This reinforces the tacit understanding that the members of the group who have already achieved academic success are those for whom university is intended. Transition support into first year for these students is embedded in mainstream activities such as Freshers' Week and induction. Other students with different characteristics are supported through separate transition activities to adapt to these normative expectations of higher education.

Briggs et al. (2012) identify three types of university preparation activities: generic (raising aspirations of young people to encourage them to consider university as a viable option for them), focused (supporting young people in their decision-making about university applications) and pedagogical (subject specific interventions which offer a 'real taste of university life'). In their meta-analysis of the first-year experience. Harvey et al. (2006) observe that the literature is dominated in the US by perspectives on social and academic integration. This, they note, contrasts with the UK where the focus is more on preparedness for higher education and satisfaction with the quality of their experiences. I provide two examples of pedagogical initiatives which focus on the preparedness for university; one study was from a university in US and the other from Wales. Both initiatives focus on transition support for students who do not meet the entry requirements for their chosen degree programme. Both courses represent a further layer of selection since to gain access to the university programme, they must succeed in these initiatives.

The Partnership for Assessment of Readiness for College and Careers in the USA (PARCC, 2015) establishes the readiness of students for their chosen course of study by their performance in relation to College and Career-Ready descriptors, at five separate performance levels. A student's level of readiness is evaluated by their performance in a series of assessments in English language and in mathematics. Although the items and tasks in the assessments are deemed to be an 'an essential part of a student's readiness' for direct entry to credit bearing courses in higher education, they represent only a strand of the learning experience that constitutes undergraduate study at university. Performance on pre-entry tests are said by PARCC to provide information on the nature and level of support that will be required for students to be successful in college. But for those who do not achieve the highest performance levels, these tests may indicate to students that they have very little chance of succeeding in their programme of choice, undermining their confidence and opportunity for success before they have even started their programme of study (or career). Furthermore, the assessments position students' cognition as an entirely individual process rather than as a socially embedded practice in which learning is seen as participation in the context of the degree programme (Lave & Wenger, 1991, O'Donnell & Tobbell, 2007). A related issue can be seen in the top-up Maths bridging programme offered in Wales at the University of Glamorgan (Newman-Ford, Lloyd, & Thomas, 2007). This study is included here in light of Gorard et al.'s (2006) observation about the lack of research designs for transition activities which include comparator

groups. Newman-Ford et al.'s (2007) design provides a notable exception in this regard.

The 'Bridging Technology with Maths' programme at Glamorgan University is designed for applicants to first year engineering programmes who lack the prerequisite qualifications in mathematics. Those who achieve success on the six-week computer based self-paced course are offered entry to the degree programme. Participants are assessed through three in-class tests and a one thousand word assignment. Mean assessment outcomes reported statistically significant higher marks in first year amongst those who had completed the programme than those who had not. But only applicants who are able to succeed on this type of course with class-tests and a written assignment are able to access the degree programme and to harvest the educational benefits of this type of pre-entry transition support. Similar bridging or access courses are offered in other universities, some but not all of which are free, and they originate from the conception of the "ill-preparedness of students" and their "deficiencies" (Newman, Lloyd & Thomas, 2007, p41) for studying some aspect or other of the degree programmes that they have chosen.

The preparedness of universities and programme teams to support a diverse constituency of learners does not predominate in pre-entry support practice-sharing narratives in the literature. This is despite suggestions that institutional changes are required to make the higher education experience match more closely to the increased diversity and numbers of students (Leese, 2010, Longden, 2006, Pitkethly & Prosser, 2001). Instead, most universities are trying to fulfil their obligations for the new constituency of students through existing degree structures and traditional learning and teaching practices (Hyssey, Smith, Hussey, & Smith, 2010). There are however examples where universities are responding positively to facilitate students' transition on an institution-wide basis within existing structures. One such national project is The What Works? Student Retention and Success initiative (Thomas, Hill, O'Mahony, & Yorke, 2011) which engaged with 13 UK universities supported by three national organisational partners to bring about organisational changes that would enable student retention.

The range of students for whom pre-entry support is intended includes those in first year, second or even third year, depending on the initiative and the university's degree structure. But the post-entry support initiatives outlined below have as their primary focus students whose initial year at university starts in first year.

3.6.2 Post-entry transition support

Wilson, Child and Suto, (2017), developed a three-generational model of activities designed to enhance engagement, success and retention in the first year experience. First generation activities include induction and peer mentoring, whereas second generation strategies prioritise involvement from academic staff and focus more on curriculum and learning, teaching and assessment practices. Common amongst many of the evaluations of university-led transition support is the observation of the importance of involving academic staff as much as possible. This recognises that not all staff are equally student-focussed and some academics are more suited to this role than others (Yorke & Longden, 2008, Briggs, Clark & Hall, 2012). Third generation activities integrate curricular and co-curricular initiatives to establish a whole-institution approach to supporting the first-year experience. Induction provides perhaps the most widely reported of all transition support initiatives and Briggs et al. (2012) suggest three categories of support provided during induction: practical (handbooks, campus-orientation, finance), social (creating opportunities to build relationships with peers and tutors, mentoring initiatives) and academic support (course information and issues relating to learning, teaching and assessment in the discipline), all of which help to establish learner identity.

Induction programmes vary in their duration, mode of delivery and focus although most are associated with an overarching aim to familiarise students with university-level study and to facilitate their engagement in academic life (Hyssey et al., 2010). In Scotland, the Quality Assurance Agency (QAA) adopted the 'first year experience' as the topic for its Enhancement Theme of 2006- 2008. The Final Report of that theme (Mayes, 2009) makes recommendations which note that induction could better be distinguished as 'transition and orientation', advocating the value of 'academic literacy' as an overarching first year outcome for universities. Kift et al. (2010) advocate an holistic, student-focussed transition pedagogy which involves 'whole-of-institution conversations and interactions' (ibid., p14). Farrell et al. (2019) provides a useful contrast to these holistic perspectives of transition support in their much smaller-scale but also student-focussed initiative. It comprises a two-day orientation programme involving group study and socialisation led by academic staff teaching on the programmes relevant to the students in the group they were interacting with. Both the Kift and Farrell's initiatives are specifically designed for students entering first year of university, with two or three years of undergraduate study to follow. Direct entrants represent a far smaller cohort who enter in second or third year and do not derive the

benefit of institution-wide induction and transition support. Neither do they benefit from the shorter-term discipline specific initiatives made available for students who enter the university in first year.

From a sociocultural perspective, induction represents a significant transitional period during which students encounter many contradictions (Saka, Southerland, & Brooks, 2009). As new entrants, students interact not only in the unfamiliar social context of fellow classmates and tutors, but also with the physical and cultural context of university (Lave & Wenger, 1991). O'Donavan (2017) discusses the importance of creating opportunities to induct students to more than the simple facts which may be contained in welcome packs, handbooks and guidance documents, but rather to induct them to the discipline and epistemic culture (Knorr Cetina, 1999), opening up for students the otherwise tacit ways of knowing and practicing. Pike and Harrison (2011) suggest that gender, age, ethnicity and social class can impact on the process of academic and social integration and they note that there is little information in relation to direct entry students' experience of induction to university. Wilson et al., (2014) refer to the first few weeks of university for non-traditional students as being "the window of maximal risk" (ibid. p1025), and they observe poor attendance at orientation activities amongst this group. Not all students benefit equally from induction (Murtagh, Ridley, Frings, & Kerr-Pertic, 2017). Palmer et al. (2009) refer to the idiosyncrasy of students' transition experience and Murtagh et al. (2017) assert that a student's motivation or ability to engage with induction will be influenced by extent to which their sociocultural , linguistic and economic capital fits with their perception of university norms. These institutional norms may be classed, raced and/or gendered (Crozier, Reay, & Clayton, 2010). Fowle (2018) and Briggs et al. (2012) advocate a more personalised approach to transition support given such a variable experience of transitioning into first year.

This is more likely to address the needs of different types of students than a universal one-size fits all approach. A sociocultural perspective supports the articulation of contradictions for students and institutions during induction, providing explanations for the fact that not all students' experience of induction is equally positive or valuable.

3.7   Student retention: institutional and student success

In 2011, two UK government papers (in England the White Paper Higher Education: Students at the Heart of the System (Department for Business Information and Skills (DBIS), 2011) and in Scotland, Putting Learners at the Centre (Scottish Government, 2011)) both sought to address issues of social equity and mobility. These papers indicated their governments' understanding that providing access to higher education is about more than enrolling a new constituency of students; it also includes leveraging appropriate and sufficient financial, social and academic support to enable completion of a programme of study (Callender & Wilkinson, 2013). There are of course various factors that cause students to leave their programme of study at university and of particular relevance to this thesis, is the fact that students from the most socio-economically disadvantaged backgrounds are more likely to withdraw from their programmes than their more advantaged counterparts (Gale & Parker, 2014, Wilson et al., 2016, Holden, 2018). Although student retention has been a concern for universities around the world since the advent of formal education (Aljohani, 2016), there is international recognition that entry into first year of tertiary education represents one of the most challenging transitions for students which are predominantly reported upon and documented in Australia (Krause & Coates, 2008), United States (Kuh et al., 2006), and the UK (Yorke & Longden, 2008).

In Scotland, retention and success rates of socio-economically disadvantaged students show a 1.6% improvement since 2009 but the mean continuation rates for SIMD20 and SIMD40 students in higher education were 88.1% and 88.8%, compared to an overall average for Scottish students of 91.3% (Scottish Funding Council, 2016c, p40). The reasons for any student's withdrawal are complex and multivariate (Whitehead, 2012) and recent literature suggests two main lines of argument; the first locates the problem of student attrition with the students and their difficulties in the process of assimilation or fitting in at university , and the second with the universities themselves (Zepke & Leach, 2005). The lack of academic preparation for university study is said to lie at the heart of many of the challenges faced by students from disadvantaged backgrounds with inadequate or disrupted experiences of compulsory education group (Thomas, 2011, Herzog, 2005, Laing, Chao & Robinson, 2005, Edirisingha, 2009, Lowe & Cook, 2003). Studies which point towards low attainment which may ultimately lead to withdrawal adopt perspectives on student attrition which places for the responsibility upon students' circumstances prior to coming to university. Other reasons for student attrition associated with this first line of argument may be associated with students'

choice of course, their personal circumstances or their intellectual abilities (Young, Glogowska, & Lockyer, 2007).

The second approach to understanding student departure is one which challenges universities to examine their own processes and culture and to recognise the need to change to adapt to a far more diverse constituency of students (Hyssey et al., 2010). Young, Glogowska and Lockyer (2007) find evidence of both perspectives on student attrition in their mixed methods study which was based on a project to promote strategic institutional change and improve student retention. Their study is of particular interest here since it emphasises the complexity of student retention and the fact that two discourses may be at play within the same institution, but also the design of the study which, uncommonly, includes staff as well as students' perspectives in a mixed methods study. The three groups of participants comprised; students who had thought of leaving their course but had stayed, students who had left the course, and academics who taught on the course. Findings suggest that staff were more likely to problematise the student in their explanation of retention, whereas the students focussed more strongly on the institution as a source of the challenges they faced. Although the study is limited (as is the case for so many in this field of scholarship) to one subject area in a single institution, it does surface contradictions between staff and students about the causes of students' early departure which seems to emphasise the complex and multi-faceted nature of student attrition.

For universities engaging with widening participation agendas, student attrition is a longstanding concern (Pitkethly & Prosser, 2001 and Wilson et al., 2016). Lack of confidence in academic ability features strongly amongst the challenges faced by students from ethnic groups under-represented at university and for mature students from disadvantaged backgrounds (Fowle, 2018). It is interesting to note that where students express a low estimation of their skills this is regarded as being due to lack of confidence, whereas it could be conceived of as maturity and insight stemming from an understanding of university requirements. Engeström and Tinto (2008) advocate that providing access for students without appropriate support is not providing genuine opportunity at all. Student success requires institutional involvement which other scholars characterise as policies and initiatives that are intended to facilitate students transitions (O'Donnell & Tobbell, 2007). At the heart of institutional interventions to support transition lies an overriding concern with retention (Palmer et al., 2009), and indeed Palmer et al. (ibid) assert that improvements in a university's attrition, retention and graduation rates are commonly perceived as success in managing transitions.

In Scotland, between the years of 2014–2017, the Quality Assurance Agency chose a focus on student transitions for its enhancement theme. During that time, an interactive map was developed which captured no less than 460 resources from Scottish universities in the form of case studies, student commentaries, conference papers and multimedia resources all of which related to student transitions into, through and out of university.

3.8   Making a contribution to the literature

More than a decade ago, Tinto identified a paucity in the student transitions literature: "What we need, but do not yet have, is a body of research that tells of the nature of institutional practices that enable more low-income students to transfer to and, in turn, succeed in four-year colleges and universities." (Tinto, 2006, p13). More recently Christie, Barron and D'Annunzio-Green note that the ' the experiences of direct entrants remain under-researched" (Christie, Barron & D'Annunzio-Green, 2013, p624). In Table 4 (below) I frame my research questions accordingly.

As mentioned in Section 3.4.1, there are few studies in the literature which include teaching academics as well as student participants. Consequently, the perspectives of academics who teach on programmes on to which students make their transition are seldom heard. My study involves teaching academics from colleges and university as well as transition support co-ordinators and of course students. It must be said that Ingram and Gallacher's (2013) study also involves students, academics and study skills staff and that theirs is a longitudinal one across two sectors, but this is rare. I have sought to build on the work of Ingram and Gallacher by adopting a similar approach to the investigation of the transitions of students who have dual matriculation in both college and university.

My review of the literature relating to students' transitions into higher education suggests a methodological gap which this study has sought to fill. The studies reviewed in this chapter use interviews, responses to surveys and focus groups to generate data with which to understand students' transitions. Only Farenga's (2018) study in this review has deployed the use of model building as a way of engaging with students in a research project. The study outlined in this thesis also uses model building and takes forward the use of creative visual methods in researching students' experience of transition.

3.8.1 Research questions

Main question	How does the Associate Student Project shape the transition experience of Associate Students from College to University?
1	How do staff, students and artefacts interact at university and college in order to achieve the local objectives of the Associate Student Project?
2	How are transition support practices enacted and valued in the transition space between college and university?
3	In what ways do former Associate Students engage in the landscape of practice as direct entrants into third year at university?

Table 4 Research questions

3.9   Key concepts - conceptual framework

In this chapter I have outlined the two key sociocultural theories which frame this study: CHAT (Engeström, 1987) and communities of practice from Wenger's (1998) social practice theory. I have also provided examples from the literature where they have been deployed in education related studies. I make the claim that these perspectives can equally be considered as sociocultural, since the goal of both is to understand the relationships between human mental functioning and development in its cultural, historical and institutional setting. While my study is not framed exclusively by either theory, instead I have synthesised concepts which are consistent with the essence of each of them. Boundaries, contradictions and tensions are the key concepts which support the analysis in respect of the first of the research questions which investigates interaction in the Associate Student Project activity system.

The student participants' experience of transition resonates with many studies from empirical research outlined in Section 3.4 of this chapter. A summary of expectations and challenges for students from widening participation backgrounds (Table 3) reflects broadly similar findings in this regard to those of my own study. Transition for widening participation students who are most often the subject of the studies outlined, commonly remain under-theorised in the empirical research. This has the effect of limiting the studies in ways that O'Donnell, Kean and Stevens (2016) refer to as an explanation of the "what" of transition but without illuminating the "how and the why" (ibid. p5). Taylor and Harris-Evans, (2016) theorise the multiplicity and heterogeneity of transition. They conceive of transition as being entangled, nonlinear and iterative rather than being a timebound process such as other authors suggest, typically limited to first year. Their

conception supports my discussion of findings in relation to all three of my research questions.

Sociocultural conceptions of academic literacies such as those of Saltmarsh and Saltmarsh (2008), and Lea and Street (2006) underpin my treatment of the second research question. It explores how transition support practices are enacted and valued by the participants in the study. A key idea which I take forward into my study is that study skills support structures in the university position students as being in deficit (Ivanič, 2004). Such a perspective considers the ways in which the predominant academic practices disadvantage students coming from widening participation backgrounds.

While I have identified the most predominant theories and concepts from the literature which provide the conceptual framework for this study, there are many others included in the review that also inform the research outlined in this thesis.

Chapter 4   Methodology

4.1   Introduction

Theoretical perspectives and methodology are outlined in this chapter in five sections. The methodology begins with Section 4.2, an explanation of the Associate Student Project in its local University context. I explain the choices that I made in respect of the colleges and courses around which the study is based. Section 4.3 discusses the qualitative and interpretive approach to the research methodology which shaped the processes of empirical engagement. Section 4.4 examines the two strands of sociocultural theory which frame the current study; cultural historical activity theory (CHAT) and communities and landscapes of practice. The chapter concludes with Section 4.5 which explains the ethical considerations which infuse every aspect of the study.

4.2   Background: choices of colleges and courses

This study is based in four Scottish colleges and a post-92 university (see Section 2.5 for an explanation of this designation), referred to in this study as 'the University'. In 2013, the University secured funding from the Scottish Funding Council for 109 additionally funded undergraduate places under the auspices of the Associate Student Project (Scottish Funding Council, 2013). The places were divided between two Schools within the University; the School of Computing (SoC) (53 places) and School of Engineering (54 places). Although I am employed in a central academic development department in the University, I had no close professional or personal connection to either school, nor do I have an academic background in Engineering or Computing disciplines. I chose to work with the School of Engineering since at the time when I was scoping the project, there was little evidence of school-based support structures for articulating college students. This afforded clear lines of sight for the implementation of the Associate Student Project. Furthermore, the Dean of that School welcomed my involvement in the project.

The School of Engineering has well established articulation routes from four of Scotland's colleges on to a range of engineering degree programmes and details of these routes are outlined in Figure 3 (below).
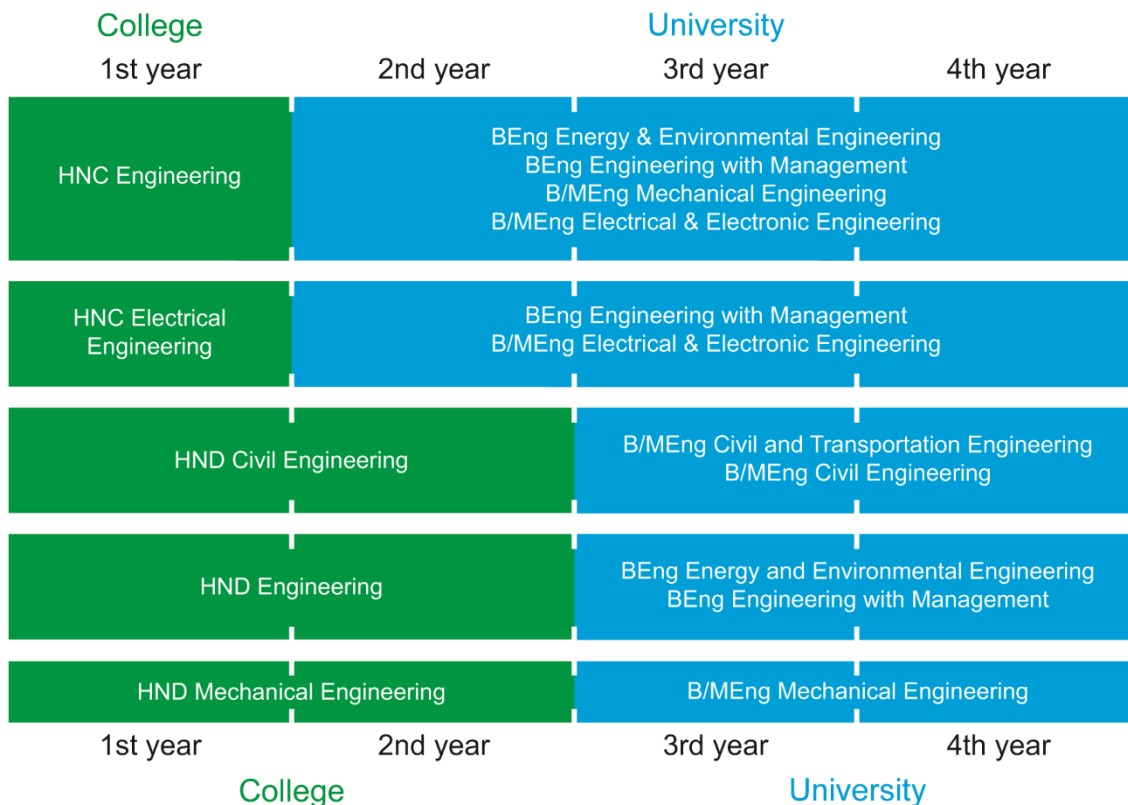
Figure 3 Articulation routes from college engineering programmes to University

In order to protect the anonymity of the four colleges in the study, they are referred to respectively as Colleges 1, 2, 3 & 4 and are located in three different local authority areas. Their proximity to the University is summarised in Table 5 (below).

		Time taken to travel	
Colleges	**Distance to the University campus**	**Car**	**Public Transport**
College 1	15 miles	35–40 minutes	1 hour 20 minutes
College 2	5 miles	20 minutes	40 minutes
College 3	33 miles	1 hour	2 hours 10 minutes
College 4	10 miles	25–30 minutes	50 minutes

Table 5 Mileage between University Campus and the Colleges

This study focuses on the transition of students who articulated from partner colleges to the University under the auspices of the Associate Student Project (key features of that

Project are outlined in Section 1.2). From the outset of their college programme, an Associate Student has had a guaranteed offer of a place on the corresponding degree programme at university, subject to successful completion of their HND and achieving at least a grade B in their HN Graded Unit. Figure 3 (below) shows the five main articulation routes available in 2013 for students intending to progress (articulate) to either 2nd year entry to university after HNC, or 3rd year entry after HND. The Associate Student Project at the University at that time specified 3rd year entry.

The HNC/D portfolio of any regional college in Scotland varies according to student demand and the availability of resources such as specialist lecturers, software and hardware required for the delivery of certain HN subjects. In 2013, no single college offered all the HNC/D programmes listed in Figure 3. Distributing the 54 Associate Student places across the disciplines shown in Figure 3, would have meant that in any HND college cohort, only some would have Associate Student status (and importantly a guaranteed place in third year at University), while others, also intending to articulate would not. Consequently, the University decided to enlarge the pool of guaranteed places to include any students in any of the four college cohorts who intended to articulate to university after their engineering HND. The consequence of this decision was a more equitable college experience amongst HN students intending to articulate to University.

As a part time PhD student in full time employment, I faced restrictions in respect of the amount of time that I had available to spend on the four college campuses. In light of this, I decided to focus my investigation on the two degree programmes which were allocated the most additionally funded places. This means that in 2013 there were other College courses which recruited Associate Students who articulated in academic session 15/16 onto engineering programmes at the University, but which are not included in this study.

In 4.5 I describe my efforts to practice ethically as a researcher, but before any discussion on those ethical considerations, the matter of anonymity arises in the naming of courses used in this thesis. In 2013, the numbers of Scottish engineering university programmes that were allocated additionally funded places in terms of the Associate Student Project was limited. Accordingly, had I identified the names of the HNC/D subjects and their corresponding degree programmes, it would have been straightforward to deduce the identity of the colleges, the University, courses and staff. In order to protect the confidentiality and anonymity of all participants, I do not specify

in the thesis which HNC/D engineering programmes the students were enrolled on in college. Neither do I specify the corresponding Engineering degrees onto which they articulated. Instead, I use the titles HND1 and HND2, which articulate onto BEng1 and BEng2 respectively (see Table 6 below). These titles refer to two of the courses listed in Figure 3 but they remain unspecified throughout the thesis. The decision to anonymise the HNC/D and degree programmes does not compromise the coherence and integrity of this study nor the insights which can be drawn from it. Instead, it ensures that I am able to fulfil my ethical obligations to the research participants (which are discussed in Section 4.5) and that I am able to disseminate my findings without compromising the anonymity of institutions or individuals.

Table 6 (below) shows the relationship between the colleges and the two degree programmes whose academic communities provide the context for the study. Each Associate Student is offered a guaranteed offer into third year of a named degree. Table 6 accounts for only 33 of the 54 additionally funded places made available to the University in 2013. The remaining 21 places were distributed amongst the other degrees shown in Figure 3, but these are not included in this study.

College	HND	Associate Student places	Guaranteed offer on named degree programme
College 1	HND1	5	BEng1
College 2	HND1	8	BEng 1
College 3	HND1	8	BEng 1
College 4	HND2	12	BEng 2

Table 6 Allocation of Associate Student places to colleges and their corresponding degree programmes

In this section, I have explained how I chose the two degree programmes and the associated college HND courses which comprise the context for this study. I have also provided a rationale for using coded names for the University and for the programmes rather than their full disciplinary title. In the section which follows, I explore the qualitative interpretive approaches that I adopted to investigate the students' transition from their college HND courses to 3rd year entry at university.

4.3   Qualitative, interpretive inquiry

This study takes a qualitative, longitudinal, interpretive approach to research which according to Denzin and Lincoln is a 'situated activity that locates the observer in the world' (Denzin & Lincoln, 2011) and which renders the world visible in a variety of different ways. The interpretive approach is one which recognises social reality as being shaped by the socio-historic contexts of human interactions (Cohen, et al., 2000). Researchers working within the interpretive paradigm offer interpretations of the social world which reflect their own social, cultural and political circumstances. In Section 5.3 I discuss my own circumstances as a part-time researcher in the field. I explore the significance of my status as a middle-class female researcher, employed by the University to which the students would be articulating. The overarching methodological approach discussed in this section is framed by an ontological stance in which I acknowledge that in my role as a researcher, I am in integral part of the world that my study focusses on. This approach enables the rethinking of certain aspects of studentship as students make the transition from college to university along the articulation routes introduced by the Associate Student Project. Studentship is a concept which "describes the active and critical engagement of students" as they act upon their learning experiences (Bloomer, 1997, p2) both in-course and out-of-course. My research seeks to open up new opportunities for understanding, rather than establishing a series of truths in relation to studentship and to the research questions which were outlined in section 3.878.

From an epistemological standpoint, this study does not attempt to offer any objective representations of the Associate Student Project, nor of the Associate Students' practices in transition. Instead, it offers situated and embedded accounts of practices amongst actors (such as teaching staff, students, transition support co-ordinators) and artefacts (such as curriculum, campus spaces, digital technologies) in the Associate Study Project activity system, and in the landscapes of practice that students encounter at university. Given the premise that knowledge is situationally created, and that reality is co-constructed by individuals in the research situation (Mcgregor, 2004), an ethnographically informed approach to data generation (LeCompte & Preissle, 1993, Robinson, Segal & Sharp, 2007) created opportunities for interactions between researcher and research participants over a period of two academic years.

Ethnography originated in the 1900s from the classical tradition of anthropology. Early ethnographic reports at that time were seen as factual accounts intended to make the

lives of groups of people typically living in colonial situations around the world visible to middle class western society (Erickson, 2011, p45). Ethnographers conducted interviews, observations and detailed field notes as a way by which the west came to 'see', to 'name' and to 'know' indigenous communities (Tuhiwai Smith, 1999). Modern day ethnography involves the study of social interactions, behaviours, and perceptions that occur within groups, teams, organisations, and communities (Reeves, Kuper, & Hodges, 2008). The development of ethnography from its original objectivist studies of indigenous people was fuelled initially by vastly differing accounts of the same researched group, prompting a critical reflection on how knowledge is produced and the prioritisation of participants' "subjective orientations and meaning perspectives" (Erickson, 2011, p45). Malinowski's (1922) ethnographic account of the Trobriand Islanders, asserts that the final goal of the ethnographer is "to grasp the native's point of view, his relation to life, to realise his vision of his world" (ibid. p24). Today, the legitimacy of the basic assumptions which underpin Malinovski's assertions would be seriously challenged, indeed the role of the researcher who positions themselves as either outsider or insider can be subject to critique. Recent developments in ethnography can be attributed to digital innovations such as audio-visual equipment, the internet, software and images which enable new ways of seeing, experiencing and representing knowledge (Pink, 2012). These have the potential to disrupt previous power relations between researcher and participants. Furthermore, theoretical shifts such as those exploring space, place, power and practices enable different ways of thinking about the 'field'. Given the limitations of time available to spend in the field with students in this study, I adopted the following ethnographically informed approaches which still echo back to Malinowski's (1922) three primary bodies of evidence:

1.   an outline of the organisation of the group that forms the subject of the research
2.   detailed observations made possible through maintaining contact with the participants throughout a two-year period and
3.   a collection of 'ethnographic statements' which take the form of dialogue amongst the group in response to object-oriented focus groups, semi-structured and informal interviews.

Using a combination of interpretive methodological practices (data generation and analysis), I offer a complex, longitudinal and unique representation of the Associate Student Project and the way that it has shaped the experience of Associate Students in college and then at the University.

The credibility of this version of my representation and the contribution that it makes to the field of knowledge about students' transitions, lies in the breadth of data generated over a two-year period, in the creative and respectful approaches that I have taken to engagement with participants, and in the rigour and transparency of the analysis. While a theory-laden deductive study is one which takes a general rule or theory to explain a single case, an inductive one emphasises the significance of individual cases and their potential to generate overarching theory (Alvesson & Skolldberg, 2009). This study adopts an inductive-deductive approach (Cohen et al., 2000, p4) which provides an alternative to any polarised position between theory and empirical data. I take an approach informed by Alvesson and Skolldberg's (2009) reflexive methodology, in which an individual case is interpreted both from an apparently existing pattern and from subsequent new cases. In this way, interpretation is strengthened by new cases and by the iterative adjustment of the overarching pattern as more cases are brought forward.

4.4 Sociocultural perspectives

In this section I begin by justifying my use of sociocultural perspectives in the study. My focus then narrows to specific perspectives which comprise the conceptual framework underpinning this study. The use of CHAT is explained and its limitations discussed. I outline how I have deployed communities of practice and landscapes of practice in Phase 2 of this study to offer a more micro analysis of students' participation as direct entrants at university.

Sociocultural approaches are used in this study to illuminate the ways that students' practice is mutually shaped by individual cognitive functioning, collaborative activity and by cultural, institutional and historical factors (Wertsch, del Rio & Alvarez, 1995, p3). The focus of this study is the students' transitions from college and of their development as they learn how to be university students. Sociocultural views of learning are distinct from cognitivist perspectives which largely see learning as a process of absorption and assimilation.

The emphasis in a cognitivist account of development is upon internalised cognitive processes rather than on mediating constructs in the social world. Consequently, cognitivist approaches to understanding the development of studentship would offer only a partial view of the important relation between context (the Associate Student Project) and students' cognition (Daniels, 2001, p69), failing significantly to align with

the research questions of this study which were first outlined in Section 3.8.1. In contrast to cognitivist theories, sociocultural approaches to understanding learning "explicate the relationships between human mental functioning on the one hand, and the cultural institutional, and historical situations in which this functioning occurs, on the other" (Wertsch, del Rio & Alvarez, 1995, p3). Furthermore, sociocultural perspectives suggest that students' knowledge and understanding are transformed across the different social systems at college and university (Bloomer & Hodkinson, 1997, Bloomer, 1997). Furthermore, it emphasises that artefacts (such as texts and technologies) and people are critical in supporting and enabling learning and transformation (Wenger, 1991).

This study draws from two strands of sociocultural theory namely Cultural Historical Activity Theory (CHAT) (Leont'ev, 1978, Engeström, 1987) and communities of practice (Wenger, 2000). CHAT addresses overarching system-wide questions about the Associate Student Project. It also directs the analysis of the enactment of transition support in the activity system. Communities of practice and specifically landscapes of practice are used for a more micro-level level analysis of student identification with the communities at university. Table 7 Research questions and theoretical perspectives shows how key concepts from each of these theories were used in relation to each of the research questions. Although this table shows the theoretical perspectives as being limited to one or other of the research questions, sensitivities from each of the perspectives are infused throughout the analysis (Chapter 6, Chapter 7 and Chapter 8) and in the discussion in Chapter 9.

Overarching research question **How does the Associate Student Project shape the transition experience of Associate Students from College to University?**	
Research question	**Theoretical Perspective**
How do staff, students and artefacts interact at university and college in order to achieve the local objectives of the ASP.	Elements of CHAT are deployed to offer a macro analysis of the ASP activity system and to highlight tensions and contradictions within it.
How are transition support practices enacted and valued in the transition space between college and university?	Transition support workshops are positioned as mediating artefacts. Contradictions in the activity system give rise to resistance and change. Campus visits are represented as boundary encounters.
In what ways do former Associate Students practice studentship as direct entrants at university?	Concepts from Wenger's social learning theory, specifically landscapes of practice, offer a micro analysis of students' transition to university, and they make studentship practices visible.

Table 7 Research questions and theoretical perspectives

4.4.1 CHAT and its use in this study

For the purposes of this study, the Associate Student Project is conceptualised as an activity system. The fluidity of the elements of CHAT and the multivoicedness of an activity system (Engeström, 1987) make it possible to vary the subjects of the analysis to recognise that everyone involved in the activity system encounters the transition space in different ways. However in this study, the students are the subjects, and lecturers, managers and transition support co-ordinators are positioned as part of the community. I considered separating the ASP into two activity systems, one for college and the other for university with the transition space located in between them. This would have been consistent with Engeström's third generation activity theory (Engeström, 1987). However, this approach would have obscured the fact that the Associate Student Project is intended to create an educational experience for students in which the transition from college to university is not a linear one taking place at the end of the HND year and the start of third year at university. Instead, the Associate Student Project positions students as already being a part of the transition space by dint of their dual enrolment as college students and university Associate Students. A further reflection of this diffuse transition experience is the programme of support interventions which take place most often on University campus even though students are still in the college phase of their programme. In light of these considerations, I made the decision to represent the Associate Student Project as a single activity

system extending across activities and practices enacted in both college and university (see Figure 4 below). This is consistent with an application of second generation of activity theory and it enabled me to analyse the interrelationships between the elements before the students made their transition to university (Dracup, Austin, & King, 2018).
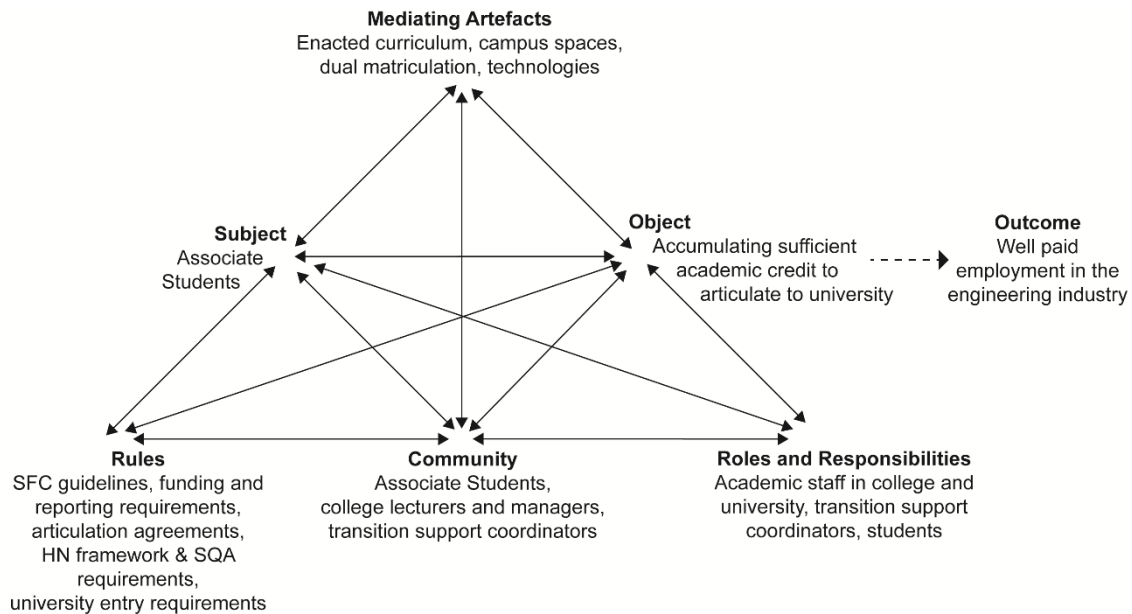
Figure 4 Associate Student Project—Activity System

The second generation of CHAT provides a theoretical framework for this study making it possible to analyse how the subjects and their context co-evolve within the Associate Student Project activity system. However activity systems can also be conceived of as intertwined with each other where each component in one activity system can be the object or outcome of another system (Foot & Groleau, 2011). For the purposes of this study, the focus is on the single ASP activity system, although I recognise that this system is not autonomous and that many interconnections with other systems could be explored. There are three key concepts associated with CHAT which warrant further explanation; object-oriented activity (represented in the top triangle as depicted in Figure 4 , mediating artefacts (see Figure 4) and contradictions (which refer to problems, or conflicting factors). These three concepts are briefly explained and their significance to the study is outlined.

An 'object' in an activity system in a CHAT framework motivates human effort and describes the particular direction of activity. Different kinds of activity are distinguished

by their objects (Sannino, 2016), but activity in second generation CHAT generally speaking centres on human collectives rather than individuals (Foot, 2014). It is however possible to take an individual perspective to illuminate particular activities at certain points in the analysis (Roggoff, 1995). Objected oriented activity therefore refers to mediated actions undertaken by groups driven by their goals or motives. In a manner consistent with Barab's (2002) study of undergraduate astronomy students (outlined in Section 3.3.3) exploring object-oriented activities in this study of student transitions involves describing and analysing interactions among subjects, objects and motivations in their socio-historical context. The activities in this current study take place in college, in university and off campus (students' homes for example) and have the students or the teachers as the subjects of the activity. The 'outcome' of the object is the result or consequences that the subject finds once the activity is completed (Engeström, 1993). In this study, the object of the Associate Student Project is to accumulate sufficient academic credit to graduate, and the outcome is to gain well paid employment in the engineering industry.

The mediating artefact is a fundamental concept in sociocultural theory. Vygotsky argued that social interactions are central to cognitive development and that semantic artefacts, namely signs (such as words and engineering drawings) and tools (such as books, campus spaces and digital technology) can be used as instruments of psychological activity such as learning (Conole, 2013). By identifying, comparing and exploring mediating artefacts which shape the practice of studentship, the less well known (as well as the familiar) practices of studentship are foregrounded in this study. Engeström (2005) distinguishes between three types of mediating artefacts: primary, secondary and tertiary. Table 8 Types of mediating artefacts with corresponding examples) is adapted from the work of Hasan, Kazlauskas and Crawford (2010) and it provides a definition of each of the three types of mediating artefacts with corresponding examples from my study. The mediating artefacts that are particularly significant in this study are dual matriculation, curriculum, teaching and transition support workshops. These act as resources for the subjects in achieving the outcome of their activity (Yamagata-Lynch, 2010).

Types of mediating artefact	Definition	Significant examples from this study
Primary	Physical objects directly used in activity	Online resources, course booklets, curriculum spaces on campus
Secondary	Psychological tools, (such as ideas) which influence the behaviour and psyche of the subjects (Hasan, Kazlauskas and Crawford, 2010, White, Burger and Yearworth, 2016, Dennehy and Conboy, 2019)	Teaching Feedback Transition support workshops
Tertiary	Imaginary artefacts, less tangible than primary or secondary (Hasan, Kazlauskas and Crawford, 2010, White, Burger and Yearworth, 2016, Dennehy and Conboy, 2019)	Learning and teaching culture amongst students and lecturers at college and at university Dual matriculation

Table 8 Types of mediating artefacts with corresponding examples

One of the key propositions of CHAT is that human activity triggers tensions caused by contradictions within and amongst the components of the activity system. Subjects attempt to make changes to the activity system in order to alleviate the tensions that originate in contradictions (Foot & Groleau, 2011) and these shifts lead to changes in activity and practice over time. Engeström (1987) elaborates four levels of contradiction: the first level is a primary contradiction which is constantly occurring within each of the components in the system. For example, contradictions may arise between different members of the community such as College Lecturers and transition support co-ordinators. Secondary level contradictions occur between the components in the system. An example of a secondary level contradiction would be the rule about the limit to the number of fundable HN credits, specifically in Engineering Maths, per student in college. This contradicts the entry requirement (rule) to university which is higher than that limitation allows. The tertiary level appears when the object or motive of a culturally more advanced form, in other words a new approach, is introduced into the dominant activity space (Roth & Lee, 2007) as a way of achieving the expected outcomes (Engeström, 1987). Lastly, the quaternary contradictions are those that emerge in interactions between activity systems (Engeström, 1987), such as between separate college and university activity systems. Quaternary contradictions "take into consideration the essential 'neighbour activities' linked with the central activity which is the original object of our study" (Engeström, 1987, p103). These levels of contradiction will be deployed to deepen the analysis and discussion in this study.

4.4.2   Limitations to the use of sociocultural perspectives

I have identified three considerations from the literature which are expressed as limitations of CHAT analysis (Yamagata-Lynch, 2007 and Choi and Kang, 2010) and that are relevant to its use in this study of the Associate Student Project. The points are briefly outlined below and together they explain the decision to include an additional theoretical perspective in the overall conceptual framing of this study.

The first point is inherent in CHAT analyses and in the difficulty of representing complex human actions, goals and interactions as activities in identifiable units. There is a risk that in trying to construct the activity system from the rich and complex data set that was generated over a two year period in this study that the data may be oversimplified (Yamagata-Lynch, 2007) in the analysis. Furthermore, the real world setting is far more complicated and dynamic than the two-dimensional triangle that Figure 4 represents. A second consideration which follows on from the first relates to the fact that activity systems are intended to be descriptive, and accounts of activity systems do not provide details about the inclusion and exclusion criteria that would typically be associated with systematic analytical procedures in qualitative studies (Choi & Kang, 2010). But this weakness of an activity systems analysis is also one of its strengths since it provides a means for "researchers to examine how complicated real-world data sets are intertwined with their context beyond individual activities" (Yamagata-Lynch, 2007, p479). Since a CHAT analysis produces descriptive accounts, the outcomes from this study are not intended to be generaliseable. However, the analysis illuminates tensions and contradictions which may speak to other projects and practices whose desired outcome is to increase articulation from college to university. The third and final limitation of CHAT relates to my decision to take the Associate Student Project as the primary activity system. This perspective affords a valuable system-wide description, but it left the community component of the Associate Student Project relatively opaque. During the interviews and observations in the Phase 2 of data generation, interactions within the community, specifically amongst the former Associate Students (who were by then direct entry students), produced interesting and even unexpected perspectives. These could best be illuminated and theorised using concepts from practice theory and in particular Wenger's landscapes of practice. A second level of analysis, at the more micro-level supplements the primary system-wide analysis revealing Associate Studentship practices in university that have until now remained obscure.

4.4.3 Introduction to practice theory and its use in this study

Practice in this study is conceived of as much more than what Associate Students, lecturers and transition support advisors do or produce, since it is also concerns what they think, say, imagine and feel (Nicolini et al. 2003). The following concepts drawn from practice theory are all used to structure the data: discursive practice, rules, routines, resources and tacit knowledge. The social theorist whose voice speaks most prominently in this study is Wenger, and it is to his depiction of communities and landscapes of practice that I now turn.

Lave and Wenger's notion of a community of practice sees practice and learning in relational terms. The relations are those amongst people and activity and other relevant communities of practice (Lave & Wenger, 1991). Communities of practice have three separate attributes: mutual engagement, a joint enterprise, and a shared repertoire. Mutual engagement is an essential feature of membership of a community of practice since it recognises that participants must practice together, sharing understanding and negotiating meanings about whatever it is that they do together. Mutual engagement signifies that the participants are more than just a collection of people (Associate Students for example) in the same physical or virtual space drawn together by some shared categorisation or other. Mutual engagement involves recognising their relationship with one another as fellow practitioners. Joint enterprise is a further source of coherence amongst participants reflecting a negotiated response to the community's local conditions. This shared response to the situation that the community finds itself in, irrespective of whether the local conditions are externally imposed or by the members themselves, evolves over time. It is the sense of joint enterprise which engenders mutual accountability amongst the members of the community of practice, giving rise to often unspoken agreement about decisions such as what to pay attention to, what can safely be ignored – all of which becomes enacted in practice. The third dimension is the development of a shared repertoire which evolves over time as a result of engaging in the practices associated with a joint enterprise. The repertoire comprises shared resources such as 'words, artefacts, gestures and routines' (Wenger, 1998, p.83) which reflect the community's history of mutual engagement, but which can be repurposed in the production of new meanings as the community's practice evolve.

The third research question in my study uses these concepts to frame the analysis and discussion of the students' participation in the landscapes of practice at university.

Wenger-Trayner and Wenger-Trayner (2015) recognise that a single community of practice fails to portray the complexity of a body of knowledge, which, they claim is distributed across many communities in a landscape of practice. In this study, the landscape includes communities of teachers in college and in university, transition support advisors, traditional-entry students who have been at university since first year, and of course the Associate Students who become direct entrants into third year of university. Direct entrants' trajectory through the landscape of practice at university is about more than participating in a single community. It involves encountering participants at the boundaries of other communities and becoming a person who inhabits and shapes their landscape of practice. While there are some communities of practice with which the participants will actively engage and identify, there are others with which they may dis-identify (Crafter & Maunder, 2012 Hodges, 1998).

4.5 Ethical Considerations

Research ethics are intended to address the asymmetry of power between the researcher and research participants (Juritzen et al., 2011). Ethical considerations in this project are intended to ensure that the balance between the risk of harm to the participants on the one hand, and the potential benefits of the study (Lincoln & Tierney, 2004) on the other is configured so as to minimise risk or harm to the participants. To achieve this end, researchers have a responsibility to think beyond the principles-based guidelines such as those produced by the UK Economic and Social Research Council (ESRC) (ESRC, 2015) and British Educational Research Association (BERA (British Educational Research Association), 2018) although there is no doubt that these provide a useful starting point for ethical consideration. Hammersley (2009) asserts that the principles endorsed by regulations and codes of ethical conducts are not sufficiently situated to respond to the tensions which arise in the diverse contexts of qualitative studies (Boddy, 2016, Hammersley, 2009). Hammersley (2009) rejects the authority of ethics committees to make decisions about what is and is not ethically justifiable qualitative research. This leaves the ultimate responsibility for maintaining ethical rigor with the researcher (Morse, Barrett, Mayan, Olson, & Spiers, 2002). Notwithstanding, I sought supervisory approval and in August 2014 I was granted approval from the University of Stirling's then School of Education Research Committee (Appendix 1). Ethical approval was also sought from the School of Engineering at the University involved in the study. This was achieved by submitting an Ethical Approval Self-Assessment form (Appendix 2) in August 2014, and the then Faculty Ethics Committee granted approval. Institutional approval is not only an

indication that the risks versus benefits analysis has been carried out and approved, but also that institutional support is extended to the researcher should problems arise in the project. While institutional approval of the research design marked an important milestone in the progress of the project, it was only the start of the process of ethical considerations which were to continue throughout the phases of field work, analysis, the preparation of the thesis and wider dissemination of the findings.

Tangen (2014) identifies three interrelated domains of research ethics which can be used to open up ethical considerations across an entire study. The domains are (a) ethical responsibility towards research participants, (b) ethics within the research community, and (c) ethics related to the value of research for policy-making practice and the quality of education. The interplay between these domains at each of the research stages is made visible by the use of a matrix which lays out key considerations in each domain. Completing the framework enables a holistic and reflexive ethical orientation which balances the need for research-based knowledge with the need to protect the interests of participants across all the stages of the project. Table 9 below uses Tangen's framework to illustrate the way in which the domains of research are operationalised in the context of the research project outlined in this thesis.

Stages in the research process	Ethical responsibility towards research participants (domain a)	Internal criteria of research quality (domain b)	The need for new knowledge that is externally relevant (domain c)	
			Applicability	Independent critique of policy and practice
Planning project	Taking Associate Student practice as the context risks making this group feel marginalised or 'other' as they are transformed into 'subjects' in a research project. But the research project signifies to all of the participants, (students, academics, co-ordinators and curriculum managers) the perceived importance of the students' transition from college to university and the potential benefit of the study to future student cohorts.	Use of Maxwell's interactive research design (2013) ensured that well-founded research questions are conceptually framed drawing from CHAT (Engeström, 2000) and landscapes of practice (Lave & Wenger, 1991). These are explored in the context of a methodology which draws upon ethnographic approaches using creative visual methods for generating empirical material in focus groups and semi-structured interviews over two year- long phases of data collection. Each stage of planning was subject to research supervision and approval.	This research takes the transition of the first group of Associate Students as its focus. Many other groups will follow on this articulation route. New knowledge about this transition from college to university could benefit future groups of students, shaping practice of all the stakeholders involved in supporting transition on these articulation routes.	The study explores how the Associate Student Project shapes the practice of studentship in college. As researcher, I do not have typical insider status in college, the Engineering Department of the University, nor with policy makers in Scottish Government. The University sponsored the PhD study by paying the fees but I was enrolled in the University of Stirling. The sponsoring University took no part in the selection of the research focus for the study.

Collecting data, analysing, reporting and disseminating the project	Assurances of confidentiality were made to all participants, but anonymity for institutional settings could not be guaranteed despite the application of pseudonyms. Curriculum managers in Colleges and programme leaders in the University expressed no concern about the possibility their institution could be recognised, none of them anticipating the possibility of reputational damage.	Each of the approaches to data generation was piloted and adapted after a process of researcher reflection. Creative visual methods were introduced only after the original focus group approach was not effective in eliciting dialogue amongst the students in the pilot phase. In piloting the classroom observations, the use of a checklist was replaced by the taking of freehand notes, which were then worked up into field notes for each visit.	The QAA Enhancement Theme (2014 – 17) on student transitions provided opportunity to engage with academics practicing in this area and to consider alternative perspectives on data and practices. Feedback from presentations and dialogue at conferences have shaped analysis and thinking throughout.

Table 9 General ethical matrix (adapted from Tangen 2014) identifying key ethical considerations in the project

4.5.1   Practicing ethically

Tangen's ethical matrix (Table 9 above) is certainly useful as a means of laying out in broad terms significant ethical considerations, but it does not emphasise the importance of researchers' "principled thinking" which is emphasised by Pring (2015, p183). Educational research is an enterprise associated with moral and intellectual virtues that inform ongoing decision making, especially where difficult ethical choices are implicated by the research design or process. Cannella and Lincoln (2011) take Foucault's construction of 'technologies of the self' as the basis for exploring forms of governmentality (in which individuals are guided to govern themselves) which are critical in relation to research ethics, and those which are not. Tangen's matrix would not be seen as critical in these terms since for example, the domains conceptualise research in a manner which unquestioningly legitimates the power and privilege of the researcher. It was not immediately possible to effect a shift in the power balance between the researcher and those who were the subject of my research. Friere (1993)

however, asserts that researchers should engage in the goal of critical consciousness involving a reflective awareness of the power and privilege embedded in social relationships. In fact, by conducting interviews and focus groups and placing participants under observation during fieldwork in the colleges, I unwittingly reinforced my own privilege as a researcher and member of staff in a university. The balance between acting ethically with ever more critical awareness while still discovering new knowledge in the social world is a precarious one. By paying careful attention to the ESRC principles (ESRC, 2015), BERA's guidelines (BERA (British Educational Research Association), 2018), and through seeking supervisory advice to enhance decision making, it was possible to move cautiously into the field. The ESRC's 2015 framework for research comprises six key principles of which two were of particular significance for this study and are considered below.

4.5.2 Maximising benefit and avoiding harm

There are always consequences associated with being the subject of social research, most of which are impossible to anticipate accurately and not all of which will be positive. Latour (1999) illustrates how participants are unknowing when they take part in research as he argues that each of the stages in the research process involves a degree of transformation. Students in the research process of this study are transformed from being a 'student' to being a 'member of a focus group' or an 'interviewee' and we can never know for any individual what the effect of that transformation will be. However, researchers can put safeguards in place to minimise the likelihood that the effect will be negative. In Phase 1, at focus groups with students in college, participants were invited to imagine how they would be as undergraduates nearing the end of their degree programme and to discuss concerns about making the transition to university. These questions could have given rise to a degree of anxiety and stress about the future, as well as physical discomfort from tiredness and hunger due to the students shortening break times (or missing them altogether) in order to engage with the research activities. On the benefit side, these research encounters created the opportunity for the group to reflect, share concerns and discuss how they might address the challenges of transition. The refreshments that I provided to allay discomfort from hunger and tiredness (sandwiches, sweets and drinks) were always greeted positively. After the focus groups, the participants continued to talk amongst themselves and where necessary assisted in rearranging the furniture in the classroom; there was no visible sign of any distress.

Five different institutions agreed to contribute to the study (four colleges and one university), and there was always the potential for reputational damage or even institutional harm. An example of harm would be in the research findings contradicted or called into question claims that the institutions make for themselves, which might in the longer term affect their ability to secure funding, or even to recruit staff or students. Early results of the analysis have been shared with curriculum managers and articulation support co-ordinators for review, and no concerns have been raised by them about the findings. Although no harm or maleficence has been identified to date from this study, it is still recognised that researchers cannot slip into the field and back out again leaving everything exactly as it was, since their presence inevitably creates some sort of rupture in the dynamic flow of practice in that field. Given these risks and my inability to guarantee positive outcomes for all of the stakeholders of the project, the research itself has to be justifiable and the researcher has to have good reason for undertaking it (Pring, 2015, p180). Table 9 above illustrates that these conditions have been met for this study.

4.5.3   Sampling strategy

A fixed purposive sample strategy was adopted in this study which indicates that the sample was fixed early on and recruited strategically. The purposive sample comprises members who shared key characteristics that made them directly relevant to the research questions (Bryman, 2016). This approach was adopted since Associate Students' experience and their practice is a central focus for all the research questions. Consequently, there was only a limited number of data sources who could contribute to the study. The sample comprised members who shared the key characteristic of being Associate Students on engineering degree programmes, or, staff in college or university directly involved in the teaching or supporting the practice of these students. Purposive sampling places the emphasis on data saturation, continuing to sample until no new substantive information is required (Etikan, 2016). The sample size is determined by the data saturation rather than by its statistical power and is therefore appropriate the context of this study where the number of cases being investigated is small.

In recruiting the fixed purposive sample, researchers typically identify key informants who play an important role as a guide to gathering the purposive sample (Tongco, 2007). The transition support co-ordinator at University fulfilled that role in Phase 1 by making introductions for me with curriculum managers who acted as gatekeepers in each of the four colleges. They also effected introductions in Phase 2 to the lecturers

on the two engineering programmes. However, given the deliberate choices that are made by the researcher and their key informant about the suitability of potential participants for membership of the fixed purposive sample, errors of judgement may be made by the researcher leading to high levels of researcher bias. This disadvantage was mitigated due the clarity of the inclusion criteria for this study (Sharma, 2017). Given the limited number of potential sample members, gaining access to the Associate Students while they were studying in college was of critical importance.

4.5.4   Gaining Access

Different approaches were required to gain access to participants in Phases 1 and 2. Given the risk of observer bias in establishing a fixed purposive sample (described above), details are provided of the various routes taken in order to access participants.

In Phase 1, gaining access to Associate Students was a lengthy process which was initiated at an Associate Student Project meeting held at the University in May 2014, attended by college and University transition support co-ordinators. At that meeting, the coordinators agreed in principle to their college's support of the study and they provided names and contact details for the relevant Curriculum Managers. In each college, it was the Curriculum Managers who could provide access to the engineering Associate Students' course lecturers and to their students. In Phase 2, the University transition support coordinator provided names of programme leaders for both degree programmes. Personal email addresses were provided by Associate Students themselves in Phase 1 and I used those addresses to invite their participation in Phase 2 of the study. The process of gaining access to participants in college is summarised in Figure 5 (below).
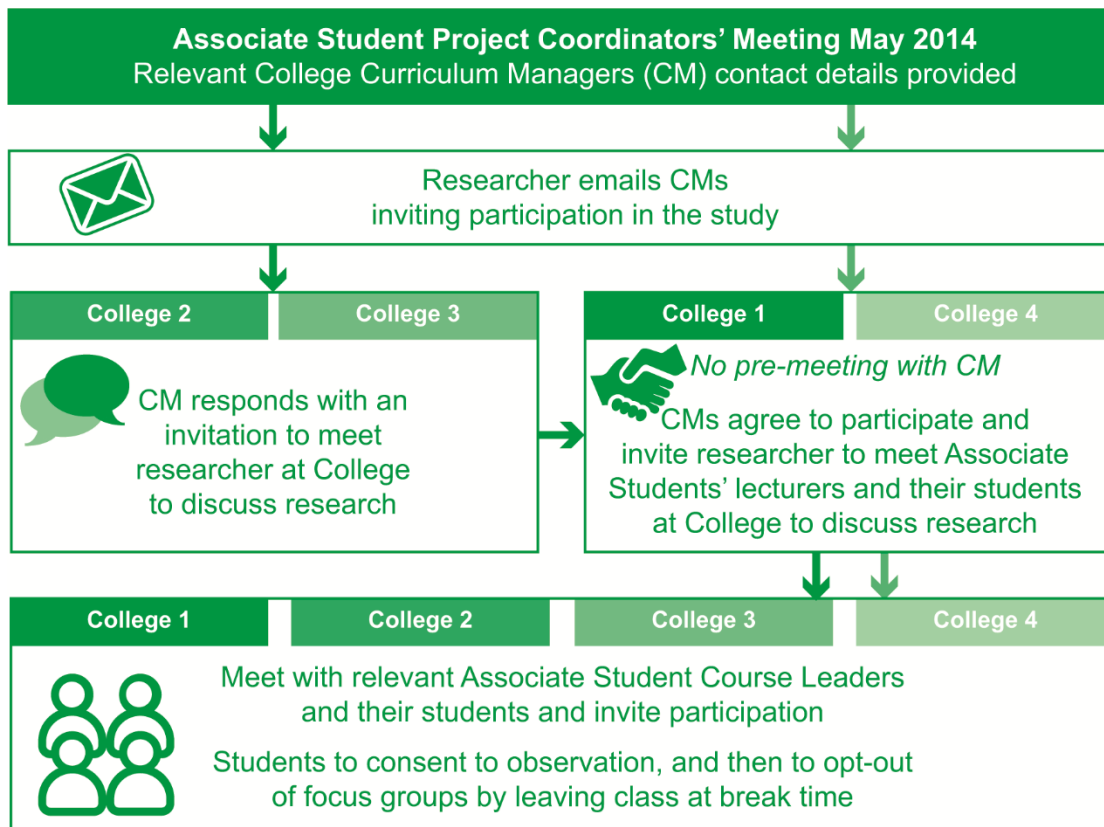
Figure 5 Route to gaining access to participants (Phase 1)

Although I was provided with contact details of the relevant managers in colleges, gaining access to and recruiting participants from each of the layers of staff between me and the Associate Students was difficult to achieve. Bryman (2016) comments on the hostility or indifference towards their research that ethnographers commonly face. But given the demanding roles that academics face in both college and university, the length of time many potential participants took to respond to my correspondence and to schedule a meeting with me is not surprising. On meeting Mangers in Colleges 2 & 3, it appeared that there may have been concern that this project could be intrusive and disruptive of students' programmes of study. Once I had explained the project and the data collection methods that I intended to deploy, access to the relevant groups was granted. This contrasted with Colleges 1 & 4 who viewed the research with enthusiasm, being pleased with the interest shown in their programme. I was always introduced by management to college staff and students as being from the University rather than as a researcher, whereas I preferred to introduce myself as a PhD student from the University of Stirling, only disclosing my relationship with the University later in any conversation.

In Phase 2 of the study, securing access to relevant University Lecturers was far more challenging despite, or perhaps because of, School senior management support for the research. Their interest in the study was far more muted than had been the case in colleges. The reasons for this are valid and complex, being beyond the scope of this thesis. I required information from Programme Leaders about the timetable for the former Associate Students coming from college. Eventually I was able to meet the programme leaders and to start to build a rapport with them which allowed me to recruit them to the study and to meet up again with the former Associate Students by then studying as direct entrants to their degree programmes.

4.5.5 Informed consent

The principle of voluntary and informed participation is intended to redistribute the power between the powerful researcher and the less powerful participant by protecting the rights and welfare of the individual (Boulton & Parker, 2007). Securing informed consent could appear to be a straightforward transaction typically undertaken by a willing participant reading a research information sheet and signing a separate consent form. But operationalising this principle in an ethical manner was complex and challenging (Alderson & Goodey, 1998) given the varying power differentials between myself as researcher, management, staff and students. In Phase 1, Curriculum managers fulfilling the role of gatekeeper at each college location provided access to relevant course leaders of Associate Students. I contacted those Programme Leaders by email inviting them to opt-in (Boddy, 2016, p210) to the study which they all did. However, the Associate Students in these class groups were only given the opportunity to opt out of the study at the point when I was given access to meet them in their classrooms. For focus group activities in both Phase 1 & 2, students could choose to remain in class to join the group, or leave depending on whether or not they wanted to participate. Despite my best efforts at providing information about the potential risks and benefits of the study, and to avoid taking any actions which might unintentionally coerce potential participants into consenting, the researcher can never anticipate all of the unspoken reservations that a participant may have. This is especially so when an opt-out strategy is adopted (Boddy, 2016). I gained the impression that consent to participate was offered on the basis of politeness rather than on their trust that I would protect their rights in the research situation. Tyldum (2012) observes that agreeing to participate in research with no expectation of personal benefit can be compared to volunteering, where people participate for the good of the community or their group. This appears to have been the case with many of the participants in this study. In

Phase 2, all participants were contacted by email, since by then I had names and email contacts of the former Associate Students and relevant programme leaders at University. This opt-in arrangement avoided significant group pressure being placed on the students to participate.

Although potential benefits and risks associated with taking part in the study were outlined orally and in writing there was always the possibility that participants perceived unspoken risks if they did not agree to take part. When the study commenced in 2014 in Phase 1, the Associate Students were in a critical year of study prior to articulating on to their named degree programme at University. They could be reasonably expected to want to create a positive impression about their confidence in making the transition to University. The same applied to their programme leaders who were enthusiastic about participating in the study, perhaps as a means to create a positive impression about their College course and their students.

A further complexity arose in achieving a balance between acting ethically in providing sufficient information about the risks involved in taking part in the research while at the same time avoiding the provocation of unnecessary anxiety since this could have deterred potential participants from agreeing to take part (Homan, 1992). Lawton (2001) argues that information giving and consent should be seen as a process rather than a one off event. In trying to respect the process of giving and receiving of consent, but also to avoid continually raising the issue of consent every time I interacted with the participants, I secured at least some degree of 'consent' by way of signatures on the ethically approved consent form at the outset of Phase 1 of data generation, and then again at the start of focus groups and interviews throughout Phases 1 and 2. The Consent form and Information Sheet is provided at Appendices 3 and 4. However, Miller and Boulton (2007) argue that typical conceptions of consent pre-supposes rational Western subjects for whom the concept of informed consent and the procedures for documenting it are unproblematic. If participants' interests are to be genuinely protected, the relationship amongst researcher, participants and the ethics committee must be underpinned by trust. In the days when I first met the students, they had no basis on which to decide whether or not to trust me or my reassurances of confidentiality and anonymity. I argue that by disclosing the fifteen years that I had spent working in the College sector prior to employment in the University, I was able to reassure the potential participants of my interest in their practice and to reassure them that their issues and concerns would be respected and properly acknowledged.

Lack of trust was especially significant for those people who had had no previous experience of being a research participant (some staff and all students). I took great care to explain the limits of the anonymity of the Colleges or of the University involved in the study. It is a matter of public record (Scottish Funding Council, 2018b) which Scottish Universities were allocated additional funded places under the auspices of the Associate Student Project in 2013 and it would be possible to guess correctly the identity of the University, and from there to deduce the identities of the four colleges. I always carefully explained this possibility to all participants in both Phase 1 and Phase 2 of the study, and while I was able to make a valid guarantee that I could protect participants individual identities through the use of pseudonyms (and have done so) and by anonymising the specific engineering college courses and degree programmes, I did not make claims of anonymity which could not be substantiated in any dissemination of the study.

4.6   Chapter summary

This section explains the articulation routes which connect HN courses in four colleges with undergraduate study at the University. The methodology adopts qualitative, longitudinal, interpretive approaches drawing from two strands of sociocultural theory each of which provides a different level of analysis. CHAT establishes a macro-level analysis of the Associate Student Project whereas landscapes of practice enable a more micro-level analysis of the students' engagement with the University as direct entrants to third year. The rationale for my use of sociocultural theories is justified and their limitations are explored. The ethical considerations which guided my practice as a researcher are presented in this chapter although my ethical stance is apparent throughout the thesis.

Chapter 5　Research methods

5.1　Introduction

Qualitative research is characteristically multi-method in its focus (Bryman, 2016, Denzin & Lincoln 2011). The range of methods and empirical practices employed in this study are all consistent with ethnographically informed approaches. Different approaches were adopted for different categories of research participants: semi-structured interviews and observations for staff, and object elicitation interviews, focus groups and observations with students. The overall approach that I have taken is one that is reflexive (Sikes, 2006), democratic (Freire, 1993) and ethical (Cannella & Lincoln, 2011), securing an in-depth understanding of the Associate Student Project and the students who make the transition from college to university under its auspices. The experience for Associate Students in this qualitative enquiry is seen as being multi-layered and complex. This warrants the longitudinal, naturalistic and emergent strategy to data generation which is described in the sections which follow.

5.2　Research participants

In this section I provide more detail about the scope of the study and its participants. Transition from college to university in this study is seen as a process which is emergent, ongoing and non-linear (Taylor & Harris-Evans, 2016). This process could not be sufficiently explored by generating data from a single point in that process (Bryman, 2016). Instead, the design is a longitudinal study involving multiple research methods spanning two academic years (2014/15 and 2015/16). This created opportunities to build rapport with staff and students in college and university settings and to meet students on several occasions during that period of time. The sample for the study draws together four categories of research participants. The first category comprises the students, and the other three categories I refer to collectively as 'staff':

- Students (ASP Students), initially Associate Students who become direct entrants at University
- Lecturers of the Associate Students in college and then Lecturers of the direct entrants (DE) in university,
- Transition support co-ordinators (TSC) who take responsibility for leading or co-ordinating the Associate Student Project for Engineering in college and/or university

- Management who are curriculum managers in college or programme leaders in university who manage or lead the engineering programmes on which the students study.

The data was generated in two phases: the first phase (Phase 1) while Associate Students were in their college settings, and the second (Phase 2) when they arrived at University as direct entrants into third year of engineering degree programmes. Table 10 provides a summary of the participants by role in each phase of the study. Table 11 shows the gender of staff and student participants. All of the student groups were male. I encountered only one female student during my visits to engineering classrooms in all four colleges, and she did not sign up for the study. The gender imbalance in the sample reflects the persistent underrepresentation of women in undergraduate engineering programmes in the UK and internationally (Blair et al., 2017, Roger et al., 1998). Table 12 shows that in Phase 1, 17 students were drawn from Colleges 1, 2 & 3 where HND1 was delivered, and 6 students from College 4 where HND2 was delivered. This imbalance reflects the fact that College 4 was the only institution offering HND2 in 2013/14. Table 13 shows that in Phase 2, the number of participants in each of the degrees does not reflect the proportions from Phase 1. This is due to my being able to recruit only 7 of the former HND1 group to Phase 2 of the study, whereas I was able to recruit 5 of the former HND2.

The imbalance between the number of participants studying on the two HND groups has meant that I have not carried out any numerical analysis of the differences between the two groups. Small numbers of participants in both phases necessitated further anonymisation of data to reduce the likelihood of identification of individuals by others although I am happy to accept that participants may recognise their own words. The decision not to compromise anonymity by linking personal information (including demographic and progression data) with participants' words, imposes limitations on the current analysis (Wintrup, James, Humphris, & Bryson, 2012). But given the sociological rather than psychological focus in this study, I am confident that the findings and their implications are not compromised by this decision.

		Phase 1 (HND at College)	Phase 2 (3rd year at University)	Total number of participants
		N	N	N
Role	Staff	10	6	16
	Student	23	12	35
Total participants		33	18	51

Table 10 Participants by role and phase of study

			Phase 1 (HND at College)	Phase 2 (3rd year at University)
			N	N
Gender	Staff	Male	7	4
		Female	3	2
	Students	Male	23	12
		Female	0	0
Gender totals			33	18

Table 11 Participants by gender and phase of study

Institution attended in Phase 1	Staff	Students	Total participant in each institution
	N	N	N
College 1 (HND1)	3	6	9
College 2 (HND1)	2	8	10
College 3 (HND1)	3	3	6
College 4 (HND2)	1	6	7
University (transition support co-ordinator)	1	N/A	1
Total participants	10	23	33

Table 12 Number of participants attending each institution in Phase 1

Degree Programme	Staff	Students
B/ENG1	1	7
B/Eng2	2	5
Both programmes	3	
Total participants in Phase 2	6	12

Table 13 Number of participants studying, teaching or co-ordinating transition support on each degree programme at University (Phase 2)

The Associate Student Project was initiated by Scottish Funding Council early in 2013 (Scottish Funding Council, 2013) and this study is timely since it includes the participants who were the first group to be designated as Associate Students. The data generation took place either side of their transition to university; during their HND year and then their first at university.

Different approaches to generating data were deployed for each group of participants. In Phase 1, initial observations in class at each college location were followed by focus groups for students and semi-structured interviews for staff. It had always been my intention to continue with that pattern in Phase 2, but I encountered difficulty in recruiting the former HND1 students for focus groups. I was able to arrange to meet them individually for interviews. The former HND2 students agreed to attend for a focus group therefore I did not have to conduct individual interviews with them. Table 14 (below) summarises the data generation methods deployed in Phase 1 and Phase 2.

	Phase 1 (Colleges) 2014/15		Phase 2 (University)		Total
	Staff	Students	Staff	Students	
Semi-structured Interviews	5	–	6	7	18
Focus Groups		4	–	1	5
Informal interviews and classroom observations	7		5		12

Table 14 Summary of data generation methods and research participants

In the following section, I begin with an introduction to the use of creative visual research methods and I then explain the various ethnographic approaches that I took to generate data for this study.

5.3   Observations, field notes and my position in the field

Observation has been a key source of data throughout both phases of this study. In the early days of being given access to the college sites (discussed in sub-section 4.5.4), opportunities to observe staff and students were arranged by appointment but when Associate Students came to the University for campus visits, I was able to freely observe the students and their interactions with each other and with staff. In Phase 2 classroom observations were made by appointment, but informal interaction with the students occurred throughout the year. In this section I explain the specifics of my approach to observations, and provide details of the strategies adopted in the preparation of field notes.

To be an observer of any culture rather than a participant in it suggests, according to Crang and Cook (2007), a detached stance in which the researcher watches activities as they unfold, and records goings-on in the form of field-notes, tallies, drawings or photographs. But typologies of observation roles describing different degrees of involvement in social settings (Adler & Adler, 1998) offer a far more nuanced understanding of what it means to generate data through observation. The use of the term 'participant observation' acknowledges that a researcher does more than observe the flow of events (Adler & Adler, 1998). Instead, the researcher interacts with the participants, disrupting to some degree the natural pattern of behaviour which would have occurred in the setting if the observer had not been present. Participant observers establish and sustain "a many-sided and situationally appropriate relationship with a human association in its natural setting for the purpose of developing a social scientific understanding of that association" (Lofland et al., 2006, p17). Adler and Adler's (1998) peripheral membership role denotes one which closely reflects the researcher relationship that I established with participants in colleges and at the University.

Peripheral membership in this case involved observing and interacting with the setting closely enough to be able to establish a representation of the identity of the group, but without participating in any of the activities that constituted the core of group membership. Angrosino and Rosenberg (2011) suggest that researchers are not adopting predetermined roles, but rather establish their membership in negotiation with

the people who are already members of the community. The researcher therefore generates the context of the observation by being present with the participants.

I believed that my gender and the nature of the practice being undertaken by the groups influenced the nature of my membership role (Schultze, 2000). When I initially met the students, they expressed a degree of suspicion when I asked them for biographical details such as their education background and even their date of birth. Consequently, we agreed that their age category and gender would be sufficient detail for the purpose of this study since the focus is on the collective group of Associate Students in each college rather than on individuals. Their ages ranged from 22–44, with only two being over the age of 30 (see Table 11 Participants by gender and phase of study) and all were male. This contrasts with my being a female researcher, middle-class, with no engineering education background and in my 50s. I became particularly aware of gender roles when it came to building rapport with the groups after meeting them initially. I found it challenging at first to establish common ground on which to build a productive, trusting research relationship that is fundamental to interpretive inquiry. But my genuine interest in the students' experience and my presence among them on campus at college and then at the University ensured that as I became more familiar with their context and more confident in my role as researcher I came to understand that any difficulties arising from our difference had been more imagined than realised. Evidence of the trust and rapport established between myself and the students comes from incidents during Phase 2 where the group who were by then studying as direct entrants to university, chose to join me at my table when I was having lunch in the Refectory on campus. At other times, they offered me a place at their table at lunchtime and greeted me when we encountered one another on University campus. I am not suggesting that I became a part of that group in any sense, but I do believe that we built some rapport and that the students came to appreciate and to trust my interest in their experience as Associate Students and then as direct entrants.

I generated two categories of data from the observations: initially, fairly unfocussed base-line data about the Associate Students' setting in college and university, and subsequently more focussed data which explored certain practices, feelings, and places. In every setting, after having gained informed consent and access to the Associate Student group (and direct entrants as they then became) and their lecturers (this process is outlined in Section 4.5.4, Figure 5), I sat quietly in the class at the back of the room. I listened and took notes and photographs of the students' physical

relation to one another, the artefacts they referred to and the questions and answers that they gave in the spaces where they practiced their studentship. Although Du Bois, (1991) asserts that '"there is not, nor ever can be a single way of putting spoken word to paper" (p73) I sought to be consistent in my notation of verbal exchanges. I adopted a system of notation in the field notes which distinguished between verbatim comments (quotation marks), other verbal comments not verbatim (apostrophes) and italics to record in the moment reflections (Lofland et al., 2006, p113).

In Phase 1, it was only during break times that I was able to physically mingle with the students, joining them if I could as they took their break from classes in the canteen, corridors, or out in their vans and cars in the student car park. I made sure that the participants always understood that our interactions in these informal settings were generating data for the purposes of my study. In Phase 2, since the students were by then studying as direct entrants at the University where I work, I encountered the students in the corridors and in other spaces on campus. I did not digitally record these informal interviews as I felt that this would have interrupted the flow of conversation introducing a formality which I sought to avoid. Instead, I observed reactions, behaviours and conversations and wrote up my field notes and annotated photographs promptly to support the process of reflection and as an aide-memoire to recall the various groups of students and their settings. Field notes form a key strand of the data that I generated and are included in the analysis and discussed in the chapters which follow. Whereas the focus for my observations was on students' practice, field notes provided an additional layer of data which offered a broader running description of what was happening in the settings (Lofland et al., 2006). I noted class interruptions, corridor comments, my impressions and aspects that struck me about the setting and I also recorded instances that I thought were of particular significance.

In each college setting I asked the participants (staff and students) whether or not they would like to meet to review the texts which I would produce later in the study, but no one accepted this offer. One of the lecturers and one transition support co-ordinator accepted my invitation to discuss an early draft of my findings. I also offered to share the photographs that I had taken of the groups of students and asked them to indicate if there were any that they wanted me to delete. There were always some students in the group who reviewed the images on my iPad, typically providing a humorous commentary for others on the images for the rest of the group, but there were never any objections about the images that I had taken. I am aware therefore that these records capture only my recollection and my representation of the research

encounters. Lacking any participants' involvement in the analysis, the data relies exclusively on my own perceptions (Adler & Adler, 1998, p87) One important advantage of my approach to all of the observations that I undertook was that they created an opportunity for the participants and me to get to know one another which prepared the way for focus groups and for one to one interviews which followed.

5.4   Introduction to the use of creative visual methods

Creative visual methods (Gauntlett & Holzwarth, 2006, Buckingham, 2009 and Bagnoli, 2009) were combined with semi-structured interviews and observations to produce a data set for this study. These methods provide an alternative to purely language-driven or number based data which predominates in the educational research literature (Prosser & Loxley, 2008). Although visual methods are deployed, the emphasis in my analysis is not on the visual artefact, but rather it is on the social processes and interaction amongst the research participants during focus group meetings which were mediated by the visual artefacts. Gauntlett and Holzwarth (2006) describe how the act of making things over a period of several minutes or even days, involves constant engagement with an artefact. By the time the created artefact becomes the subject of discussion between participant and researcher, the participants have already spent time reflecting on it. This has the effect of making their responses more considered than when asked a question during an interview or focus group, at which point an almost instant response is required. In this study, creative visual approaches, specifically object elicitation, offer routes to understanding how Associate Students think of themselves in the present and imagine themselves participating in the landscapes of practice at university in future (Wenger-Trayner & Wenger-Trayner, 2015). Visual methods are certainly not novel since there are examples of photography being used in anthropological studies as far back as the end of the nineteenth century, but the use of creative methodologies and collaborative image and/or artefact making amongst participants is a more recent research phenomenon (Banks, 2007). Gauntlett's (2007) adapted version of Lego Serious Play methodology was a major influence on the design of the visual methods that I used in this study. Lego Serious Play is described by its creators as a "thinking, communication and problem solving methodology" (Kirstiansen & Rasmussen, 2014, p3) which is typically used in business settings to support change management initiatives and in developing organisational strategy and team building. In Gauntlett's (2007) study, seventy nine participants were introduced to an adapted version of this approach in which they each built a metaphor of their identity and key influences on its development. That study is framed

theoretically by Ricoeur's (1992) and Wilson's (2015) ideas about the relationship between narrative and identity in which metaphor is positioned as being the primary interpreter of reality. Gauntlett's engagement with Lego provided me with an example of a way for people who have little or no experience of the interviews or focus groups to express some aspect of their experience in a relaxed environment. This approach removes the pressure to translate instantly their thoughts about personal or social matters in response to researchers' questions. The data generation methods deployed in this study open up further ways of talking with students for research purposes. They offer an ethical and respectful approach to data generation as an alternative to the more traditional methods of language-driven interviews and focus groups which favour verbally articulate participants (Prosser & Loxley, 2008). As discussed in Section 4.5, the power differential between researchers and student participants may be unavoidable (Juritzen et al., 2011). However in this study, I took steps to mitigate some of the distance and to find a point of departure for interaction which ceded a greater degree of control to the student-participants. This approach recognised the value of their creativity and their willingness to engage with novel approaches to data generation.

In the sections which follow, I provide a short explanation of my use of semi-structured interviews, and further detail is provided about focus groups and observation.

5.4.1 Semi-structured interviews with staff

With staff (lecturers and transition support co-ordinators), instead of focus groups, I carried out semi-structured interviews which I recorded and transcribed (see Section 5.5.1, Step 1 – Preparing data for analysis). My approach to the construction of interview guides was informed by Bryman (2016) and of probing questions by Lofland et al. (2006). I mapped the topics contained in clusters of questions to the study's overarching research questions in order to ensure the relevance of the data that I would generate. I was confident that staff would be comfortable with this traditional interview format. By the time I had scheduled the interviews, I already had some opportunity to build rapport with the interviewees either due to a previous working relationships, or as a result of the time I spent on campus or in their classroom for the purposes of observation and informal contact with the students.

5.4.2 Focus Groups with students

Two different approaches to the use of creative visual methods were deployed in this study: a model building activity and a mapping exercise. Before discussing the approaches I explain my rationale for the use of focus groups as a means of generating data in a sociocultural study. Focus groups, in which people are brought together and encouraged to discuss and debate issues (Barbour & Schostake, 2011), are associated with trying to achieve a rich understanding of people's lived experiences and perspectives. The researcher's focus is on not only the views which are expressed by the group, but also the interaction between the participants and the joint construction of meaning (Bryman, 2016, p501). Barbour and Schostake (2011) suggest the advantages of working with participants in peer groups as close as possible to their real life situations. However, they warn of the presence of hidden pecking orders or pre-existing animosities which may impact on the participants' collaborative conversation. In this study, focus groups comprising pre-existing classes of HND students met in their usual classrooms in college and in familiar parts of the University. They met to discuss the topic of transition to university as a group, rather than as individuals. Taking the group as the unit of analysis (rather than the individual) is consistent with second generation CHAT (Engeström, 1987) which commonly treats group-based activity as the unit of analysis.

5.4.3 Phase 1 focus groups – Mr Potato Heads

I carried out a pilot focus group in August 2014 with a group of students studying in College 1. The main purpose of this pilot was to introduce students to the experience of being a focus group participant. It also presented an opportunity for me to start to understand students' perceptions of the significance of the Associate Student project and to begin to identify the more tacit aspects of their studentship (Bloomer, 1997). I planned to use data from the pilot to structure the subsequent focus groups that would follow. I did have reservations about the composition involving existing student groups (Cohen et al., 2000) due to the possibility of groupthink (Janis, 1982) in which individual participants who are invested in a cohesive group prefer to avoid opposing the prevailing opinion. This phenomenon might have restricted the responses in ways that could have been avoided with a mixed group of staff and students, with students from different colleges, or even one to one interviews (Boateng, 2012). The value of working with existing groups of students with a similar social identity and shared experiences (Cronin, 2016) and who would be making the transition to university together outweighed the potential disadvantages of this approach. Following Robson and

McCarten (2016) who observe that "participants tend to enjoy the experience of focus groups" (ibid., p299), I had not expected to find that the students in the pilot group were extremely uncomfortable being asked to respond to my questions in front of their peers. In a critique of focus group methods, Boateng (2012) reports on participants' feelings of shyness and a "hold back" attitude (ibid. p55) in sharing feelings with others, particularly when topics deemed to be sensitive are discussed. This can pose a risk to the trustworthiness of focus group data since respondents may not all open up to the questions. When this occurs, the focus group data comprises only the views of those with enough confidence to speak up, while leaving the others in the group completely silent (Boateng, 2012). I gained the impression that it was not the topic of transition to University which was making students feel awkward. Instead, it was the unfamiliarity of focus group format, the presence of the recorder, shyness and eventually the silences which loomed in between my questions and discussion prompts. Following on from this experience, I made the decision to continue to pursue the focus group format, but to use creative visual methods which would elicit discussion through engagement with "intermediary artefacts" (Prosser, 2011, p484). This would enable all the participants to contribute irrespective of their level confidence or verbal eloquence. My intention was to disrupt the formality of language-based focus group interactions and to encourage the students to discuss their expectations and their envisioned futures as undergraduates in a less constrained manner than in the pilot focus groups. The specifics of the activity in the focus groups and its challenges are now explored.

Based on Gauntlett's use of Lego to explore identity (Gauntlett, 2007) Mr Potato Head accessories and craft items (Plasticine and fuzzy pipe cleaners) were deployed with Associate Students during Phase 1 of the data collection. The Mr Potato Head construction set is a toy, but not a representational one (such as a miniature model car) since its primary purpose is as an object for play (Brougere, 2006). The toy is sold as a playset containing parts made of plastic which include brightly coloured, simplified and stylised body parts (ears, eyes, arms, nose, and mouth) and accessories (shoes, hat, spectacles, microphone) that are easy to manipulate and intended to stimulate play. Banks (2007) notes the importance of the biographies of artefacts used in visual research since their "previous embeddings" (ibid, p61) are likely to impact on how they are perceived by research participants. The Mr Potato Head characters have a longstanding role in popular culture which began in the US in 1952 being the first televised toy commercial to be directed at children instead of parents. The character continues to feature in films, cartoons and comic strips including the Disney/Pixar Toy Story films. In the film series, Mr Potato Head is portrayed as a character who when in

times of need, rallies round to work with the other characters in the film to achieve heroic feats of bravery. I hoped that the participants would identify with the representational and metaphorical characteristics of the toy and that this would stimulate conversation in a relaxed environment. Given the well-known biography of Mr Potato Head in popular culture, it is unsurprising the respondents engaged in playful manner fulfilling their model construction brief with much good-natured chat within and between the groups.

I invited students to work in groups of three or four to build models as they saw themselves now as Associate Students and as how they imagined they would be as fourth year University students. Each group was given two Mr Potato Head constructions sets, Fuzzy pipe-cleaners and soft modelling clay (Plasticine) as resources for the models. I explained that each group would be invited to introduce their completed models to the other group. After outlining the requirements of the activity, I adopted a low-level moderation approach to facilitation (Morgan, 1988) giving the participants' complete responsibility for the conversations which occurred as they undertook the task. I took up a medium-level moderation position (Cronin, p166) after the model building during discussions with the whole group. We discussed their aspirations for university and the challenges that they expected to encounter as they made their transition to university. The data produced at this stage was dependent upon the participants' interactions as they decided how to express their identities and which artefacts to use in order to do so. The conversations during model building and the discussions with the whole group were recorded and later transcribed. I took photographs of the models (see Figure 6 below) and in every focus group session, participants took their own photos of their models and expressed enjoyment in participating. I suggest that Mr Potato Head was agentic in eliciting this playful emotional state. The artefacts were successful in enabling the creation of a space for research which was less bounded by the traditions of academia and the conventions of educational research which were unfamiliar to the participants. I created instead a playful environment where laughter and informal conversation was actively encouraged. Furthermore, unlike the traditional focus group pilot, there appeared to be no socially agreed way to construct the models or to talk about them. I argue that the approaches that I adopted with the model-building activity were successful in eliciting participation and responses to the follow-up and probing questions (Bryman, 2016) that I asked. They also prompted laughter, questions, interaction and interest amongst the students which I believe enhanced the substance of the data.

Clark et al., (2013) note that visual products such as photographs or pictures produced during focus groups need not be seen as end products to be analysed. Instead, they may be regarded as a stimulus for conversation with the participants who have produced them. Consistent with this view, the photographs of the Mr Potato Heads have not been analysed although there is a growing body of evidence suggesting that certain purpose-built objects may be considered as valid visual research material (Hinthorne & Simpson Reeves, 2015, Margolis &s Pauwels, 2011). However, in this study the discussions within and between the groups as they explained their models provide plausible and trustworthy data which is explored in the Findings and Discussion Chapters which follow.

Figure 6 Participants constructing and discussing their models

5.4.4   Reflections on creative visual focus groups

The gendered nature of the Mr Potato Head artefacts meant that the participants used predominantly masculine artefacts (top hats, moustaches, brogues) to create representations of themselves. This could be seen as being insensitive to the gender

imbalance in the engineering profession (Smith, 2011, Roger et al., 1998), inadvertently serving to perpetuate higher education's role in reproducing existing social hierarchies (Walker, 2014). However, the groups comprised only male students so the model building activity did not marginalise any females. I had considered using gender neutral Lego pieces rather than Mr Potato Head artefacts. This would have provided less restriction on what could be produced, but the participants were engineering students, and I wanted to avoid an activity with an emphasis on building and constructing as a possible source of distraction from the questions to which I sought answers.

The recordings of the dialogue between the participants in the groups during the construction phase was not as rich with verbal exchanges as I had expected. During one of the focus groups, the sound of a drill being operated in the next-door room almost drowned out parts of the students' exchanges altogether. In all the focus group recordings, there are many silences followed by bursts of laughter and commentary about the models which are difficult to hear, to follow and to analyse. This degree of non-verbal communication between the participants may have occurred because the component parts of the toys were so representational that they did not require naming or explaining as they worked with them to construct the models. A video recording instead of audio could have yielded further insights into the groups' collaborations. However, the dialogue with the whole group after the models had been built was free-flowing and the recordings were audible.

Findings from the Mr Potato Head focus groups shaped the design of the Phase 2 data collection activity. The use of a mapping activity (discussed in sub-Section 5.4.5 which follows) enabled participants to reflect on their recent experience of transition from college as well as their current experience as undergraduates. The places on the map all referred to spaces and places that the participants had referred to during the Phase 1 focus groups and observations. (Observations are discussed in more detail in Section 5.3.) Although the focus group activities were different in phases 1 & 2, they each took the students' experience of transition to university as the point of departure. The design of the mapping activity retained the playful, visual elements that characterised the model building activities in Phase 1. While the Phase 2 mapping activity was still object-oriented and structured, it was more open and less gendered (Wolkomir, 2012) than Mr Potato Head kits. Both focus group activities prioritised the use of creative artefacts to mediate relaxed conversations with students (Prosser, 2011).

5.4.5 Phase 2 focus groups – mapping with poker chips

Figure 7 Mapping time spent on campus spaces

The Phase 2 focus groups were scheduled towards the end of the academic session 2015/16. This was the point at which the former Associate Students were completing their final trimester of the third year on the degree programmes. It was also the end of their first year as direct entrants to university. Two separate focus groups were scheduled on campus at the University: one each for BEng1 and for BEng2 students. The BEng2 focus group recruited successfully and was carried out in April 2016. Despite my numerous attempts to secure a date which suited the participants, the BEng1 group did not recruit successfully. The first attempt was attended by only one student, and the second recruited no students at all. The lack of participation amongst the BEng1 group of students represented a setback for this study. I used the first focus group to pilot the mapping exercise and to explore how the activity could be adapted for one to one interviewing. Through informal conversations with the students on campus I realised that the focus group method would have to be adapted to one to one interviews to correspond with participants' individual availability. The flexibility of the mapping activity which is described below enabled its use as the basis of focus group activity and for one to one interviewing.

The design of the map was based on early analysis of Phase 1 data generated from focus groups, observation and informal interviews. When the participants were discussing their experiences they almost always included reference to places and spaces where they studied, socialised and worked. Temple (2018) draws on philosophical (Casey, 1997) and sociological (Lefebvre, 1991) perspectives which explore the relationship between space and place. Temple arrives at a distinction between these two spatial terms which works well for this study; namely, "place is space which has meaning for its users; it is special space." (Temple, 2018, p136). In order to understand the mapping activity, a further explanation of how places are conceptualised is warranted at this point. Places on campus are not simply recognised as pre-existing physical entities, but rather their significance to this sociocultural study is that they are constituted through students' and staff practices and interrelations. The campus and surrounding areas are seen as negotiated spaces which are always under construction (Lefever, 2012).

Having established the salience of space from the first phase of data collection, the focus group activity foregrounded places and spaces which the students had referred to. I used place as an entry point to discussion about their experience of transition to university and their subsequent studentship as undergraduates. For the focus group in Phase 2, instead of model-building, the participants engaged in a mapping exercise which explored their use of spaces and time in college and university.

The colourful map shown in Figure 7 (above) created a useful focus at the start of the interview or focus group. Poker chips were chosen as the tokens to represent time because they are to some extent gendered towards the masculinity of the sample group (Wolkomir, 2012). I hoped the chips would be something with which they could identify and because poker chips are associated with playing games being easy to manipulate on the map. The red set of chips represented the participants' time as undergraduates at University and the black set for their previous year as HND Associate Students in college. The places detailed in the map are listed in Table 13

On campus spaces	Off campus spaces
Gym	Transport
Small seminar rooms	Home study
Canteen	Other socialising space
Large lecture theatres	Part-time work
Workshop	Other off-campus spaces
Library	
Self/Group study with pcs	
Small seminar rooms	
Other independent study areas	
Other on-campus spaces	

Table 15 Places indicated on the map

I began by explaining the different spaces and how they referred to some of the areas in the college and on campus at university. Participants were invited to distribute the chips across the map according to the amount of time that they spent in the places indicated. The participants were invited to start with the red chips (time as undergraduates), and then the black (time as ASP Students), but with the opportunity to shuffle the chips around as they further engaged with the task. As students placed the chips, I asked naturally occurring questions about their choices and about their practice in each of the spaces. I used a range of discussion prompts which included; Who was with you? What activities were carried out for what purpose? On what occasions? What tools and equipment (artefacts) were significant in these spaces? What rules were manifest in these spaces? The dialogue during the distribution of poker chips encouraged reflection on their activities creating a more relaxed atmosphere for my questions. Once the chips had all been placed, I asked questions from an interview guide (Appendix 5) relating to the opportunities and challenges which transition to university had wrought. As with the Mr Potato Head models, it was not the finished artefact of the map and poker chips that was the subject of analysis, but rather it was the conversation about the students' use of the spaces and their practices within them. This data provided valuable insight into the students' experience first of all at college and then at University.

5.4.6 Reflection on the mapping activity

The mapping activity avoided many of the more obvious disadvantages of the model-building in Phase 1 focus groups. Nevertheless, limitations can also be identified in the mapping exercise which was designed as a collective focus group activity, but which had to be adapted for the use in object-oriented interviews. First, the spaces on the map were predefined, thereby limiting the scope of the discussions. Some intentionally less defined spaces designed as 'other' were included on the map; 'other on campus spaces', 'other off campus spaces', 'other independent study areas'. None of the participants referred to these spaces at all. Instead, they preferred to engage with the spaces which referred to specific areas that they recognised.

5.5 Data Analysis

This section describes the approach taken to analysis, but although the thesis presents the sections as distinct activities, the process of designing methods, data collection and analysing outcomes from the interventions was an iterative one. I moved between methods, analysis, literature and further refinement of methods. What constitutes data in this study requires some introduction given the range of ethnographic approaches that were adopted over a two-year period.

Direct data comes from researcher observations, focus groups, informal interviews and semi-structured interviews. Indirect forms of data come from researcher generated field notes and analytic memos. Some of these note absences or what is not said by the participants (Frankham & MacRae, 2011), and which draw attention to certain occurrences which appeared to be significant. Early ideas about potential themes were also noted for further exploration. My approach to analysing this data and the claims that I make in the study recognise the fact that participants continued to practice in places and spaces when I was not present. So too with field notes which Clifford (1990) describes as being "enmeshed in writing and reading that extends before, after and outside the experience of empirical research" (ibid., p65). My data and its analysis represent ways of understanding, connecting and probing the moments that I encountered during the two phases of this study. But as I have read and engaged with the data over the course of six years, its meaning and possible interpretations have evolved as I have begun to look at it in new ways in light of my continuing scholarship and supervision. I have however sought to be systematic in arriving at the findings that I present in the chapters which follow, and to justify the analytical approaches which I

adopted. The data set was presented in Section 5.2, and the approach for its analysis is outlined below.

5.5.1 Thematic analysis and coding structures

Thematic analysis is an approach to analysing data which focusses on identifying and describing both implicit and explicit ideas (themes) within the data (Guest, MacQueen & Namey, 2012, Braun & Clarke, 2006). The approach to analysis that I have taken is underpinned by a constructionist view. This is one in which the researcher takes an active role in shaping what can be discovered in the data; by their presence in the research encounter, and by the way they illuminate certain aspects of the data in response to questions they have devised. Themes, then in this thesis refer to fundamental concepts that I use to conceptually link patterns that I have discerned in the data (Ryan & Bernard, 2003, p88). Braun and Clark (2006) suggest a six-step process for systematic thematic analysis which I followed; familiarising yourself with your data (I have adapted this stage to refer to preparing data for analysis), generating initial codes, searching for themes, reviewing themes, defining and naming themes, producing the report. The first three of those steps are used to structure the explanation which follows of the analysis process that I undertook.

Step 1 – Preparing data for analysis

The data set is outlined in Appendix 6 and it outlines the data generated across the two phases of this longitudinal study; informal interviews, semi-structured interviews, focus groups, researcher observations, memos and field notes. In considering how best to capture the data for the purpose of analysis, I considered producing partial rather than verbatim accounts (Halcomb & Davidson, 2006), but at the point when I was making this decision, I had not yet decided which approach to analysis I would use. Although thematic analysis can rely on a partial transcript (Halcomb & Davidson, 2006), both template analysis and conversational analysis rely on verbatim transcriptions. By opting for verbatim accounts accompanied by field notes, I was able to keep my options open regarding choice of method of analysis. Accordingly, audio recordings (from focus groups, interviews and informal interviews) were transcribed initially by typing directly from the voice recorder to MS Word, but eventually using the Google Transcribe tool which runs the audio offline in a Chrome browser. Using this application saves transcription time since the audio speed is controllable through the keyboard. I used punctuation marks to represent participants' intonation; a full stop for a fall in tone of voice, a question mark to indicate a rising inflection, and a triple dot ellipsis to indicate

a pause or trailing off of speech (Bird, 2005). I placed italicised words in the text to indicate non-verbal gestures such as *shrugs, pause, laughs* and *looks around.* In Phase 2, transcription of four audio recordings from interviews were outsourced to what Lofland et al. (2006) refer to, derogatorily, as a "hired hand" (ibid., p107) in order to save time. Bird's (2005) assertion that transcription is of itself an interpretive act rather than a truthful representation of an objective reality could have problematised my decision to outsource the process to a commercial company. However, I mitigated that disadvantage by checking each transcription against the audio making corrections where necessary (mainly misinterpretation of names) and inserting punctuation marks to indicate intonation and noting pauses and other non-verbal gestures as outlined above.

I produced field notes, comprising descriptions and impressions about what appears to be going on and what participants are trying to accomplish in each setting (Silverman, 2004). These were typed on an iPad directly into Evernote which is an application that I used throughout the study to create and organise field notes, memos and photographs into searchable 'notebooks' (Beddall-Hill, Jabbar, & Al Shehri, 2011). I considered generating digitally voice-recorded field notes, but my typing speeds are high which meant that I could be discreet in the production of notes when in the field (and at other times too) and by creating notes and memos I avoided generating audio files which would require subsequent transcription (Bryman, 2016, p441). I had access to NVIVO11 (qualitative data analysis software) through my employer, which I used to assist in the management and analysis of the data. I exported field notes from Evernote and uploaded these and the transcription scripts as source documents to a single data-base type file which is known in NVIVO11 terms as a 'project'. Although NVIVO11 has many functions, I have made use of a small subset of these to manage and organise the data, (drawing together and separating the data from the two phases of the study as required), to capture and connect ideas as they occur in the data (using the linked memo and annotation functions), to establish and apply a coding system (to structure the data for retrieval and analysis), to query the data (using word frequency, text search and matrix coding queries), and to visualise the data to represent connections between different cases (using mapping and chart building tools).

Step 2 - Generating initial codes

The process of devising codes began during Phase 1 of data collection. At that point, codes were established inductively from the raw data (Bryman, 2016, p23) by my

listening repeatedly to audio recordings and reading transcripts and field notes and writing memos about ideas that were occurring to me. Through this extended engagement with the data, I identified extracts in the raw data that appeared to me to be interesting and important 'codable moments' (Boyatzis, 1998). One of the criticisms of CHAT as a model for framing analysis is that the six elements may constrain the researcher's focus with the effect that aspects of the data which do not sit comfortably within each of the six elements of the activity system may be overlooked or disregarded (Peim, 2009). In order to avoid this, I initially established inductive codes without trying to fit them in to the pre-existing theoretical frame although I always intended to code in subsequent cycles using the elements of CHAT. NVIVO11 uses the terminology of parent-node and child-node to reflect the hierarchy of main codes (parent) which are then subdivided into sub-codes (child). I set up an initial coding structure in NVIVO comprising 12 parent-nodes subdivided into 50 child-nodes. This initial coding structure allowed me to organise the data and to provide an inventory of the contents of my transcripts (Saldaña, 2009, p49). However I realised from reviewing the definitions of the codes that they were overly descriptive, relating to surface or explicit meanings of the data (Braun & Clarke, 2006, p13) and they did not sufficiently reflect the theoretical framing of the study, nor the research questions. My second attempt at establishing a coding structure took me back to the transcripts, field notes and memos from both phases 1 and 2 of data generation, but this time I started with codes and their definitions that reflected important constructs from the theoretical framing of this study. The six elements of the activity system shaped how I constructed or defined codes at this stage, although not all of them map perfectly on to the model of activity system. I supplemented these with theoretically based codes with ones established inductively from the data (Braun & Clarke, 2006, p12), arriving at what Fereday and Muir-Cochrane refer to as a hybrid approach to coding (2006). Coding with this first revised cycle coding framework allowed me to develop an in-depth knowledge of the data and to identify possible lines of enquiry for analysis. It also highlighted where the coding structure was not working well. For example, the development of the code for curriculum alignment in the first cycle was structured with the parent code as 'Mediating Artefact' which is a key concept in Cultural Historical Activity Theory, and a sub-code 'Curriculum'. The first cycle code book entry showed that I intended to code items in the data relating to curriculum content and curriculum alignment at this sub-code. But given the significance of curriculum alignment to all participants in stage 1 and stage 2 of data generation, the subsequent second cycle coding structure has Curriculum Alignment as the main code divided into six sub-codes. Braun and Clark (2006) make the process of moving from first cycle to second cycle coding structures, and from step

1 to step 2 of thematic analysis sound straightforward and linear. But in fact that process was an interactive one in which I worked between coded data, coding structures, transcripts, literature and supervision. The outcome of those interactions made it possible to identify overlapping codes and subcategories that were too fine-grained and with too few items coded to them. Once confident that the structure was working well for my data I was able to move on with coding, and the analysis process began to yield possible responses to my research questions.

Step 3 – Searching for and reviewing themes

A second cycle coding structure is one which 'reorganises and reanalyses data coded through the first cycle methods' (Saldaña, 2009, p149) and in this study comprises 13 main codes and 81 sub-codes. I used this structure to analyse data at first on an individual case-by-case basis across both phases of the study, and then to group data according to college settings, degree programmes and different categories of participants. To do this, I carried out analysis known as matrix queries in NVIVO11 looking for similarities and differences in how possible codes were operating in the four different college settings during Phase 1, and I also used codes to compare the data from the two different degree programmes in Phase 2. But the numbers of participants in the college settings were small and unequally distributed across colleges and degree programmes which meant that these comparisons of numbers of responses or sources coded to particular categories did not yield significant insights. However, by exporting the data from each of the main codes into printed and then annotated MS Word documents, I identified where codes needed further restructuring and I revisited cases to test the patterns that the final coding structure allowed me to draw in the data. Eventually, I became satisfied that I had established a sufficiently robust structure which included all the data, which allowed for the identification of cases that did not fit the pattern (these will be discussed later), and which could bring codes together into three overarching thematic clusters.

The first cluster relates to the question of what it means to be an Associate Student. Consistent patterns amongst categories of participants indicate that while Associate Students and University see the Associate Student project as an 'asset' (and this term will be explained in more detail later on), the picture is less clear-cut for College Managers who recognise the tension (liability) caused by the differing academic requirements of the HN students who are and are not enrolled as Associate Students. Table 16 below shows the main codes and sub codes and the number of references

coded at each of the main codes. The second cluster of codes illuminate students' responses to transition support with consistent patterns emerging about the nature of interventions which are valued and those which are dismissed. The final cluster of codes illuminates former Associate Students' patterns of engagement with certain aspects of University life and disengagement with others, all of which involve struggle, immense amounts of hard work and essential close peer support from amongst the Associate group. More detail about the findings relating to each code is presented in the Findings chapter which follows, but by way of introduction to the findings, Tables 14, 15 and 16 provide information about the codes used to establish each of the three thematic clusters. Table 16 shows the codes that establish Thematic Cluster 1 (The Associate Student Project shaping Associate Students' transition). Table 17 shows the codes that establish Thematic Cluster 2 (Factors shaping transition support for ASP Students), and Table 18 shows codes that establish Thematic Cluster 3 (Direct Entry Students' participation in the landscapes of practice at the University). Further detail about the codes is provided in Appendix 6 (Second stage code book).

Main codes for Thematic Cluster 1: The Associate Student project shaping Associate Students' transition.	Sub-codes	Number of references coded
Partnership (partnership between the colleges and university under Associate Student Project (ASP)	Funding Implications of ASP for staff Implications of ASP for students Recruitment of students Understanding partnership roles Other implications of ASP	161
Confidence, concern and responsibility for curriculum alignment between College and University (ways in which participants understand how the HND qualification will align with what is required for 3rd year study at University)	Concern about curriculum alignment Confidence in curriculum alignment Maths alignment Responsibility for curriculum alignment Other aspects of curriculum alignment	145
Acknowledgement of, and compliance with rules and norms (associated with the ASP, and college and University systems)	Being aware of the rules Being unaware of the rules Rejecting the rules Staff compliance with rules and norms of the system Students' compliance with the rules Other	65
Roles and responsibilities (in relation to the Associate Students' transition to university)	Acknowledging differences between similar roles at college and at university Preparing students for study at university Responsibility for ASP admin Teaching and support roles at college Teaching and support roles at university	65
Self and others' expectations of achieving outcomes of ASP (confidence of Associate Students' ability to graduate with an engineering degree)	College staff expectations of ASP Students Student expectations of self Transition support co-ordinators expectations of students University staff expectations of students	24

Table 16 Codes that establish Thematic Cluster 1

Main codes for Thematic Cluster 2: Transition support for Associate Students	Sub-codes	Number of references coded
Recognising transition support practices (staff and students talk about how they interact with transitions support in order to achieve the object of the activity system)	College academic staff engage in transitions support University academic staff engage in transitions support Pastoral or administrative support Students' views of transition support Transition support co-ordinators' views of transition support	314
Mediating artefacts – this code features seven sub-codes of which only four are drawn into the analysis for thematic cluster 2	Spaces Teaching Technology Associate Student group	159

Table 17 Codes that establish Thematic Cluster 2

Main codes for Thematic Cluster 3: Patterns of engagement with the landscape of practice at University	Sub-codes	Number of references coded
Direct entrants' engagement with the University. The 7 sub-codes explore with whom and for what purpose they engage, and the degree of accountability to the landscape of practice at University that the students report	With AS students from own college With continuing students With academic staff at University Purpose of engagement (academic or social) Being accountable or not With continuing students Students from other colleges	158
Recognising differences. The 3 sub-codes explore how students, college and university staff see differences between college and university.	College staff see differences between college and university University staff see differences between college and university Students see differences between college and university	166
Dispositions for learning. The 4 Sub-codes explore students' values, attitudes and beliefs about learning and their preferences for their own learning.	Recognising intrinsic rewards of learning Recognising extrinsic rewards of learning Changing studentship practices Consistent studentship practices	200
Out of formal programme of study practices. The 5 sub-codes capture how associate students refer to these practices and their significance in relation to their programme of study.	Employment Home Friends (other networks not college or university) Family Other	55

Mediating artefacts There are 7 sub-codes, and 4 of those are drawn into Finding 3.	Teaching Prescribed curriculum Feedback Other mediating artefacts	53
Students act on learning experiences The 10 sub-codes explore how students report their studentship as Associate Students at college and then as direct entrants to University.	Supporting peers Self-direction Working things out Seeking feedback Seeking help Studying in the computer centre Studying at home Revising Attending lectures/seminars Other	215

Table 18 Codes that establish Thematic Cluster 3

Appendix 6 contains a full list of codes and sub-codes together with their definitions.

Before moving on to establish the detail of each of the three thematic clusters, the diagram below illustrates how the research questions are associated with the main codes which have been introduced above. Whereas Tables 14, 15 and 16 show how the codes and sub-codes were drawn together in three thematic clusters, the diagram below takes the research questions as the organising principle and demonstrates how the main codes are distributed amongst them. The diagram enabled me to look at the codes from two different perspectives; first from the three thematic clusters, and then double checking back to the research questions (stated in Section 1.3). After completing this stage, I became satisfied that the coding structure was one which was sufficiently robust to justify its use in claims made as a result of this study. Had I been working as a member of a research team, I would have added an extra step into the process of establishing the coding structure by testing it with other researchers, but instead, I submitted the various iterations for supervision until they became finalised.

Using the coding structure presented in this section, I was able to develop ideas, extract strands of narrative and to identify examples of object-oriented activity located within the Associate Student project. Following Yamagata-Lynch's (Yamagata-Lynch, 2010, p90) approach to analysing data with activity systems, I used the coded data clustered around each of the research questions to make visual representations of my findings in Figure 8.
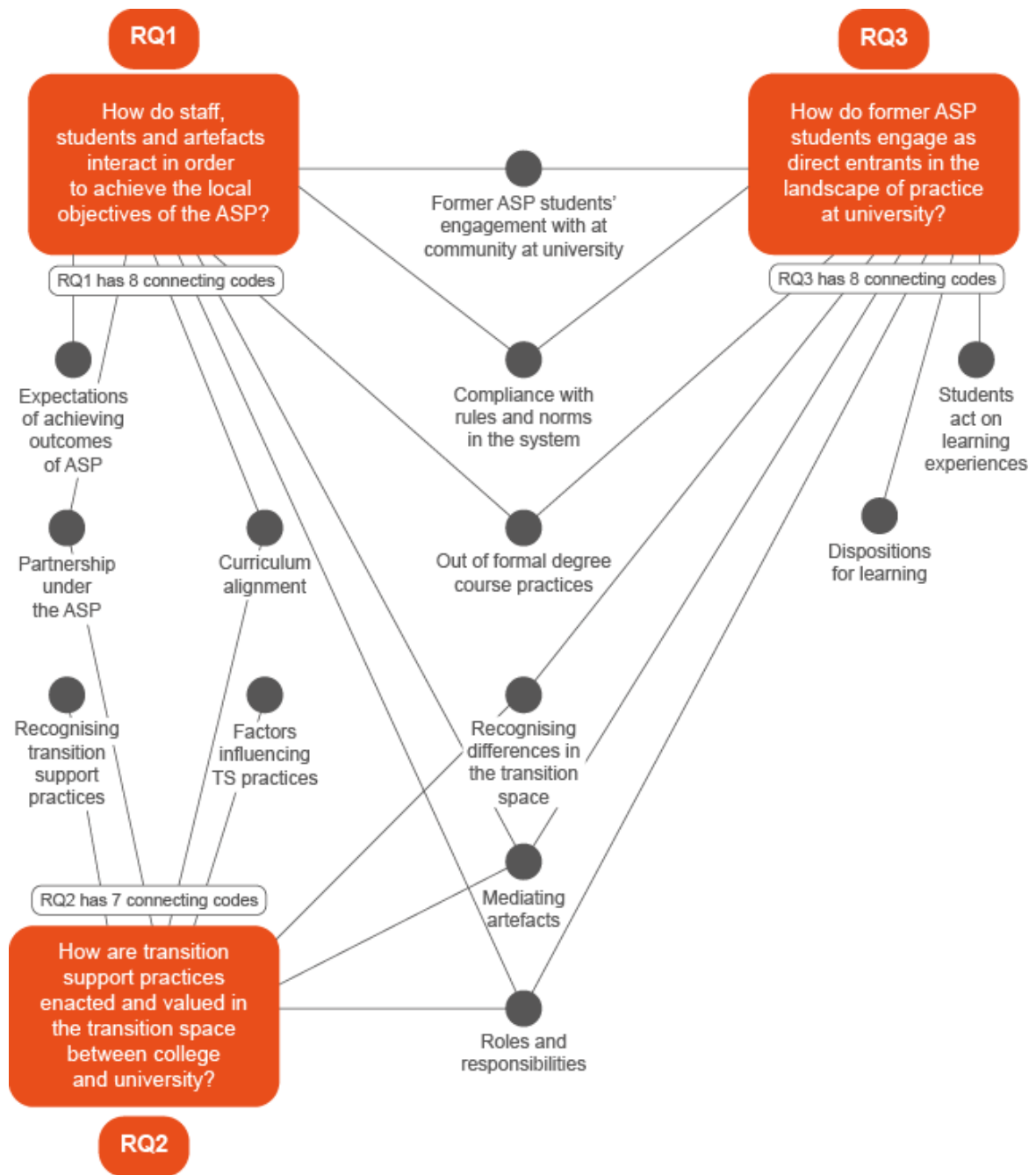
Figure 8 Research questions and main codes mapping

5.6 Chapter Summary

This chapter has introduced the data set for this study. It presents the research participants and the sequence of data generation which took place over two years; first in college and then in the University. I also outline my use of thematic analysis, explaining how the coding structure was iteratively designed using thematic analysis with the overarching themes identified after the main codes and sub-codes were established.

The strength of thematic analysis used in this study could also be interpreted as a weakness. The flexibility afforded by the iterative process of constructing codes and establishing thematic clusters was useful given the diverse data set. However that flexibility in approach to analysis allows for variety of possible interpretations of the data, depending on the codes that were deployed. By anchoring the majority of the codes in the conceptual framing of the study, I have been able to show in this chapter that my analysis was coherent and systematic.

Chapter 6   Findings

6.1   Introduction to the structure of the three findings chapters

In Chapters 6, 7 & 8, I present my findings from this study. Each chapter relates to one of the three thematic clusters that I have constructed from the data, and each chapter relates specifically to one of the study's three research questions. I refer to the student participants from Phase 1 as ASP Students. This nomenclature avoids confusion with other groups of college students, some of whom also intended to articulate to university, but not under the auspices of the ASP. When in Phase 2 of the study, the former ASP Students make their transition to university, I refer to them as Direct Entry (DE) students. This distinguishes them from continuing, or traditional-entry students who entered university in year 1 of the programme. The designations of College Manager, College Lecturer and University Lecturer speak for themselves. There were 4 transition support co-ordinators (TSC) in the study; three based in University and the other one in college. I refer to these individuals as UTSC 1, 2, 3 and CTSC for the fourth college based one. These are not their organisational job titles, but TSC reflects the part of their job role which relates to the ASP. The rest of their time is spent in many other aspects of student support.

Chapter 6 explores the Associate Student Project (ASP) and what it means to be an Associate Student with dual enrolment at college and university. I explain how the ASP operates in college and I outline the tensions that arise between the constituents in the ASP community, presenting the issue of dual matriculation as contradictory, but valued. Curriculum alignment forms the bedrock of articulation agreements such as those which underpin the ASP. My findings show that raising university entry requirements potentially advantages Associate Students by ensuring their readiness for university study, but it potentially disadvantages the remaining students in the same group at College. Chapter 7 explores findings in relation to transition support outlining the range of interventions which take place in college and at university, not all of which are valued by nor equally accessible to Associate Students. Analysis reveals tensions that can arise between different members in the community who value or dismiss the provision according to their own perspectives. Chapter 8 explores how the former ASP Students who become direct entrants made their transition to university in a manner which I characterise as confirmatory (Bloomer, Hodkinson, & Billett, 2004) and ongoing. The chapter considers how DE Students engaged at the periphery of communities that they encountered in a landscape of practice at university. Interactions amongst the close-

knit group of peers coming from college provide mutual academic and emotional support. Former Associate Student peer groups dis-identify with some of the practices of traditional-entry students. In so doing, they marginalise themselves from the support and experience of the cohort who have been at university since first year.

The three findings chapters follow the intended trajectory of Associate Studentship; starting in college, engaging with support and progressing to university with the eventual outcome of gaining employment as a qualified engineer.

6.2   Findings - the Associate Student Project (ASP) as an activity system

6.2.1   Introduction to the findings in chapter 6

As the Associate Students in this study engaged with their HND programmes at college their practices included coming on campus, attending classes, taking notes, asking questions, sharing jokes, establishing friendships, imagining their futures at the University and planning to work in the engineering industry. But data from this study takes the reader beyond Associate Students' observable interactions to explore the sociocultural perspectives of their experience using the concept of the activity system and drawing from cultural historical activity theory (CHAT) to surface tensions that shape interactions. By considering each of the elements of the activity system which reflect the sociocultural context, tensions which give rise to contradictions and which may pull the ASP Students away from the achievement of their object are identified. I draw on these tensions to provide a deeper understanding of what it means to be dually enrolled at University and at college as an Associate Student. This chapter is structured around the three sociocultural elements of the activity system: rules, community and roles and responsibilities.

Section 6.3 explores how the ASP was implemented in the University and its four partner colleges and it sets out what is involved in being an Associate Student and the expectations these students have of their college given their particular status, and of the University to which they will articulate. Section 6.4 (

Community perspective) explains the constituency of the social group or community to which the subjects (Associate Students) in this study belong. Curriculum alignment in Section 6.5 represents a mediating artefact for the subjects (the ASP Students) and is a central consideration for all participants. The community's expectations in this regard are discussed.

Main code	Sub-codes
Mediating artefacts (not including curriculum)	Digital technology
	Transition (and other) support
	Teaching
	Spaces and places
	Feedback
	The ASP group
	Transition and other support
	Other
Curriculum alignment between college and university	Concern about curriculum alignment
	Concern about Maths
	Confidence in curriculum alignment
	Concern about curriculum alignment (except Maths)
	Responsibility for curriculum alignment
	Other aspects of curriculum alignment
Roles and responsibilities	Acknowledging difference between similar roles at college and university
	Preparing students for study at university
	Teaching and support roles in college
	Teaching and support roles in university

Table 19 Main codes and subcodes used in the analysis of the ASP

6.3 Rules perspective – affordances and constraints?

The strategic aims and background of the Associate Student Project (ASP) are outlined in Section 1.2, but in this section, the focus is on the Project as it was implemented by the University in the School of Engineering and with four local partner colleges. This section provides an overview of how the Associate Student Project is implemented in colleges given the rules and norms associated with guidance from the Scottish Funding Council.

Data in this section was generated mostly in Phase 1 from interviews with College Managers and ASP Student focus groups, but the narrative in this section also draws from interviews with University Lecturers which were carried out in Phase 2. The section begins with an explanation of how the Project operated in colleges in 2014/15. It describes the terms of the Associate Student offer and it explores how ASP Students understand their status given their dual matriculation in college and in university.

6.3.1 Allocation of ASP places

For academic year 2014/15, the University was allocated 54 'additionally funded places' on undergraduate engineering programmes. For ASP Students of the University the offer is threefold;

- a guaranteed place into third year of named degree programmes (subject to their achieving the corresponding HND and an A or B in the graded unit),
- a matriculation card with the designation of Associate Student granting access to university campus facilities such as library, gym and study areas
- access to transition support opportunities provided on campus at university and in college.

The additionally funded places, referred to by the colleges and university as Associate Student places, were distributed amongst the four colleges, based on the size of the college and the number of students historically articulating from each college on to engineering degrees. In 2014/15, none of the colleges in this study publicised the Associate Student Project on websites nor in their prospectus. Consequently, colleges were expected to recruit Associate Students from amongst their existing HN group of students. The students were selected on the basis of their interest and potential for university level study, and on College Managers' estimation of the likelihood that a

student would be successful in achieving their HND and would take up their offer at university:

> Phase 1, College Manager Interview (College 3)
>
> "I'm particularly looking for people that I think honestly are going to stay and do the HND and then go into 3rd year, so that it is following the guidelines, you know what they actually want."

Other College Managers referred to Associate Students as "the best performing students" and "the cream of the crop" and having a good attendance record. This finding stands in contrast with the evidence from Phase 2 interviews when some (but not all) University Lecturers considered the former college students to be the less able ones in the group and being the most in need of support.

Whereas in 2015/16 colleges experienced a shortfall of HN students seeking to articulate to university, in 2014/15, each College had more HN students seeking direct entry to the University than their allocated number of funded Associate Student places. This led to a decision made by all the colleges to establish a wider Associate Student group, which would include all HN Students expressing interest in articulating to university, irrespective of whether they held one of the University funded Associate Student places. This means that the entire Associate Student group comprised all the students interested in articulating to the University, but with only a limited number having a guaranteed offer of a place in 3rd year on a named engineering degree at the University. All students in the wider group have access to the programme of transition support referred to in Chapter 7. Apart from College 3 which ran a separate additional strand of Maths provision for Associate Students, in all respects Associate Students' college experience was the same as for other HN students. However, their interaction with the university and their expectation that they would be making the transition to undergraduate study after their HND is what made the ASP college experience distinctive.

All College Managers reported that most HND students were in the Associate Student group. Data which recorded the precise numbers of HND students who were and were not in the Associate Student group was not available from any of the Colleges. This was said to be due to the group's composition fluctuating throughout the year. The absence of formally recorded data is a feature of this section and although the institutional data regarding numbers and funding provides background rather than the

focus to the research questions which this study addresses, its absence, or unavailability to a researcher is of itself an interesting finding. This point is further illustrated when I asked College Managers about the funding that the college received from the University in respect of its Associate Students. Although they were aware of the Associate Student Project as a source of income for the college, they were more ambiguous in their responses about how it was spent.

> Phase 1, College Manager Interview (College 3)
>
> "that's income that we can actually bring in alongside, we don't have to really - well I say we don't have to really do that much for it … but from an academic point of view, these students are here anyway so why would we not encourage them to do that."

> Phase 1, College Manager Interview (College 1)
>
> "In the College it would be myself that would take ownership of getting the students signed up to the programme. Obviously, I know there's funding associated with this and the college management is quite keen to take the funding … I don't know the figures, but I do believe that the associate student funding brings in a higher income per student for the college."

This lack of clarity about how the funding from the ASP was allocated was not confined to College Managers. In University, neither the transition support co-ordinators nor the lecturers were able to respond to questions about how the funding from the Associate Student Project was allocated within their organisations, although College Manager 2 suggested that the 'bean-counters' might be able to provide answers to my question. I was able to establish that at University, the funding for ASP is incorporated into a much larger section of funding allocated to the University by the Scottish Funding Council. This helped to explain the difficulties for University transition support coordinators (UTSC) in tracking the precise amounts allocated to them to support the transition of Associate Students. But this widespread lack of knowledge amongst those who would be best placed to influence the allocation of funds to support Associate Students' learning, is a significant finding which potentially impacts on how the Associate Student Project shapes students' transition from college to University. Funding is not therefore considered to be a mediating artefact in the Associate Student Project activity system.

College Managers reported on the difficulties of recruiting ASP Students at the start of the HND programme. During their first year of HN study, ASP Students would commonly change their HN course or their degree preference, or which University they wish to go to, which year they wanted to enter, or even about going to University at all. Others could take up employment and leave the college, or they may not have accumulated sufficient academic credit to progress to HND, or they may not have met the university entry requirements at the end of their HND year. Recruiting HN students to make firm decisions about their future intentions so early in their college experience is not only challenging for colleges, but it also presented difficulties for the ASP Students.

During focus groups in Phase 1, the ASP Students recognised the restrictions which were brought about by dual matriculation as an Associate Student of the university. Making the decision so early in their college course not only to go to university, but to go to one particular University to study on a specified degree was challenging for some ASP Students. The excerpts below illustrate that while some students were quite likely to reverse a decision made in the early stages of an HNC, others are happy with the degree of certainty that the Associate Student status bought them. For some students, the rules of the activity system, (the procedures associated with being an ASP and making a firm decision to go to university) can be understood as a tension, whereas other students found the certainty of a degree offered a motivating factor. The extent to which dual matriculation represents a powerful secondary mediating artefact is variable.

> Phase 1, DE Student Focus Group (formerly College 2)
>
> "I think the most annoying thing about it is you're stuck with that, you have to go to *the … University* (pseudonym). Like when you filled in your (*UCAS*) application you didn't have a choice, you only got to choose one university, you couldn't choose more than one, because we're an Associate."

> Phase 1, DE Student Focus Group (formerly College 4)
>
> "I had a problem at the start when we got offered the associate course, when they came to the class and said, 'Who wants to go to *Northern* (pseudonym), who wants to go to *the … University*?' They didn't give us time to decide really, you only got a couple of days and that's a big decision to make. And it

was all right at 16 when I applied for university the first time, because I know what my situation would be like, because it was only a couple of months away, but if it's two years away, you could have like three bairns by then and be married!"

Phase 2, DE Student Interview (formerly College 2)

"It's good from the very first day that this is good, you were on the Associate Degree, you were on the BEng programme from day 1 so you knew you had that path already you didn't have to wait till later on. It was good."

There are financial consequences for colleges if Associate Students changed their mind about their intentions to go to the University, or for any reason no longer warranted their status as Associate Student. In order to receive the expected funding for the Associate Student Project, the college must balance the number of allocated Associate Student places with the number of students taking up their places as direct entrants at university. Given the challenges of anticipating who would and would not take up their places as direct entrants, colleges established the informal practice of 'infilling' which involves replacing a funded Associate student who has withdrawn from the scheme with another HN student who was not previously an Associate student. Although this practice ensures that there is no shortfall in students taking up their place at University, it impacts significantly on the experience of the ASP Students. University transition co-ordinators described how Associate Students may be "parachuted in" to the ASP Student group, sometimes even as late as December of the HND year in order to make up the number of funded ASP Student places. An ASP Student's experience of transition support and opportunities to make connections with the University will vary according to when they matriculate as an Associate Student. In the two examples below, the students were not part of the original cohort of Associate Students and were pleased to be offered that status later on in their HN programme of study.

Phase 1, DE Student Informal Interview (formerly College 4)

"I wasn't an Associate student last year, but I got an A in my graded unit, and then I got a letter saying 'did I want to be an Associate Student' and I thought what have a I got to lose. So, yeah, I'm going to Uni, but I'm not sure if I'll go to *Central* (pseudonym) or to *the University*."

Phase 2, DE Student Interview (formerly College 2)

"They gave Associate Student places out in HNC but I wasn't given one of them. They had Associate Student induction then - but it was pointless, but I came in later so I didn't do any induction nor anything like that."

Although the process of infilling does not contradict the guidelines of the Associate student Project, it does undermine the intention that all Associate Students should have the opportunity to engage in transition support activities throughout the duration of their college course. This tension between the guidelines of the Associate Student Project Scheme, and local practices in college is discussed in Chapter 9.

For the ASP Students in this study who did take up their offer as direct entrants to 3rd year of degree programmes, once they had accepted their Associate Student offer in college, there was never any doubt in their mind that they were going to University. Their status as ASP Students and the peer support of belonging to the Associate Student group in college served as further recognition and acknowledgement of their intentions. In all the Phase 1 focus groups and informal interviews, the ASP Students were consistent in their view that going to university for them was only ever contingent upon their success in achieving a grade A or B in their graded unit at HND.

For every group of ASP Students, the overriding purpose of going to university was said to be to get a qualification, or 'ticket' as it was sometimes referred to, which would enable them to take up well paid employment in the engineering industry. The findings in Chapter 8 illustrate the impact of this singularity of purpose in the ways in which the direct entry students (DE Students) engaged with university. Despite the ASP Students' confidence that they would go to and succeed at university, they did have some doubts about how their HN programme of study would prepare them for direct entry to third year. They had expectations that the terms of the Associate Student project either would or should make appropriate provision for them. In activity system terms, the ASP Students expected that the rules of the ASP would positively mediate the achievement of their object.

The next section narrows down the analytical focus to just two elements of the activity system; community, and roles and responsibilities. Through analysis, the boundaries of the activity system and its sphere of influence begin to emerge.

6.4 Community perspective

The community of the Associate Student Project (ASP) activity system refers to the social group that subjects belong to while engaged in activity (Yamagata-Lynch, 2010, p140). In this study the community comprises Associate Student Project students (ASP Students), College Managers for the Engineering HN programmes, College Lecturers teaching on the engineering HN programmes as well as Transition Support Co-ordinators (TSC) from colleges and University. For all members of the community, apart from the ASP Students, their involvement with the Associate Student Project is only a small part of their practice which extends into other overlapping and intersecting activity systems in the institutions where they work.

6.4.1   Limited interaction with University Lecturers

University Lecturers are limited in their activities in the Associate Student Project activity system, having very little interaction with their academic counterparts at college and minimal contact with the Associate Students before they enter the University as direct entry students (DE Students). University Lecturers indicated that their engagements with college partners were based on happenstance opportunities or favours to friends and former students or colleagues who were working in the colleges included in this study. This is not to suggest that they do not influence the Associate Student's object (to secure well paid employment in the engineering industry). Despite their limited interaction with the University Lecturers during their college years, the ASP Students expect that because of their status as Associate Students and their guaranteed offer of a place on the programme, University Lecturers will solve any problems that arise as a result of their college experience.

The University had longstanding formal and informal articulation arrangements with all the college partners involved in this study prior to the introduction of the ASP. During interviews, the University Lecturers were able to draw on their recollection of interactions which pre-dated the ASP. When asked about their understanding of the Associate Student Project, only one of the four University Lecturer participants was knowledgeable about this particular articulation route. The others described their understanding as "rudimentary at most", "very sketchy" or "none at all". I did not discern any sense of resistance from University Lecturers towards engaging with college partners in respect of the ASP. Any activities in which they had participated were reported by them as something that they had chosen to do, rather than as a required component of their academic role. Indeed, one lecturer was candid in his observation

that although he understood the sorts of conversations that academics in colleges and university could have with one another in respect of the ASP, as far as he understood, these have "simply not taken place". Another lecturer who had previous history of collaborating with colleges by way of preparation for college students with HNC qualification to enter second year University programmes was very much more engaged with the ASP than the other three. They described with some concern the structural issues relating to the sequencing of Maths modules in first and second years of the undergraduate programme which had limited their opportunities to make contact with direct entry students.

> Phase 2, University Lecturer Interview
>
> "I do not have any way of inputting into the third year – although I very much wish that I did. "

Where they had managed to engage with transition support co-ordinators in colleges to discuss the most relevant HN Mathematics Modules to prepare students for study in third year at University, they described their interventions as "unofficial". This is consistent with the characterisation of this practice as being 'voluntary'. Another University Lecturer had had some interactions with College 1 in the past due to friends and former colleagues whom they knew who worked there. But they recalled the frustrations of responding to a recent invitation to meet with Associate Students at College 1, only to find that the students were not due to attend college on the day of the visit. The extract below from an interview with one of the PLs illustrates a degree of frustration with the practicalities of attempting to become involved in the ASP community:

> Phase 2, University Lecturer Interview
>
> "If I can be quite direct, will I go out again? I'm not sure I will. I think they've been quite disorganised. I gave up a morning to go out there after battering backwards and forwards with diaries, "the students you're going to see will be there" … then "oh sorry – they're not here today".

6.4.2   University Transition Support Co-ordinators initiate interaction

Interactions amongst members of the ASP community were generally initiated by transition support co-ordinators in colleges and the University. Most of these interactions involved meetings with two main agenda items: the ASP's complex administrative processes (deadlines for information, ASP Student numbers and funding), and the programme of scheduled transition support for ASP Students from all four colleges. The provision of transition support is addressed in Chapter 7. Other potential items for discussions, such as curriculum alignment or pedagogic approaches that supported transition to undergraduate study were largely absent from discussions at the meetings that I observed.

Interactions (on any topic) between the university and colleges that took place in 2014/15 were unevenly distributed amongst the four college partners. Colleges 1, 2 & 4 received the most collaborative effort from UTSCs whereas College 3 engaged in very little interaction at all with the University. Although most University Lecturers did not consider themselves to have a significant role with the Associate Student Project, the ASP Students expressed a sense of entitlement and expectation about their involvement with the University during their HN study time. This represents one of the tensions of the Associate Student Project; given their dual matriculation some of the ASP Students expect a degree of commitment from the university during their college years that the University Lecturers are either unaware of or are unable or unwilling to provide. The excerpt below indicated that this tension is recognised by one of the College Managers.

>
> Phase 1, College Manager Interview (College 2)
>
> "We have had a few complaints from the students saying 'I've had no answer' 'I've had no involvement – am I really a student of that university?' 'Am I really doing this, because there's just been nothing coming back.' That's probably just, eh … not ideal. So they're missing on bits and pieces because they're missing out, I bet, I'll bet they will feel kind of a wee bit left out. And they shouldn't be."

6.5 Roles and responsibilities for curriculum alignment between HN and undergraduate study

This section draws data from interviews and focus groups carried out in both phases of the study. Analysis of data from all participants draws a picture of the ways in which ASP Students understand how their college's HN programme of study prepared them for articulation to third year undergraduate study. Juxtaposing data from College Managers and University Lecturers in respect of curriculum alignment provided insight into the tensions arising from cultural and institutional differences, particularly in respect of lecturers' roles and responsibilities. This section concludes with a discussion of the findings in relation to Maths as a concern for the community of the Associate Student Project activity system.

6.5.1 Curriculum – significant primary mediating artefact

In this study, the HN curriculum at college is one of the Associate Student Project's most significant mediating artefacts (Vygotsky, 1978) with more responses coded to curriculum than to any of the others. The most significant codes used in this section are 'mediating artefacts', 'curriculum alignment between college and university' and 'roles and responsibilities'. In Section 5.5.1 I explained how the initial coding structure featured curriculum alignment as a sub-code of 'mediating artefacts', but as the analysis developed further, the subsequent coding structure was re-organised to position curriculum alignment as a main code, given its prominence in the data.

The HN frameworks involved in this study are expressed in documentation produced by the Scottish Qualifications Agency (SQA). Since pseudonyms for the HN titles are used in order to protect college and participant anonymity in this study, these are not provided in this thesis. Each framework specifies the learning outcomes to be achieved at a specific level and makes a series of broad statements about expectations in relation to teaching and assessment practices to achieve the specified goals. The alignment between HND1 and year 3 of BEng 1, and between HND2 and BEng 2 is documented in the articulation agreement between the University and its partner colleges. There is no separate agreement made for students making their transition under the auspices of the ASP. Articulation agreements between each of the colleges and the University stipulate that for direct entry to third year on both degree programmes, students must obtain either an A or a B in their Graded Unit in addition to achieving a pass in their HND qualification. There was no mention in the articulation documents about the optional units that colleges should choose to deliver from the HN

Framework, nor of the level of SQA Maths units that students would be expected to have achieved.

During interviews and focus groups, all ASP Students discussed (irrespective of the college where they were studying) their concerns about the extent to which their programme at college would prepare them sufficiently for studying at university. Even though ASP Students understood the articulation agreement between the colleges and the University, and the entry requirements they must fulfil, in three out of four college settings students recognised the limitations of this specification. They understood that although they may pass their HND, the way the curriculum is enacted in college may not prepare them for the learning experiences that they would encounter in third year at University. Features of the college learning experience such as the structure of lectures, the amount of home study, the pace at which topics are covered, the assessment process and the support that they would able to access at college were all considered to be significant in this regard. Attendance at campus events (explored in Section 7.2) provided a reference point for some ASP Students in their comparison between college and what they expected will be their experience as direct entrants to third year students.

> Phase 1, ASP Students Focus Group (College 2)
>
> **R1** "Even just from attending a few lectures at *the University*, like the majority of students that went have agreed that there is a big gap in mathematics … and a variety of courses, which are, according to the SQA, meeting the criteria to go straight into third year."
>
> **R2** "I'm not saying that it's bad by no means, they present it in a less complicated way, the college, in order to adapt to other students that come from different backgrounds, that don't have the particular skills needed to go that far, maybe they're not interested or maybe they have problems learning, but at university, from what we've noticed, everything happens so fast and you've got to keep up."

A primary contradiction emerges between the ASP Students and College Managers in respect of the responsibility for preparing students for university study. The ASP

Students' perspective was that their colleges could and should do more to prepare them for university. It was the teaching, 'the delivery', which prepared them inadequately for university, and some ASP Students felt strongly that College Lecturers did not recognise this fact. Two (of the four) College Managers on the other hand said that the responsibility lay with the ASP Students to study in ways that would better prepare them for university, for example by "working harder", "trying to be more independent", or that they should "up their game". The remaining 2 College Managers expressed views that were partly aligned with each of these perspectives. The ASP Students make no mention of their own studentship (Bloomer, 1997), by which I mean how they themselves act upon the learning experiences provided for them at college, and how that might influence their preparedness for University study. The excerpts below illustrate this contradiction.

> Phase 1, ASP Students Focus Group (College 4)
>
> **R1** "They *(College)* need to understand that there's a massive jump, because the college doesn't recognise that there's a difference between the level of delivery of the courses and things like that. The college don't recognise that. I think there's an assumption that what we're learning in the HND is going to fit right in to the second part, but there's often a massive gap and that's most commonly the delivery of the content and the course and the examinations and things like that."
>
> **R2** "In general there are a lot of concerns among the students. On paper there doesn't seem to be many gaps between the transition, but realistically there seems to be quite a large gap, because it's the students that see the difference between the two types of delivery, like between the classes, but it's the students that are going to have to pass the exams … I think the college always seems to fail to recognise that there's a massive gap and they fail to resolve that."

College Managers did not suggest how college teaching practices might be developed to enable those behaviours which they identify would serve Associate Students well at University. They were however confident and express a degree of pride that their college is 'delivering the right material' for the Associate Students.

Phase 1, College Manager Interview (College 1)

"All our lecturers are aware of what the requirements are for different degree programmes. So we would advise on, okay if you're going into year 2 you need engineering maths 1, 2 and 3. Year three entry you need engineering maths 4. If you're going to be doing mechanical you're going to need advanced strength and materials. So all the staff are very aware of what units are required to be able to support the students in making the decisions and making sure that they get the right units … we do our best to prepare students for university and we do have very knowledgeable staff that delivery really effective lectures. We do feel like our students have learned the underlying knowledge that they need to succeed in year 2 or year 3 of their study."

Phase 1, Interview, College Manager (College 2)

"We know we're delivering the right material because it's in association with what we've been told to deliver, but, you can align that all you want, but it's how do you get the student to accept it being delivered in a different manner … The general feeling of the teaching staff … is to try to get the students to 'up their game' basically."

College Managers 3 and 4 recognised the limitations of the college experience for future direct entrants. They distinguished between the prescribed curriculum (what is taught) and the enacted curriculum (how the topics are taught). They acknowledged that although the HN Units may be aligned with the curriculum being delivered in University, they are less confident about the college learning and teaching approaches. They feared that the level of support ASP Students experienced in college may disadvantage them when they arrive at university.

Phase 1, College Manager Interview (College 3)

"Most of our units at the minute, they're all aligned, but there's always face to face or there's some sort of lecture, so we're not promoting independent learning, I would say we're not actually setting the students up properly for what they're going to meet for when they go to University. We're probably doing them a disservice I would say."

"I've worked out what I think they should have, and I do that, but I'd like to know more. Ideally I would prefer a list of all the things that the uni wants from my students. Are the students disappointing you? Are they manageable, are they mendable? It's like preparing your child to go to primary school – you want to do the right thing."

University Lecturers teaching on the undergraduate programmes on to which ASP Students would articulate, held differing views about how well the college curriculum was aligned with what was required at university. Whereas University Lecturer for BEng 2 considered ASP Students to be well prepared for university study, the Lecturer teaching on the BEng 1 identified areas where the college and University curriculum were less well aligned – notably Materials, Thermodynamics and Maths. On this undergraduate programme, the lecturer also observed differences amongst students in the extent to which their HND prepared them for university study. He observed that despite the fact that students had studied the same HND programme, the different ways that the curriculum was enacted meant that students from different colleges had different educational experiences.

Phase 2, University Lecturer Interview

"What I've seen a little last year but more this year, there's quite a disparity in equity, if somebody is getting an HND from *College 3* but doesn't seem to have the same background and underpinning as the HND from *College 1* or *College 2*."

The variation of ASP Students' experience in college observed by the University Lecturer was consistent with the different reports from ASP Students about the extent to which they felt college curricula were aligned with University study. In the first excerpt below, the DE Student questions why he has been offered a place as a direct entrant at university if he does not have the knowledge that is required. This reflection provides further evidence that DE Students understand the premise upon which the Associate Student Project is based; that through partnership, the HN college experience should prepare students to take their places as direct entrants to third year.

Phase 2, DE Student Interview (formerly College 1)

"We hadn't used Excel. That was the biggest challenge for me was Excel. Definitely. I've spent 4 years at college, 2NCs, a HNC and a HND and I've never used Excel once. And one thing I've realised from being at Uni is it's almost the most important tool, especially for engineering. And there's another thing, Inventor, this year we were expected to know it already by now … but I've never done it, so that's another thing we're having to learn, but we should have done it. Why's that not been taught at College? Also I think then why have been accepted to Uni if we haven't done it?"

Other DE Students who had studied at College 1 were angry that the lack of alignment which they considered had put them at a disadvantage as University direct entrants. They also had concerns about the disorganisation of the administration and management of their programme, lack of resources (staff and equipment) which they felt resulted in their being inadequately prepared for University. On one occasion at College 1, I witnessed an example of conflict between a College Manager and the Associate Students' lecturer about the lack of availability of the software required for one of the units which further strengthened the students' account of their experience.

DE Students previously from College 2 painted a different picture of their college experience reporting that the topics covered in college were sufficiently aligned with equivalent provision in university, but they recognised differences in the ways the curriculum was enacted at University, particularly in relation to assessment.

Phase 2, DE Student Interview (formerly College 2)

"I think the content is the same, it's just the way it's taught … they ways of teaching – so it's quite different. … The main difference is what was required for the assessment, reference and stuff like that was different from college and stuff like that … Here you're expected sort of just expected to know."

Associate Students who had studied at College 3 also reported that the content was well aligned with their University programme and they felt well prepared by the referencing practices that they had learned at college. They felt that these had

equipped them well for University assessments. This finding is of particular note when viewed in light of the findings in relation to transition support which are outlined in Chapter 7. College 3 is located furthest away from the University. None of its students had attended at Associate Student Induction event and none of them had recalled attending any other campus visits. Furthermore, due to changes in the management of the HND programme, it had not been possible for the University Transition Support Co-ordinator (UTSC) to arrange for the delivery skills focussed workshops that year. Consequently, there was no skills-focussed workshop provision delivered at College 3 during 2014/15, but this did not impact on how prepared they felt for university study.

Phase 2, DE Student Interviews (all formerly College 3)

RI"I felt college was really good. I managed to pass everything, do really well. … Yes, it works out pretty perfectly mostly, at least for my course, because it's specifically designed to go into it. The one thing we didn't prepare for was Materials. That's because we were taught materials in HNC, not HND as much. And then back into third year uni where Materials is part of it again."

R2 "We used Excel a lot … Word, we were already really good at it and PowerPoint, we had to do a presentation for my graded unit, So again, I had already done all that "

R3 "We had already done referencing in college. Obviously, for the graded Unit you had to reference, there was a lot of stuff submitted on Turnitin at college; actually, more so than here surprisingly."

There are important differences in the extent to which the DE Students from different colleges felt that college had prepared them for university, despite the common HN frameworks. These findings are illustrative of the significance of the enacted curriculum and its impact on college students' readiness for third year undergraduate study.

6.5.2 Tensions with Maths

Mathematics is a fundamental aspect of engineering degrees and their corresponding HN Qualifications. In 2013, the University Maths lecturers recognised that students with passes in HN Units in Engineering Maths 1, 2 & 3 were inadequately prepared for third year engineering modules in the BEng 1. This was the result of structural changes both

to the SQA's suite of Maths Units and a restructuring of the BEng 1 programme during academic session 2013/14. A list of topics that were not addressed at HN and which would be required for third year of degree courses in engineering was generated by the Maths lecturer and shared with all four partner colleges. These are shown in Appendix 7. Corresponding Maths Support Booklets (titles and topics are listed in Appendix 8) were made available by the Maths lecturer to students in all four partner colleges. They were intended as self-study resources to address the gaps between HN and university curricula. The potential for these resources to serve as primary mediating artefacts in preparing for Maths at university was never fully realised as the ASP Students in the current study did not engage with them.

> Phase 2, University Lecturer Interview
>
> "… I went up, I took enough for everybody, they're really heavy, and I took enough for everybody, and I said don't, don't just don't panic, but if you've got time over the summer have a look through this stuff, particularly the calculus one. "

The University Maths lecturer anticipated that the restructuring of the third year of the Engineering degree would cause further difficulties for direct entrants since the new structure contains no discrete Maths modules even though students are required to use mathematical techniques to complete assessments. Since no specific engineering maths modules are offered at University in third year, all students would need to have already developed mathematical skills to cope with the calculations that are embedded into third year course work and exams.

In order to accommodate the requirements for ASP Students transitioning to 3rd year degree programmes at the University, the entire HND year group in partner colleges will in future be required to take additional Maths Units. This is represented in Figure 9 (below). There are typically insufficient numbers of HN students to run separate classes for Associate Students in any of the colleges. The tensions associated with an HN programme which serves two different purposes for its students are discussed in Section 9.3.3.
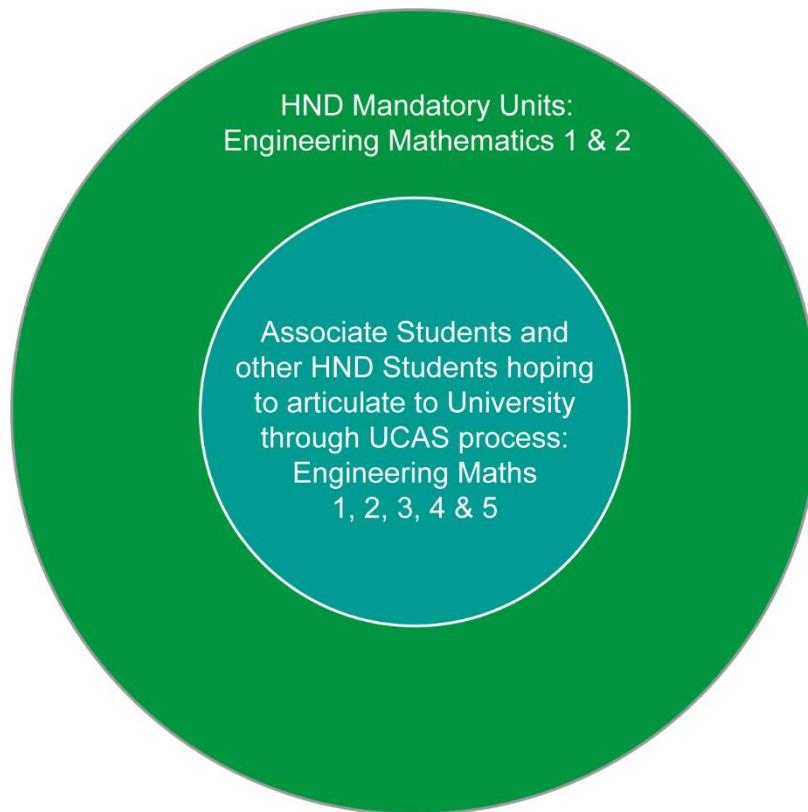
Figure 9 Entire HND year group studying Maths to varying levels

The HND Eng2 Associate Students also expressed concern at both focus groups about Maths, initially in terms of their understanding of the difference between the HN Units that they had achieved and those that were required by the University to which they would articulate. Subsequently, the group reported feeling 'palmed off' by the college with empty reassurances that *"it will be fine".*

> Phase 1, ASP Student Focus Group at the University (College 4)
>
> **R3:**. "We're told next trimester we may have extra classes.
>
> **R1:** No. That's been ruled out
>
> **R3:** That's changed?
>
> **R2:** Yes, It's been ruled out
>
> **R1:** Yes, because the college won't spend the money.
>
> **R3:**.That fires back when we're going to be at Uni"

According to both staff and students then, the prescribed curriculum in college as it relates to Maths, was not sufficiently preparing Associate Students to achieve their

object and outcome. This was despite the extra funding from Scottish Government provided for these students under the auspices of the Associate Student Project. Associate Students are funded at the university unit of resource (Scottish Funding Council, 2018a); the University passes on 75% of the funding to the college to 'teach the students' with 25% being retained by the University for 'aligning curriculum to achieve ease of transition and to provide support for Associate Students while they are in college' (Scottish Funding Council, 2017b). I found no evidence that the resource passed to the college was being used to support the learning and teaching of Associate Students. This begs the question 'who is responsible for curriculum alignment under the auspices of the Associate Student Project?'

The situation with Maths can be understood in terms of tensions and contradictions within the ASP activity system. In order for the subjects (ASP Students) to achieve their object, the 'rules', in this case the articulation agreement between both HND1 & 2 and their corresponding degree programmes at university, had to change. This in turn resulted in changes to both prescribed and enacted curriculum which served as powerful primary mediating artefacts for subjects to achieve their object.

Figure 10 below draws together the diverse perspectives on responsibility for curriculum alignment discussed in this section. There are two dimensions in the figure which represent that diversity of views identified during interviews and focus groups. The first dimension is 'confidence versus concern' about the extent to which the prescribed and enacted curriculum prepares students for university study. The second dimension relates to where the responsibility rests for ensuring the curriculum is appropriately aligned: 'college versus university'. While there is no strong and consistent pattern emerging from this representation, there does appear to be more confidence amongst lecturers and students on the BEng 2 programme than on the BEng 1 programme. And, while there are staff from colleges who believe that the University should take some responsibility for ensuring students are ready for study as 3rd year direct entrants, there are no University Lecturers who adopt the same position. Two University Lecturers (University Lecturer Maths and University Lecturer Eng1) indicated that they understood the responsibility should be shared to some extent, although they felt that the main responsibility lay with the college. Figure 10 (below) represents different perspectives relating to responsibility for curriculum alignment and levels of confidence about students' readiness for 3rd year study at the University.

Concern about curriculum alignment and students' readiness for HE year 3

They are expected to know it and it's assumed that they do know it, and when they don't we're putting them at a huge disadvantage.

HND1

Concerned about Maths and report writing

Concerned about materials, engineering applications and thermodynamics

College should take responsibility for ensuring ASP students' are ready for study as year 3 direct entrants

HND1

BEng1

Why's that not been taught in college? Why have we been accepted to uni if we haven't done it?

Hopefully I have made reasonable adaptation

BEng1

BEng1 and BEng2

HND2

HND1

University should take responsibility for ensuring ASP students' are ready for study as year 3 direct entrants

It's not my role to be concerned with what the students are doing (at college) - we have an entrance requirement.

BEng2

Confident that College HN has prepared them well for university.

BEng2

HND2

We do our best to prepare students for university and we do have very knowledgeable staff that deliver really effective lectures. We do feel like our students have learned the underlying knowledge that they need to succeed in year 2 or year 3 of their study.

HND2

Confidence about curriculum alignment and students' readiness for HE year 3

KEY

College Manager

ASP Student

University Lecturer

DE Student

Figure 10 Different perspectives relating to responsibility for curriculum alignment

6.6 Conclusions from findings – the Associate Student Project as an activity system

This chapter explores the macro level functioning of the ASP activity system. The challenges for colleges in managing the fluctuating population of Associate Students are offset by the advantage which the additional funding from the ASP brings them. The status of Associate Student is valued by those who hold it providing them with certainty about future study and confidence that the university will help them to solve problems that they may encounter on entry to third year of the degree programme.

This study suggests that collaboration amongst the members of the ASP community is initiated and sustained primarily by the UTSC. A University Lecturer's engagement in the system is limited and voluntary, typically being based on historical friendships which pre-date the ASP. The experience of being an Associate Student is not universal and it may vary depending upon several factors, the most significant of which relates to the ways in which the curriculum is enacted in college. There are concerns about the extent to which the college prepares ASP Students for university which can be seen in CHAT terms as primary contradictions amongst the members of the ASP system 'community', about whose responsibility it is to prepare the students for university study.

This study shows how structural changes such as those made to the prescribed curriculum can impact on ASP Students' ability to achieve their outcome. Interactions between members of the community are essential to resolving contradictions that may occur as a result of structural changes. Findings highlight one University Lecturer who brought about significant adjustments to the components of the activity system which enabled students to achieve their outcomes. These changes have implications for all students and not just those articulating to university in the ASP activity system.

Chapter 7   Findings - transition support for Associate Students (AS)

7.1   Introduction to the Chapter

The guidance document provided by the Scottish Funding Council (Scottish Funding Council, 2013) on the Associate Student Project identifies that support for students should be 'sufficient', and later 'appropriate', to ensure that articulation takes place. It does not however specify the roles and responsibilities of colleges and universities in this regard, nor does it provide examples of the sorts of interactions considered to be either sufficient or appropriate for this purpose. This chapter draws a picture of delivery and uptake of transition support initiatives for Associate Students studying in the four college settings and then during their first year as direct entrants at University. The wide-ranging initiatives are clustered around three categories which are characterised as; 'Making connections', 'Filling gaps', and 'Embedded the in the curriculum'. These are analysed using the codes listed in Table 20 Codes and sub-codes used in analysis of transition support). Several of the sub-codes represent repeating themes that are used in association with more than one of the main codes. As described in Chapter 5 (Section 5.5 Data Analysis), the codes were derived using a hybrid approach to coding (Fereday & Muir-Cochrane, 2006) in which codes were drawn from the six components of the activity system, supplemented by ones established inductively from the data.

In the sections which follow I explore findings in relation to structural and institutional factors which shape transition support and the ways in which Associate Students engage with the provision. I present the roles and responsibilities for transition support, noting the tensions and contradictions which shaped activities over time as transition support co-ordinators, managers and lecturers interpreted their roles differently. Findings in relation to students' responses and their reaction to transition support shed light on those practices which they acknowledge as helpful in supporting their transition and on those which they dismiss as less useful. This chapter sees the analysis shift from a macro analysis of the ASP as presented in Chapter 6 and of transition support in Section 6.4.2, to a more micro analysis of the ASP Students' experience of this support provision.

Codes	Sub-codes
Beliefs about transition support	Entitlement
	Valuing
Student reaction to transition support	Dismissing
	Privilege
	Grateful beneficiaries
	Duty
Responsibilities for TS	Pastoral
	Administrative
Limitations on time and timetables	Structural
	Institutional
	Individual
	Locality
University staff engage in transition support	Responsibility
	Duty
	Skills gap
	'Dolly along'
Relationships	Beneficial for staff
	Beneficial for students
Mediating artefacts	Transition support workshops
	Teaching
	Spaces
Transition support for Maths	Responsibility

Table 20 Codes and sub-codes used in analysis of transition support

7.2 Campus visits - overview of provision and participation

This section draws together the range of transition support activities which took place on the University campus during Phase 1 of the study. It explains the University Transition Support Co-ordinators' (UTSC) intended purpose for the events. It also introduces some of the challenges associated with co-ordinating participation from University colleagues, college partners and the ASP Students themselves. Excerpts from ASP Student interviews and focus groups illustrate how the students engage with and value campus events, and they offer insights into how the structural issues and students' individual circumstances shaped the uptake of provision.

Campus visits for groups from colleges occurred at various points between November and June during academic year 2014/15 and served two main purposes. First they were offered as 'pre-entry support', intended to help Associate Students adjust to the future social and academic demands of undergraduate life. Being able to imagine themselves at university makes it the more likely that they will take up their offer which is the second purpose of campus visits. The UTSC recognises that the opportunity to make connections with University people and places represents a marketing opportunity for the University. The rate of uptake of Associate Student places at college and the rate of their conversion to accepted places in third year are measures of the University widening participation team's success in managing the Associate Student project. Success in recruiting Associate Students from college into third year makes an important contribution to meeting the targets for widening participation set in the University's Outcome Agreement, particularly in respect of National Measures 1[2] and 2[3]. It is not surprising then, that University Transition Support Co-ordinators (UTSC) who organised initiatives in colleges and in university sought to promote what they described as positive messages about University which had an emphasis on offer conversion. One of the UTSCs exemplifies the marketing perspective of these events in the following excerpt:

[2] National Measure 1 – The number and proportion of Scottish-domiciled learners articulating from college to degree level courses with advanced standing

[3] National Measure 2 – the number and proportion of Scottish-domiciled undergraduate entrants from the 20% and 40% most deprived postcodes.

Phase 1, UTSC1 Interview

"I suppose the main thing is trying to get the Associate Students interested, attending events, interested in uni. And why am I doing that? It's to keep the students interested and involved with *the University (pseudonym)* in the hope that they come to *the University* or as many as could realistically be expected - which was a good number last year."

Although the status of Associate Student gives a guaranteed place on a named degree, some ASP Students will have had other options too; perhaps in employment or at different universities. Furthermore, not all ASPs will articulate to third year as the scheme intends. One ASP Student (from College 4) had no intention of attending the University but he still attended the transition support events and used the Library to access to online resources saying

Phase 1, Focus Group (College 4)

"it does make me feel just slightly bad though that I'm not actually going to *the University*."

An Associate Induction Day took place on campus at University in October 2014 which was open to all HNC and HND engineering college students intending to articulate to university whether or not they held Associate Student status. Lecturers and transition support co-ordinators from all four of the college partners were also invited to attend the event. The agenda included presentations from academic and professional services staff, library and campus tours (the latter led by Student Representatives) followed by lunch with University staff. College students were invited to join 2nd year students already studying at university, for a Maths lecture. Finally, a plenary session with University staff created opportunities for questions and answers. During the two academic years which span this study (2014/15 and 2015/16), although the ASP Students were invited to the induction event described, no equivalent induction arrangement was made for them when they arrived at University a year later as DE Students. In 2015/16, the Students' Association held an induction event for all Direct Entrants as part of Freshers' Week, but only one of the DE Students in this study attended that event.

In 2015 a change in the Associate Student Project activity system 'community', namely the transition support co-ordinator, led to a change in the UTSC roles and responsibilities. Since that change, campus visits in trimester 1 have been renamed as 'Associate Days' and the term 'Induction' is now reserved for new introductory provision for DE Students, led by the UTSC during their first week at University.

Other campus visits during 2014/15 were arranged with partner colleges on a more ad hoc basis for specific purposes such as a guest lectures, lab sessions, site visits and an employer networking meeting. The UTSCs aim was for these events to provide further opportunities for social interaction between Associate Students from different colleges and with representatives of the School of Engineering. ASP Students who attended were enabled to make connections with the University campus and to further imagine themselves studying there. The Engineering Subject Librarian visited every college to give virtual tours of the Library, so that even those who did not attend the campus events were able to gain some experience of the tools and resources which would mediate their learning at University.

The University Associate Student matriculation card is an artefact which mediates further connections at University; some face to face (gaining access to study spaces on campus such as the gym and library) and others remote or virtual (connecting with the 'Coming from College section of the Student Portal, the Library and most of the digital resources contained therein). Throughout 2014/i5, and 2015/16 the then UTSC set up a Facebook group for Engineering Associate Students (discontinued in 2016) that hosted posts and pictures to notify and report back on relevant University events and approaching deadlines such as UCAS dates. This was intended as a further opportunity to make positive connections between Associate Students and the University. As the following excerpt from a focus group shows, it did not elicit the sorts of dialogue and community amongst the ASP Students that had been the intention at its initiation. Initiatives that could potentially mediate the students' transition, and ultimately the achievement of their object, are resisted by ASP Students unless they recognise their value as mediating artefacts that will help them to achieve their goal.

> Phase 1, ASP Student Focus Group (College 1)
>
> "There's the Facebook, but there's that many updates from *Pat* (pseudonym) and most of them are nothing to do with us any way. I don't have time to look through them all. I should really I know but …"

Planning, designing and delivering transition support events takes a great degree of co-ordination and University Transition Support Co-ordinator resource. In order to realise the University's marketing intentions for these events and to encourage ASP Students to accept their offers to third year, ASP Students' participation and their perception of its value is important. This next section presents data which illustrates students' understanding of the value of campus visits.

7.2.1 Associate Students' participation in campus visits

Students who attended the campus events and who make use of their Associate Student matriculation card speak favourably of the access to University that these interventions brought them.

> Phase 1, ASP Student Focus Group (College 4)
>
> "The access to the library and online resources was very useful actually. I'm glad of that. I used my *University (pseudonym)* computer account to access the library to get some stuff for my Graded Unit work that I was doing here (*in college).*"

But most participants had not engaged at all with this provision, despite their status as Associate Students and their entitlement, but not requirement, to do so. In discussing the value of visits on campus with those who attended, the responses were generally appreciative but not enthusiastically so, commonly using terms such as 'nice', 'helpful' 'supportive' to describe their experience. There was also a note of reticence in ASP Students' responses to my questions about these events which may be attributable to the fact that these participants engaged with me as a member of staff of the University at this point, rather than as an independent researcher. Several Associate Students position themselves as being 'in need of help' or as grateful beneficiaries of support (Hallett, 2013) which they observe that campus events go some way to providing.

> Phase 1, ASP Student Focus Group (College 2)
>
> "I think in general, the universities seem to show a lot of support. I think they seem to try and help students from college as much as they can, they seem to be very supportive on things …"

There is also a sense of duty expressed in some of the students' responses and a feeling of obligation to engage with the provision; 'it will look good on me if I go', and several students commented about their good intentions to use the Library resources and the Facebook page which they regret that they did not always follow up.

Phase 1, ASP Student Focus Group (College 4)

R1: Getting access to the library was quite cool. I actually used it.

R2: Access to the library was very helpful for the Graded Unit, for materials, more books.

R3: I didn't use the library once – I feel bad for that.

Despite a prevailing sense of duty, participation at campus events was still understood by students to be discretionary rather than mandatory, and later in this section, I will show how this was also the case for University Lecturers. Structural issues such as timetabling, transport from home to the campus and employment commitments were regularly cited as reasons by the ASP Students to explain why they did not attend any or all of the campus events.

Phase 1, ASP Student Focus Group (College 1)

"I don't have time for other stuff, just college work, and work really. I have to earn a living."

Phase 1 Focus Group College 4

"A lot of people have other commitments because this isn't a day when we usually come to college so, like I don't work today, but if I did, I wouldn't be able to come."

There were limited observable patterns in the data about which ASP Students did or did not participate in the events apart from one striking fact that none of the participants from College 3 reported having attended any of the campus events. Their college campus is located 33 miles away from the University (this is the furthest distance to the University from any of the colleges) and to travel by public transport would have involved a journey of 2 hours or more each way, or a drive of well over an hour during rush-hour traffic. (See Table 5 Mileage between University Campus and the Colleges in

Section 4.2) This contrasts with ASP Students from College 4 (just a short bus ride for most of the group and within walking distance for one of them) and who were the most enthusiastic about their visits on campus. They highlight the access to equipment (such as 3D-printers) and the value of understanding how theory learned in college applies in practice and they also mention access to the Library as being of particular interest and value.

> Phase 2, DE Student Focus Group (formerly College 4)
>
> "When we got to do visits … we also did the geotechnic visit as well. I got most out of that because it was just simple things like you learn the theory and then we went and done the sheer analysis, there was bits of the theory that just sort of dropped into place because you actually saw what was going on, as opposed to watching a YouTube video (*at college).*"

The materiality of studying engineering at University creates interest and enthusiasm amongst this group which is consistent with the marketing intentions which underpin these events. Their comments indicate that instead of understanding the campus visits as working in opposition to the achievement of HN programme, they saw the visits as a mediating artefact for helping them to achieve their HND. Yet the data from the other College focus groups suggested that some ASP Students experience tensions between the requirements of their HN course and the opportunity to participate in pre-entry support at University. They express frustration at what they interpret as a lack of coordination between their college and the University which gives rise to these tensions.

> Phase 1, ASP Student Focus Groups (College 2)
>
> "Yes, so the timetable hasn't been very well coordinated, because there are some lectures that were made available to us, but they're all at times when we're at lectures here. So obviously we need to pass this course to go onto university, so we're going to be attending the ones here first."

Phase 1, ASP Student Focus Groups (College 1)

"There's lectures and that (*at university)*, but if you went to them you'd upset your study time here."

For these groups, given the demands of full time HN study, work and family commitments, there was never any doubt expressed about where their priorities lay; and it was not, at this point in their academic career, with the University. The findings in this section point to the fact that although the Associate Student Project is intended to promote close collaboration and transition support for all ASP Students, the offer is unevenly distributed amongst Associate Students, varying according to each individual's personal circumstances including their spatial mobility, employment and caring responsibilities. The clash between University transition support events and the demands of college created tensions for ASP Students which they resolve by prioritising their HN study.

7.2.2   College Managers and Lecturers encourage participation in campus events

Co-ordinating participation from four different colleges at University campus events represented a significant challenge due to structural and institutional differences between the four partner colleges and the University. To give every ASP Student the equivalent opportunity to attend the events, timetables in each college would have to be aligned with Programme Leaders', Librarians', Lab Technicians' and Student Representatives' availability at University. The University and college transition support co-ordinators were the drivers for scheduling and recruiting support for the events. They sought support from amongst their colleagues on engineering programmes at University and also amongst the ASP Students and lecturers in college. College Lecturers were supportive of their students attending campus events, but there was only one occasion that was reported to me where a change had been made to students' timetables to resolve a contradiction in scheduling between university and college. In that instance, in order to avoid disruption to the HN timetable, a lecturer (from College 1) had delivered their lecture to their HN group during one of the campus events as part of the programme for the day. But despite this example, I found no other sense of a shared responsibility between colleges and the University transition support co-ordinators for organising campus visits. Furthermore, none of the participants (College Managers, College Lecturers or ASP Students) were able to recall any attempt to engage the ASP Students in reflective activities nor even to promote

discussion with the group about their experiences at University on their return to college after the campus events.

There was certainly no resistance from College Lecturers to their ASP Students attending the campus events: rather they identified them as being "valuable", "promoting social integration" and an opportunity for Associate Students to "bond with the University". College Managers recognised the advantages for ASP Students in actively engaging with the University and suggested an active role for the college in promoting their involvement:

> Phase 1, College Manager Interview (College 3)
>
> "…. instead of just 'you're going to university' ... to get them, so they're kind of immersed, so they know what's going to happen to them when they actually go there. I think we've got a bit of work to do to do more of that. To promote that a bit more, to tell them how that's going to benefit for them in the long run."

> Phase 1, College Manager Interview (College 2)
>
> "At the HND level, we've not got to make them go to University, but we've got to make sure that University, make them understand the culture of University and what it's like. "

Two participants in the College Lecturer/Manager group identified the campus events as a privilege for students, which resonates with the ASP Students who positioned themselves in this context as being in need of support, or grateful beneficiaries.

> Phase 1, College Manager Interview (College 1)
>
> "…. giving them the privileges such as access to Moodle and the systems and letting them be party to the transition support attending lectures and everything like that."

This perspective was in contrast with that of Managers (from Colleges 1 & 2) who regarded campus visits and interaction with the university as more of an entitlement than a privilege for Associate Students. The Manager of College 2 suggested that

under the auspices of the Associate Student Project he would like to see even more interaction between the college and the university and a future partnership in which students would be entitled to an almost open invitation to attend lectures at the University.

> Phase 1, College Manager Interview (College 2)
>
> "… I like the idea of (Associate Students) interacting with Uni and College. Especially HND guys who ought to be spending half their time in *the University* … they'd then get an idea of what level they'd need to get to … If you can get your head round it you can do it. "

Manager from College 1 recounted the circumstances in which, further to a discussion with a University Lecturer at one of the campus events, she had invited him to come to College 1 to lecture on his specialist topic which she had thought would be of interest to Associate Students. Dates and times were agreed in email correspondence, but prior to the event, the College Manager received an invoice from the University charging for the University Lecturer's time at consultancy rates. The lecture was cancelled without the Manager reminding the University of the significance of collaboration between partners under the auspices of the Associate Student project: "I just let it go". This incident highlights the contradictory nature of expectations within the community of Associate Student Project activity system and its interaction with related activity systems. It also provides an example of a quaternary contradiction which emerged between different but related activity systems such as the ASP and the 'commercial/financial' activity-system within the University.

All College Lecturers indicated that they recognised the value of campus visits. They commented on the potential for students to realise more about the challenges and academic level that will apply at University. There was also a note of pastoral concern too, hoping that campus visits will help the students to make a good start at University. From the College Lecturers' perspective then, the campus visits represent a valuable opportunity for their Associate Students to envision their participation at University. The idea of students' 'imagined participation' uses a concept associated with Wenger's landscapes of practice (its use is outlined in Section 4.4.3) and will be discussed in Chapter 9. Despite this positive endorsement of transition support provided by the

university, transport was never offered for students at the more geographically remote locations and timetables were never altered to enable ASP Students' attendance.

7.2.3   University Lecturers' participation in campus events

Most University Lecturers were more muted in their enthusiasm for campus events than were their counterparts in college, commonly expressing frustration at the tensions of being assigned responsibilities for visits of which they were given little notice. This provides an example of a primary contradiction between University Lecturers and UTSCs in respect of their understanding of their roles and responsibilities for participating in transition support. The way that roles and responsibilities for campus events are negotiated and taken up by Lecturers in university and in colleges, illustrates how tensions can build between closely related activity systems within and between institutions.

The University Lecturers did however recognise the challenges of co-ordinating the contributions of so many different people.

> Phase 2, University Lecturer Interview
>
> "So ... a little bit of forewarning and a bit more coordination. But it's not going to be easy to coordinate because most people are doing different things at different times … One doesn't really mind these things as part of the job but ..."

Both University Programme Leaders offered accounts of agreeing to host visits (labs and/or lectures) before the introduction of the Associate Student Project for HN students, only to find that no students attended at all. But one University Lecturer's attitude was far more closely aligned to that of the College Lecturers, recognising the positive value of campus visits in creating opportunities for students to engage in the practices of studentship at University (such as attending lectures).

> Phase 2, University Lecturer Interview
>
> "I think the more interaction we have between the colleges and the university, the more successful their studies are likely to be … I think it's helpful in lots of ways *(Associate Students attending lectures at Uni)* – it all seems less strange if they've been into a lecture, lectures are different – they are bigger, my

teaching style and *James's* (*pseudonym)* teaching style is probably different from college and it's good to see all that."

Whereas College Lecturers were not expected to assume any responsibilities beyond encouraging their students' attendance at transition support events, data from interviews drew a different picture for University Lecturers. Although both programme leaders in my study had visited at least one of the partner colleges for networking or for different purposes not specifically related to the Associate Student project, University Lecturers supported campus events and visited colleges only as a discretionary part of their role, discharged voluntarily.

> Phase 2, University Lecturer Interview
>
> "I don't really get - I haven't had any direct involvement with the college, or I haven't gone out to speak to my equivalent at '*College 4*' or '*College 1*' to have a chat about subject matter, modules, the transition so I'm no' really involved heavily … it's almost that I've got so many hours in the day, it would be nice to get involved and be speaking to them and having … but I feel it's not my role to do that. My role is to deal with the students here rather than deal with the students there and be too concerned with what the colleges are doing because we've got an entrance requirement it's an HNC or HND. HNC to 2nd Year, and HND to 3rd year, and if they have an HND from that institution we accept that."

This attitude was not shared by their Head of School who expected support for transition support events frequently at very short notice. The voluntary nature of a lecturer's engagement with transition support was further endorsed at interview with one of the University transition support co-ordinators who observed inconsistencies in how lecturers discharged their responsibilities in this area. He reported that some lecturers were willing to participate in activities which were integrated with transition support activities, while others were not. Further, the co-ordinator noted the effect that such disparity could have on the students' experience when they articulated to university from college.

Phase 2, Interview UTSC2

"One of the academics couldn't actually attend Let's Start, he had another commitment, but we were able to organise a film. He was able to do a film to welcome the students to the session and he handed over to his colleague and spoke about what the programme entails and so on. So some academics are really, really engaged, fantastic. Others less so. Unfortunately, students will have different experiences, coming in."

Discretionary involvement in Associate Students' transition support is not confined to University Lecturers. In Section 7.2 (Campus visits – an overview of provision and participation) I noted that the change in UTSC led to a change in provision for Associate Students. Changes to workshops were a further result of the appointment of the new UTSC and are outlined in the section which follows (Section 7.3). It makes sense to deduce that to some extent UTSC activities in relation to transition support may also be seen as discretionary.

In my interview with the original post-holder (UTSC1), he described his role as 'college facing' explaining that once the Associate Students have left college and started in third year, his responsibility for the group is finished. This perspective was further reflected in his response to a request from the Head of School to design and deliver induction on campus for the Associate Student group at the start of the academic session in September 2015. He declined to do so, explaining that the group could access the Fresher's Week Induction Event for all college direct entrants run by the Students' Association. He believed that once the students had "come on board" at the University, their induction route should be through the School of Engineering.

Phase 1, Interview UTSC1

"The college/direct entrants are now signed up … and they are now just part of that cohort. And if I took the view of a student, I wouldn't want to go to a separate induction event because I had been an Associate Student or I had come from *College 4* – I think it's perfectly right that they just are part of the general student cohort on that subject. They are no longer walking about with a sign on their head saying 'Please help me' 'please donate to this charity – I am an Associate Student', 'I used to go to college – please help me' … We don't need to mollycoddle

them or look after them specially, but we do look after **all**
(emphasis) of our students."

This response gives a valuable insight into his conceptions of transition. First of all his perspective is that transition is time-bounded and secondly his view was that former Associate Students could be regarded as being in deficit if they are seen to be treated differently from the cohort of continuing students that they are joining. His successor however (UTSC2), himself a former direct entrant to third year of University from college, had a different view of the role and a markedly different conception of transition. Both transition support co-ordinators use their discretion in how they discharge their responsibilities to offer transition support activities for their students, based on their beliefs about what is best for the students. Whereas the original post-holder declined to provide induction and had no further contact with former Associate Students once they finished at college, his successor devised an induction plan for them. He was also proactive in emailing every former Associate Student during their first week at University to support or guidance of any transitional issues that they may experience. He explained his view of transition, which was much less time-bounded, beginning during the college years and extending into the first weeks of University:

> Phase 2, Interview UTSC2
>
> "the transition to university's not completed after you finish your HNs and you've had all the workshops from me. Personally, I think in most respects it's only really starting then, and then when you're preparing over the summer to come to university, then the workshops that they may have had will then start to make a bit more sense, and they'll start to fit into their life."

In my analysis, given that I deploy CHAT as part of the theoretical framing for this study with its focus on mediating constructs, (see Section 4.4) rather than regarding workshops as 'processes', I have treated them as secondary mediating artefacts. A categorisation of three types of artefacts used CHAT is provided in Table 8 of Section 4.4.1. Secondary artefacts have the potential to mediate ASP Students' ideas and attitudes towards the University, and to shape their outcomes in the activity system.

7.3 Academic Skills workshops – filling gaps

Academic skills workshops are presented in this study as filling a perceived gap between Associate Students' academic skills and those that would be required of them at university. The term 'academic literacies' (this concept was first discussed in Section 3.9) is never used by any of the participants in the study. Instead, 'gap' is used by lecturers and students in relation to the difference in studentship practices at college and at university, particularly regarding assessment. In Section 6.5 participants' views about aspects of the college curriculum which do not align well with the University modules were outlined and a different sort of gap is referred to. That section refers to a gap in the curriculum at college which may be remedied by closer curriculum alignment although responsibility for that alignment (college or university) is never settled upon. In this section, I look at the perceived academic skills gap which is positioned by transitions support co-ordinators as a deficit in skills which may be remedied by Associate Students' participation in workshops delivered by the University at colleges. The data presented in this section indicates that some members of the community in the Associate Student Project activity system, (such as transition support co-ordinators and College Managers) regarded skills workshops as significant mediating artefacts in the achievement of Associate Students' outcomes. The subjects themselves, the ASP Students in colleges, held opposing perspectives, attaching less significance to them.

During academic session 2014/15, University Transition Support Co-ordinator (UTSC1) devised and coordinated a schedule of 90-minute academic skills-focussed workshops in each of note taking, report writing, library skills and Maths workshops for delivery to ASP Students in partner colleges. Provision for skills focussed workshops shifted over the two years of this longitudinal study in terms of their positioning in relation to students' HN programme of study, and by whom they were delivered. Although the academic skills workshops were not formally evaluated by either the college or the University, in the 2015/16 session, the new University transition support co-ordinator (UTSC2) noted the lack of college engagement with the provision and sought to provide contextualised workshops which were designed according to each college's HN teaching plan. Although the topics remained broadly the same (an extra topic on critical thinking was included), they were no longer stand-alone, and were delivered to coincide with points in the HN teaching schedule when the academic skills being taught would be most relevant. In 2014/15 the then UTSC's involvement was restricted to organising the workshops which were delivered by academic skills advisors. In 2015/16, his successor (UTSC2) was responsible for organising as well as delivering

the workshops in conjunction with College Lecturers. The findings in this section then relate to the stand-alone workshops delivered during 2014/15, although provision had changed during the following academic year under the leadership of UTSC2.

College Managers, Lecturers and ASP Students appeared to welcome the University's engagement with the college, perhaps for the prestige it offered the college and its students. I received conflicting accounts of whether or not workshops had been delivered, when and by whom. I was able to establish that workshops had been made available to all four colleges, but only Colleges 1,2 & 4 took up the offer. The Manager of College 3 was not in post during session 2014/15 at which point it appears that none of the stand-alone workshops was delivered in that college. However. in 2015, he was supportive of what he referred to as "advanced' academic skills" and their integration into curriculum delivery, "so that everybody benefits from them whether they're going to university or not" (Interview, Manager College 3). Whereas the opportunities to attend campus visits at University were valued by Associate Students who attended them, academic skills workshops delivered at college were less widely acknowledged as valuable transition support.

The UTSC1 confirmed that arrangements were made in 2014/15 for a full programme of skills focussed workshops to be delivered in three out of the four colleges. Inconsistent accounts of the workshops from College Managers and Associate Students inhibited detailed analysis, although the lack of clarity is of itself interesting. In one of the colleges, it was not possible to secure commitment from the college to host the workshops for the students, and so none were delivered. The vagueness amongst some of the participants (lecturers and students) about whether or not workshops were delivered and their lack of visibility in colleges may be accounted for by the fact that the sessions were offered separately from the HN timetable. Instead, they were organised as stand-alone events delivered by a member of the academic skills team at University. College Lecturers and Associate Students were unlikely to have had any previous contact with the person leading the workshop. Associate Students' reports of workshops are exemplified by two participants during interviews held in Phase 2. Both previously from College 1; one said that there was a single workshop provided and the other said there were none, although in hindsight, they both state that workshops (or more of them) would have been helpful to support their studentship at University. Amongst those students who did acknowledge attending workshops, reactions varied significantly even within college groups. Responses ranged from dismissing the session altogether as 'a joke class', to a more critical evaluation. One Associate

Student observed the limitations of being shown how to write a report, rather than receiving contextualised feedback on a report which they themselves had written. This finding further emphasises the limitations of a single or universal programme of transition support where there are no opportunities for students to customise or shape the offering according to their preferences or needs.

Phase 1, ASP Student Focus Group (College 2)

Me: "How did you find the workshop?

R1: It was concise and informative. Probably more than we would have wanted, because we were given an example, we were told why it's like that and briefly described every part of the report.

R2: Is that not what we want?

R3: Yes, you want that, but you also want like, when you do your own work and when you do your own thing, when you've done your own mistakes, you can see it easier, so when you get that feedback from a lecturer to tell you what you've done wrong, it's a lot more - it goes in a bit better."

Phase 1, ASP Student Focus Group (College 4)

Me: "What about when people have come in from *the University* and delivered academic skills sessions with you in College …

(Complete silence … No response at all)

Me: Did someone come and do a report writing session…?

 R1: Someone did come in for that.

R2: Yeah. We had one guy from the University actually.

Me: How was that?

R1: I think that was more a general view about writing reports.

R2: It's something you learn by doing I think.

R1: It doesn't matter how many times someone'll tells you how to do something, until you actually put it into practice.

R1: It's a technique, that's all it is.

R2: You learn so much information, but unless you actually see the information being like, put into practice it doesn't really help that much."

The students' perspectives about the limited value of the workshops stand in contradiction to that of the University transition support co-ordinator (UTSC2). It may be significant that the UTSC2 had not been in post during the year when the DE Students had been in their colleges as ASP Students (he took up post in 2015). The workshops that they would have received would have been different from those that he was now delivering in colleges. He believed that skills such as report writing are useful to have in advance of articulation given the pressure of time that the students will be under in their first trimester:

> Phase 2, Interview UTSC2
>
> "It's helpful to know that you have all these skills in advance, because as I said to the students, the university year is really quick. You'll only be in the door four or five weeks and you'll have two or three assessments due in. Then the report-writing skills and what goes into a report and different sections and referencing and accessing journals and those skills, become very, very valuable."

University Transition Support Co-ordinator 2 (UTSC2) observed that while Associate Students might feel confident of their ability in respect of general academic skills such as report writing and referencing, they are less confident about the Maths that they will face at University:

> Phase 2, Interview UTSC2
>
> "I don't know if they're oblivious to it, or if it's a conscious decision that, 'I can do reports, I've done them, I got a B in my grade unit, that's covered', but maths has always been the pressing concern."

Although my data suggests that there is little acknowledgement amongst the former Associate Students of the value of skills-focussed workshops delivered while they were in college, a different picture emerges when it comes to support for Maths. This is a subject that the ASP Students acknowledged as being likely to cause them the most difficulty when they start as direct entrants to third year at university. Maths focussed transition support received a good deal of attention from college and university, and the provision for students has developed over time in response to changing curriculum

frameworks in college and in university (these are discussed in Section 6.5.2). Subject-based transition support is the subject of analysis in the section which follows (Section 7.3.1), and there is no doubt that Maths is the predominant concern.

7.3.1   Transition support for Maths

Whereas in Section 6.5.2 I examine the tensions arising in the activity system due to the differences in the levels and scope for Maths between HND and 2nd year at university, in this section, I explore findings in relation to transition support for Maths. This is distinct from the skills focussed workshops outlined in the previous section (Section 7.3) in two key respects. First, it was a University Maths lecturer rather than transition support coordinators (or others in the widening participation team) who assumed responsibility for the delivery. Secondly, College Managers and University Lecturers recognised that Maths transition support was indeed required, whereas the requirement for academic skills support was subject to more diverse views.

In 2013, this Maths lecturer, unlike any of the other University Lecturers, made transition support visits to Colleges 1, 3 and 4 (but none to College 2) in respect of the changes to the SQA's suite of Maths Units for HN provision and its impact on third year direct entrants. These structural changes are discussed in Section 6.5.2. This lecturer characterised their own involvement in colleges and on campus at university at several points during the interview as 'interfering' (on four separate occasions through the interview). This suggests that although they saw transition support as a formal part of their role, their personal commitment to working in partnership with colleges and to the students meant that they were willing to extend their practice to include transition support activities in their repertoire.

> Phase 2, University Lecturer Interview
>
> "by then I had twigged, there was a problem, there was a mismatch between what was happening in the colleges, in terms of content and what we were doing …. so, ever since then, I've worked very, very closely with College 1 and Manager 1 … we're in touch a lot … So, the reason I was the one who interfered was that I was the first person to know there was a problem."

Local arrangements between the University and College 1 were put in place. This involved the University Maths Lecturer providing a Maths 'Summer School' for students and printed resources for teachers towards the end of the HND year. But attending further study was not always a priority for Associate Students:

> Phase 1, ASP Student Informal Interview (College 1)
>
> "You're usually asked if you want to do it, because by the time the summer hols come I've done enough."

Colleges 2 & 3 were notified of the Summer School arrangements at College 1 and students and their lecturers were invited to attend, but none took up the offer. The Maths lecturer sent copies of the printed resources to all four colleges for future reference. The booklets did not serve as a mediating artefact for this group, despite its potential to do so because the students resisted the practice that would involve engaging with them.

By the start of academic year 2016/17 in collaboration with the transition support co-ordinator (UTSC2), these previously 'heavy' paper-based booklets were uploaded to an Associate Students Moodle course as digital resources, together with materials from other workshops which were accessible by use of the University Associate Student matriculation card. But establishing the need for transition support and making corresponding provision did not mean that the students valued the opportunities sufficiently to take them up. None of the Associate Students in this study remembered engaging with the Maths Support Booklets nor attending any Maths workshops. When asked about how useful students had found the Maths Booklets for independent study, College Manager 1 was confident of their value to students but did not have information on their uptake, whereas College Manager 3 expressed his doubts about the likelihood of students' successful engagement with them:

> Phase 1, College Manager Interview (College 3)
>
> "And I would probably say the majority of our students need that face to face, they need that interaction with the lecturer - even at HND level, I would say that's for most of our students. Certainly when it comes to the Maths. To actually let them work on their own, they would actually probably not be the majority.

Certainly, the ones who are keen would work through it but the other ones would just give up."

In June 2015, the University Maths Lecturer communicated with colleges either in person or through email to inform them that the University would provide Maths transition support. The support was to be scheduled during the summer period; after Associate Students' had completed their HNDs and before starting at the University. However, despite a level of anxiety amongst Associate Students specifically about whether or not they would be working at the required level of Maths when they joined 3rd year and the good intentions of one group (expressed during a focus group in Phase 1), none of the Associate Students in this study took up the provision that was offered in the summer of 2015.

Phase 1, ASP Student Focus Group (College 4)

"R1: It would also be good to know what they are expecting from us when we start in September. Are we going to be thrown in at the deep end and find out we're way behind or, are we going to find out we're on a level with everybody else? Because I'm happy to spend time over the summer if there's work needs to be done.

R2: Yeah. I'd agree with that."

Phase 2, DE Student Interview (formerly College 1)

R: "Yes, we did (Maths) 1 & 2 at HNC, we done Maths 3 and I think when we done it it had just been cut from a double credit down to a single credit, so we'd 12 or 13 weeks for a morning's lesson to do Maths 3 and it was no-where near enough.
Me: So you didn't do (Maths) 4 & 5?

R: No. It was mentioned that you could maybe do it over the summer, but …

Me: And did that actually happen?

R: No."

ASP Students experience of Maths in their HND programme varied according to whether their College had adopted the optional Maths 4 & 5 SQA Units as part of their HN Framework. One College Manager (College 3) had successfully sought additional funding from the Scottish Funding Council to make the exceptional offer to ASP Students to undertake the Maths units 4 & 5 as workshops extra to the HND programme. This was instead of the extra unit being embedded in the students' existing timetable and curriculum at college. But the other colleges had not taken this route and College Managers hoped that their ASP Students would take up the University's offer of Maths transition support over the summer months in order to address the gaps that were known to exist between the topics included college and those at university.

In my interviews with staff in college and university I established that the Maths support was offered after the college trimester had ended (rather than during the trimester). This was for two main structural reasons; to fit in with University Maths lecturer's availability and, in recognition of the fact that the Associate Students were too busy completing their Graded Unit before the end of the trimester to have time to engage in the workshops. Associate Students, who might justifiably have thought that successful completion of their HN course would have been sufficient preparation for university given their ongoing matriculation status with the University, did not attend the workshops despite their acknowledgement that it might be a useful course of action.

> Phase 1, ASP Student Informal Interview (College 1)
>
> "You're usually asked if you want to do it, but … because by the time the summer holidays come I've done enough. Yeah – 'Maths Lecturer' is going to do a summer school."

This finding draws attention to the spatial and time-bound nature of studentship, and to the fact that it competes for predominance amongst other practices in the lives of Associate Students. During the trimester, Associate Students recognised that transition support for Maths in the summer period could make a valuable contribution to the achievement of their object. But once the trimester had finished and there was no longer any requirement to travel to campus or to attend lectures, this acknowledgement is subsumed by other priorities such as the need to rest and to work. In chapter 9, the concepts of boundary–crossing is used to illuminate the ways in which practices such as transition support are enacted in the Associate Student Project activity system,

shaping the studentship of the entire group of Associate Students. Practices such as engaging with Maths support in the summer may be resisted or adopted, but the activity system is never static. The dynamism of interactions in the system help to establish new norms and constantly emerging ways of being an ASP Student. Although skills-focussed workshops delivered within the framework of the college timetable and as extra over the summer period were typically dismissed (or resisted) by Associate Students, teaching practices embedded in ongoing classroom interactions which were understood by College Lecturers to prepare students for university study, were consistently acknowledged by students as supportive and of great value. The next section of this chapter explores Associate Student responses to teaching practices which, although not specifically identified by the college or the university as transition support, were nevertheless intended better to prepare students for university study.

7.4   Support embedded in teaching practices

In this section the focus is on College Lecturers and those teaching practices which are recognised either by the lecturers themselves, their managers, or the Associate Students as providing useful preparation for studying at university. The findings are based on data which comes from both phases of the study; from College Lecturers and managers interviewed in Phase 1, and from UTSC2, student interviews and focus groups carried out towards the end of their 3rd year. The data generated from Phase 2 interviews and focus groups with DE Students has the advantage that students can talk with hindsight about their college experience and how it had supported them. Transition support that is embedded in teaching practices is not as visible as the forms of transition support discussed in Section 7.2 (Campus visits) and Section 7.3 (Skills focussed and subject-based workshops), but I structure my findings in this section in terms of four topics: Associate Students' expectations of support, College Lecturers' practices, independent learning and assessment practices.

7.4.1   Associate Students' valuing transition support

There was consensus among the students that their college experience should prepare them for University study and that this should include transition support. One ASP Student from College 4 expressed a degree of frustration at the lack of support from the college given their status as Associate Students and the associated funding that colleges received under the auspices of the Associate Student Project:

> Phase 1, ASP Student Focus Group (College 4)
>
> "That's the only frustrating thing for me, is because when the Associate Degree was sold to me, coz I was approached with it, one of the main reasons they said they can offer it is on the basis that they got extra funding. And I thought that would have meant, you know, that we got extra tutoring or something … but not really"

The fact of his connecting college funding and extra tutoring suggests that his expectation was that the college would provide this input, possibly embedded in the HN curriculum. But the Associate Students had not always been accurately informed about study at University, and therefore their expectations for 'extra' transition support were built on a foundation that did not always represent the undergraduate experience at the University.

Phase 1, ASP Student Focus Groups (College 4)

"if you look at the majority of HNC and HND courses, most of them scheduled for three or four maximum days. Some of them have to and that's just like half a timetable, whereas if you look at the university timetable, you're fully booked from Monday to Friday and the standard of curriculum is not so as extensive as what you would get in university, but I think in order to make that transition, there has to be extra, otherwise the gap is going to be too high."

There was variation between Associate Students within and between the four college settings about the part that their college had played in their preparation for university. Two participants from College 1 agreed that it was their own efforts rather than their college's that had prepared them to succeed at University.

Phase 2, DE Student Interviews (formerly College 1)

"I don't know if college did prepare me or if I was just ready anyway … they are not setting us up for uni."

"So. I think the fact that I've done OK here has been - I'm not giving the college any credit for that - I'm giving myself credit for that because they didn't help us at all last year."

For both of these DE Students, although they felt that the college had not made a significant contribution to their preparation for university, each one was confident that they were coping with the demands of undergraduate study. Although formal transition support in the form of workshops and campus visits were not always acknowledged as enabling effective transition to university, informal transition support embedded in teaching practice at college was cited by all DE Students as making a valuable contribution in this regard.

College Lecturers familiar with current practices at University, either from having recently graduated or through recent undergraduate teaching experience, provided insights about pedagogic practices at university that both College Managers, Lecturers and students valued as sources of transition support. In the excerpt below, the student is referring to a new member of staff at College 1 (Guy is his pseudonym) who had

recently graduated from the University and that participants described as 'saving the day' for them and by another as someone they could 'lean on'.

Phase 2, DE Student Interview (formerly College 1)

"We wouldn't have got our HND if it wasn't for him coming in. Because nobody else seemed to care and nobody was bothered that we weren't doing the work or ... I didn't know how to write a proper report, structured report what the Uni would require until Guy *(pseudonym)* came in. Because he'd been through it, and we'd handed reports in to him and he'd turned round and said look this isn't the standard at Uni. Which he was spot on, I didn't know how to Harvard reference, so I would have come into uni not knowing how to Harvard reference - I didn't know how to do all the heading and stuff, all the referencing all that sort of stuff."

Phase 2, DE Student Interview (formerly College 1)

"Guy *(pseudonym)* - he got us back on track because he'd finished his Honours degree here (*referring to the University)* and knew what we needed, what level we needed to be at. When he came in he was really good for us and saw us all through.

Me: What kind of things did he show you?

"He knew what we'd be going on to study, and so he knew which bits of the course were important. Other things like he'd taken a few hours out to create a report format and get us up to speed. We'd never done that. A few little things, but, they made quite a difference."

Although they identify some practical academic skills which *Guy* taught them such as report writing, they also refer to the less tangible aspects of the curriculum and which were understood to be of particular importance. A different Maths lecturer from College 3 who had graduated with a doctorate from the University was also credited with providing embedded curriculum support through their knowledge and experience of Maths at university:

Phase 2, DE Student Interview (formerly College 3)

"We had Hakkan *(pseudonym)* last year, he already has a doctorate from *the University*. He was really helpful at getting us through all the complicated stuff that he had learned here, I guess."

The Manager from College 2 recognised the value of graduate lecturers, whom he described as 'having been through the "uni mill", working with the Associate Student group on the basis that they are familiar with learning and teaching practices at University and 'knowing how things are done'. But the fact of being a lecturer with a university qualification and having previously taught in university did not predict that they would provide the sorts of interactions with Associate students would value and regard as transition support.

Phase 2, DE Students Focus Group (formerly College 4)

"… there was a guy who was used to universities; he was a lecturer and then he got a job in the college. Because he wasn't used to it, he would come in, give a little lecture and then leave some work and just go away. We were never used to that; we were used to being … it's almost like at college they're more like teachers whereas here it's more lecturers."

Phase 2, DE Student Interview (formerly College 1)

"There's three lecturers, there's 'College Manager 1' *(pseudonym*) who's in a management position now, but three lecturers who have all came from Uni. All they say to us is 'you need to work hard, it's hard to work, you need to put the work in'. That's all we got. We know that – that's basic, that's a given, you work hard, but the actual academic side of it, like writing a report wasn't there. That was maybe 4 weeks before we finished college."

Findings in this regard suggest that College Managers, lecturers, transition support co-ordinators and students all recognise transition support as a relational practice between lecturers and students. There is potential for these practices to extend beyond

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organised opportunities to make connections at campus visits and to fill skills gaps with workshops. Lecturers providing this embedded support were doing so as part of their everyday interactions with students. They sought to develop their students' learning and assessment literacies for university study while also trying to manage the students' expectations of the amounts of effort and level of study that will be required to succeed at University.

7.4.2   Independent learning and assessment practices

One of the practices adopted at university and most commonly cited by all participants as being significant in making a successful transition was the ability to learn independently. College Lecturers recognised opportunities to develop their students' research skills through curriculum activities and the Graded Unit project, in both HNC and HND years, was commonly referred to as a site where independent learning could be promoted. All the College Lecturers in this study acknowledge the difference between traditional college teaching and university lecturing practice and recognised the need for Associate Students to develop their capacity to learn independently prior to arriving at university.

Three examples of lecturers' practice in this regard are provided below:

Phase 1, College Lecturer Interview (College 3)

"What we're trying to do at HND level is to try and get them to do a lot of their own learning. In this case, I've given the notes, but a lot of the stuff I've skimmed over – but I've said you need to know about that – go and find out. I think at HND level, we've got to make sure that they can try and establish the best method of learning for them before they go to the degree."

Phase 1, College Lecturer Interview (College 3)

"It's very much I will give them the various topics to look at and the basic concepts, but after that you need to learn it yourself. We'll give you the basic jigsaw puzzle, but I won't tell you what the picture is. Right. At HNC level I'll give you the jigsaw puzzle and I'll show you what the picture is, but you need to put the pieces together. HND level, I'll give you the jigsaw puzzle, but there's bits of the picture missing. Degree level, there's the jigsaw, go and make it. No picture – where are you going to go with it, you've got to figure it out for yourself."

Phase 1, College Lecturer Interview (College 1)

"The big problem is these guys come from school in to college. Ostensibly they're in 2nd year at University. At Uni they don't get spoon fed … by not spoon-feeding the students, they think I'm not teaching them … So, they're going to get a proportion of their work directed not fed …"

But a lack of shared understanding about the different ways of teaching to promote independent learning gave rise to tensions within the Associate Student Project activity system. During an informal conversation, one College Manager (College 1) confided that although their HND lecturer (Lecturer College 1) purported to promote independent learning with the Associate Students, that manager perceived this practice as being 'lazy and just leaving the students to get on with it'. Embedding the practices associated with independent learning given the amount of face to face class contact time when tutor support is so readily available was seen as contradicting the traditional practices of college teaching. An Associate Student in that same college recognised the tensions around independent learning observing that not all his classmates were ready for what he referred to as 'self-study':

Phase 2, DE Student Interview (formerly College 1)

"The only person that led us into it was *Lecturer 1*, a tutor on the HND. He's the only one that gave us – what's it called now … self-study, to do. I was doing that anyway. He was trying to get that into everybody else, but it wasn't really working, only for some of us, and you need to have that skill. You need to be able to study on your own in uni so yes."

Although all the Associate Student participants understood that they would be expected to learn independently at university, some were trepidatious about their ability to learn in that way. They recognised that this would be challenging for them, while other students were looking forward to the freedom it would bring. Concerns about independent learning at university frequently had their basis in fears of being able to perform well in assessments without the availability of College Lecturers for guidance and support. College Manager 2 recognised the tension that arose from providing sufficient academic challenge so as to prepare students for university study, while at the same time ensuring that students are provided with the support they need to

achieve success in their HN award, thereby meeting the college's Performance Indicators. In describing the opportunities for resubmission, remediation and individual support for any college assessment, he observed that the "relaxed rules" do not prepare students effectively for the assessment regimes at University.

Phase 1, College Manager Interview (College 2)

"Any lecturer would likely to be under pressure to get the student in, to remediate and to get them through the assignment."

This concern that college practices relating to assessment do not prepare students well for undergraduate study is further endorsed by College Lecturer from College 2, who explained that his students had come to adopt a casual approach to submission and resubmission which would not serve them well at university.

Phase 1, College Lecturer Interview (College 2)

"The students almost think "if you have two attempts you might as well use them both"

That tension between preparing students for university study and developing their capacity to learn independently while at the same time meeting the divergent expectations for college study is discussed in Chapter 9. Tensions are explored in terms of the ways that the Associate Student Project activity system interacts with and at times contradicts the object and outcomes of closely related and overlapping activity systems.

7.5 Conclusions from findings – transition support for ASP Students

This chapter presents findings from a macro-level and micro-level analysis of the ASP. The first part of the chapter offers a macro-level analysis of transition support, whereas the analysis in the latter part of the chapter presents a more micro-level analysis of the ASP Students' expectations and experience of transition support.

The data was drawn from Phase 1 and Phase 2 of the study which allowed for Associate Students' experience of transition support during their college years to be evaluated in light of their experience of their first year of university study as direct entrants to year three of the University programme. Associate Students welcomed the opportunities to make connections with the University and with some academics teaching on their future degree programmes, but not all the students were able to access these events given personal and structural issues. Associate Students prioritised their attendance at college over campus visits and there was a degree of frustration at the lack of co-ordination between their college and the university which could have avoided the clash in commitments. Co-ordinating the timetables of four college HN groups and two degree programme teams at university presents transition support co-ordinators with significant challenges. College Lecturers rarely adapt their teaching schedules to accommodate ASP Student visits to the University.

The developments in the arrangements for academic skills workshops delivered on college campuses over the two years of this study reflect the different interpretations of roles and responsibilities of university transition support co-ordinators. The different approaches offered by the UTSC and the activities made available for ASP Students offer interesting insight into their different conceptions of transition. The current schedule for contextualised transition support sessions delivered in colleges by the university transition co-ordinators replaces the previous arrangement of stand-alone skills-focussed workshops which were less well endorsed by the Associate Students.

College Lecturers' teaching practices, based on their own experiences of university which promoted independent learning, academic skills and dialogue about university study were highly valued by students. Academic preparation for university offered informally by lecturers at college as part of HN study is not specifically acknowledged as a source of transition support in the Associate Student Project Guidance document (Scottish Funding Council, 2013). The findings from this study suggest that its value should be recognised and included as an integral part of the transition support offering for Associate Students, together with the now well-established campus visits and skills-focussed workshops.

Chapter 8   Direct entrants' participation at the University

8.1   Introduction to the chapter

The findings in this section are drawn from the analysis of data (discussed in Section 5.5) generated in both phases of the study. Data from Phase 1 is used to illustrate how the former Associate Students imagined themselves participating as undergraduates at University. Data from Phase 2 provides evidence about how when the time came, the former ASP Students established themselves as a community of direct entry students (DE Students) engaging in their engineering degree programmes. As ASP Students in college, this group always knew that they would be going to the University after completing their HND. The programme of transition support offered by the university outlined in Chapter 7, and their college's engagement with the mechanisms of the Associate Student Project (explained in Section 6.3) signified to the students that this transition was never in any doubt. The findings in this chapter provide evidence that the transition that the students make to university on completion of HND study is a confirmatory one (Bloomer & Hodkinson, 1997) involving a multitude of relations and identities.

The chapter is structured in four sections each of which relate to the ways in which former ASP Students participated as direct entrants to third year of their degree programmes. The analysis starts with 'Valuing support from close peers' (Section 8.2), then 'Boundary encounters' (Section 8.3), followed by 'Shared practice of studentship' (Section 8.4) and finally Seeking expert help (Section 8.5). This structure is intended to correspond with Lave & Wenger's (Lave & Wenger, 1991) characterisation of the dimensions of a community of practice; mutual engagement, joint enterprise and shared repertoire. The findings from this section are discussed in Chapter 9 in terms of the former Associate Students' community of practice, and also their modes of identification (engagement, imagination and alignment) as they negotiate their place in the landscape of practice at University (Kubiak et al., 2015; Lave & Wenger, 1991).

Main codes	Sub-codes
Former AS engagement at university	Accountability with various communities With academic staff at university With former college peers With traditional entry students With other students
Recognising transition support practices	Students' views of TS TSC views of TS University academic staff engage in TS
Expectations	DE Students have of themselves DE Students of continuing students Lecturers of DE Students
Seeking help	From close peers From lecturers From formal student support Working things out
Seeking feedback	From lecturers
Out of formal degree course practices	Family life Friendships out of university Leisure activities Paid employment Other practices

Table 21 Codes and sub-codes used in analysis of students' participation at University

8.2 Valuing support from close peers

The Guidance from the Scottish Funding Council (2013) about partnership between colleges and universities recognised the potential benefit of peer support amongst Associate Students moving to University from college. Former ASP Students, now direct entrants, from all four of the partner colleges participated in Phase 2 of the study provided evidence which supports that assertion of the value of peer support. It also sheds light on DE Students' engagement with the communities they encountered at University. Prior to starting as direct entrants all ASP Students indicated a strong commitment to going to university.

> Phase 1, ASP Student Focus Group (College 4)
>
> **R1:** "I was always intending to go to Uni anyway so from my perspective I'm not sure what's different.
>
> **R2:** I would agree with that."

Me: How do you feel the Associate Student thing has changed things for you as a student?

R1: It was the plan anyway, but it's just been nice to have the certainty of getting in.

Phase 2, DE Student Informal Interview (College 3)

"The reason I wanted to go to University is because it's just what you do. "

"It's bit of a waste to get all the way up to the HND and then not just get the little bit further to get the degree."

The use of defensive metaphors such as 'back-up' and 'sticking-together' occurs frequently during interviews with the ASP Students in Phase 1. This suggests that despite their enthusiasm and bravado expressed during the Mr Potato Head model building activities in Phase 1 (outlined in sub-section 5.4.3), the students imagined a level of challenge which could best be met by belonging to a mutually supportive group. The shared experience of having studied together at college was noted as being of significance.

Phase 1, ASP Student Focus Group (College 1)

"the group's going to be incredibly important. I think it might be different if we were all going on our own, but we'll stick together at first until we get to know the others."

Phase 1, ASP Student Focus Group (College 2)

R1."It will be a little bit more difficult than college, but yeah … challenging, absolutely. Now it's a new field, new subjects, new environment … Plus the advantage will be that if we all go to the same course, you know, we will have the back-up of each other.

Phase 1, ASP Student Focus Group (College 2)

"I think, we've all been through the same journey, sort of thing, we all have – yes, that's basically my answer. We've all been through the same journey, so I think it *(the group)* might be important."

Phase 1, ASP Student Focus Group (College 4)

"I think they'll be important (*the group*) - they'll be people that you already know, so it'll be easier to start up , it's a lot harder to start talking and communicating with people that you don't know than with people that you already know."

Despite these examples of shared understanding about the anticipated significance of the college group when students start at university, not all of the students agreed with this perspective. This divergence of opinion serves as a reminder that although the focus on this study is on the collective of ASP Students, the personal characteristics and circumstances of individuals are also powerful mediating forces. One of the ASP Students anticipated that they would not interact much with the group whereas a classmate mentioned the close bond of friendship with one of the other ASP Students that extended beyond mutually supportive studentship and into their personal and family lives.

Phase 1, ASP Student Informal Interview (College 3)

R2: "Sorry, but to be, eh to offer a separate point of view, but when I've been in class, I've always just kept myself to myself and concentrated on getting myself through, and I think that's held me in good stead, just doing my own stuff."

Phase 2, DE Student Interview (formerly College 1)

"Yes … Cameron *(pseudonym)* is a close friend … We've become really close because we've worked together. NC, HNC, HND and now this so …"

University Lecturers noticed that DE Students tended to stay in their former college groups and they recognised the challenges for them in joining a class where networks and friendship groups have already been established. I found only one example of a University Lecturer having been proactive in trying to integrate the new students into the larger learning community. Other lecturers were happy for the direct entrants to stay with their chosen groups.

Phase 2, University Lecturer Interview

"They often sit together, they'll stay together in their groups, because they're mates from college and so they're more comfortable and that's cool …"

Phase 2, University Lecturer Interview

"They'll often sit with the same people in the tutorial and I'm happy with that … It's nothing I do anything about, except if I knew students were in a group, I wouldn't deliberately put them in a different class. You get the odd one who just works on their own and is fine, but that's unusual I think. "

Phase 2, University Lecturer Interview

"I have a group of Associate Students in the subject I'm teaching just now and there was lots of new faces in the class and so rather than leave it to the students to work out – I kind of briefly said 'OK guys – those of you who were here last year, you'll notice the class is a bit bigger, lots of new faces. So where's everybody from? Put your hands up if you're an Associate Student. Put your hands up if you're an exchange student …' So then the students immediately look around and go 'oh yes, that's why', so there's a bit of an understanding."

A University transition support co-ordinator offered a different perspective on the value of former Associate Students remaining with their college group. Like the Lecturers quoted above, she observed that direct entrants were most likely to choose their former classmates from college as team members for group work, but in this regard, the group serves as a far less valuable asset.

> Phase 2, Interview UTSC2
>
> "If they're allowed to pick their own group, they'll just pick four of their pals. That's what they do, but they don't benefit then. I had a student last year, who spent months stressing because he didn't know the correct coversheet to put on his work. He'd googled it, and I went, 'Why didn't you just ask another student in the class?' 'Oh, because we didn't really talk to them.' Whereas, if you're in group work and you're talking to someone that's been there from year one, that knows the ropes, that knows exactly how to submit your work, it knows exactly where to get the resources, why wouldn't you pick one of them? They don't … they stick together."

According to the university transition support co-ordinator (UTSC2), direct entrants who do not engage with traditional-entry students may be less able to access the tacit knowledge, routines and resources associated with university study. This highlights the significance of the DE Student groups' interactions with others at university. The section which follows presents an analysis of the direct entrants' shared response to the local conditions as they interact with others in the community. These interactions are characterised as boundary encounters and are analysed in the section which follows.

8.3 Boundary encounters on campus

In the previous section, my findings established that as the direct entrants engage in practice at university, attending lectures, preparing for assessments and socialising, they engage in mutually supportive groups that recognise their shared experience and their categorisation as former ASP Students. In this section, I use data from Phase 2 of the study to analyse the ways in which the students identify with the communities that they encounter on campus as they respond to the local conditions at university.

The communities that the ASP Students refer to when discussing their practice at university comprise three main categories; lecturers (module lecturer, programme leader and personal development tutor (PDT)), continuing students, and transition support (academic skills advisors and disability advisors). For most of DE Students their studentship practices at university were not substantially different from their college years; listening to lectures, talking to each other, seeking help, note taking, following instructions in labs, reading and preparing course work. At university, the practices of revising, accessing Moodle, travelling, sitting exams and working together were added into their repertoire of practices. There was a marked difference between college and university in how the group referred to the affective component of their studentship; in Phase 1 focus groups the ASP Students characterised themselves as having a laugh, being stressed and mucking about, whereas in University their self-narrative was more about struggling, juggling and coping.

DE Students' use of the spaces on campus was limited to lecture and seminar rooms, labs, the canteen and the two main communal study areas. These comprise a large computer centre hosting hundreds of personal computers with dual monitors, and the campus library. Only one of the students had been to the Students' Union which was located elsewhere in the city off-campus. None had visited either of the University's other two campuses, even though the communal study facilities of one of them were located closer to the home geographic regions of two of the college groups. One group of three car-sharing students reported that although they sometimes drove past one of the other campuses, it had not occurred to them that they could use the facilities there and they did not anticipate using them. Although other former ASP Students had no further engagement with their college after completing their HND, expressions of the positive identity as a former college student were apparent even after they had started at university. The students quoted below recognised that they might have knowledge

from college which continuing students may not have access to, and have an attitude to study which places them at an advantage over their other classmates.

> Phase 2, DE Student Interview (formerly College 3)
>
> "I feel there are some advantages of coming up from college, because there's a lot of things that you'll know that the person in second year won't and it's the other way round. You both have strengths, but it's not to get too worried when you're not quite at the same stage as everyone else in your class is at but it might come to a point where something from your past experience is useful."

> Phase 2, DE Student Interview (formerly College 2)
>
> "I feel like coming to third year, I feel like I've got a lot more responsible attitude … I just need to come in and do my work and try and do and achieve as much as I can. Whereas if I came in first year, I might have a more laid-back attitude"

As the DE Students talked about engagement with their classmates and their programme of study at university it became apparent that they identified differences between themselves and the rest of the traditional-entry students (by which I mean those who had been at University since first year of the programme). These perceived differences echoed views of College Lecturers with experience of teaching in university (interviewed during Phase 1) and who distinguished between the college student experience and the equivalent first year experience at university.

> Phase 1, College Lecturer Interview (College 2)
>
> "They don't mind missing first year and all the drinking. We don't mind filling in the gaps (*at University)* from the drop outs from first year. We tell them you will hit the deck, you will graft."

DE Students made assumptions about the participation of the continuing students at points beyond their immediate engagement with them, such as during first and second year. Their comments indicate a sense of superiority and pride in their own work ethic and commitment to study.

Phase 2, DE Students Interviews (various colleges)

"Some of the students who were here first and second years are just here for party time, and that's slowly meant to recede, but that's not always the case."

"'I believe first year is basically a waste of time. You don't really do anything, you turn up for your classes, and they get through."

"I never missed a day at college and then there are some uni - boys here that are missing half the terms and then they're expecting all the help at the end to get through"

During the Phase 2 interviews the student participants frequently referred to themselves as 'Associate Students' even though by then they were fully enrolled undergraduates, and to the continuing students as 'uni-boys'. By the end of their first year at University (third year of the degree programme), they had adopted local terms to describe the computing resource centre and some common shortened names for their University Lecturers. Details of these shortened names are omitted in order to preserve anonymity. This shared vocabulary forms part of the shared repertoire within the group and their alignment with each other and with the broader environment and local conditions at University.

During the Phase 1 interviews in colleges, the ASP Students did not anticipate forming friendships with continuing students since they recognised that friendship groups would already be established during first and second years. As they had anticipated, they did not socialise much with the traditional-entry students on campus, preferring to sit with existing friends and to have lunch in the canteen either individually or with their former college group. Although the continuing students and direct entrants mixed comfortably, "we know them and we talk to them", I found only two examples where members from the different communities socialised together in circumstances other than for teaching and learning. The first instance involved two students from College 1 joining the Whisky Club but only attending a single meeting. The second involved a whole class group socialising after exams. In both cases the students explained their lack of further involvement on campus in terms of their lack of time, or their other commitments in other aspects of their life.

Phase 2, DE Student Interview (formerly College 3)

"The only time we did that *(socialising with the continuing students)* was the end of the trimester exams – we went out after the exams and there was about a group of ten of us so that was quite good. But apart from that no. I come in to Uni, I'm at Uni, and then drive home and then I work at the weekend so …"

During Phase 2 interviews which took place towards the end of third year, I asked the direct entrants about their sense of involvement and belonging with the university or with the School of Engineering. Their responses indicate a weak integration (Jary & Lebeau, 2009) into campus life, but this orientation was made by way of a deliberate choice. None of the students reported having felt in any way marginalised or unwelcome at the end of their first year: rather they expressed a strong sense of the usefulness and value of studying at university. The confirmatory transition from college to university was never imagined as being anything other than a means to gain a degree, referred to by them sometimes as "getting our ticket", and ultimately well-paid employment in the engineering industry. According to these students, the practical considerations of commuting, family life, part-time work and studying left little surplus time. This made any other form of engagement with the university unlikely and for some students undesirable.

Phase 2, DE Students Interviews and Focus Groups

"Between being at work and being at home studying, I'm just here for classes and then away or I'm handing something in. That's it. I've never really been one for joining in these societies and stuff like that!"

"I'm not really looking for the student life, I'm just here to get my degree you know. So I'm here to work, not to have the student life. It doesn't bother me."

"I'm here to study and that's it, get my degree and then hopefully get a job"

"I tried to stay away from getting involved as much as possible; I just wanted to get it done and leave with a degree."

In Chapter 9, these findings will be further discussed using Wenger's concepts of identification and dis-identification to highlight this group of DE Students' distinctive engagement with the landscape of practice at University.

The next section moves the focus from the DE Students' engagement with university life to explore in more detail how these students practice their studentship on campus and elsewhere. The group features strongly, but the narrative of optimism expressed in college is replaced for many by one of grim determination and struggle.

8.4   Shared practice of studentship

This section examines how DE Students act upon their learning experiences at university. Before presenting the analysis, I introduce three important distinctions between this section of findings and all of the other sections in the three findings chapters (Chapters 6, 7 and 8). The first relates to the source of data in this section, and the second to the difference of the students' experience between the two degree programmes; BEng 1 and BEng 2. The findings in the preceding two sections of this chapter (Sections 8.2 and 8.3) draw together data generated in interviews and focus groups carried out in both phases of the study (referred to as Phase 1 and Phase 2). The findings in this section however were generated exclusively from data generated in Phase 2. The second significant distinction in this section is the extent to which informal conversations with DE Students contributed to the data and to my understanding of how the DE Students practiced their studentship at university. In Phase 1 it was necessary to make pre-arranged visits to each of the colleges to meet with the ASP Students which left limited opportunity for me to make my own way around the campus to observe and meet the students informally. But in Phase 2, since the students were studying at the University where I am employed (although I usually work on a different campus from the DE Students) I was able to enjoy the benefits of serendipitous encounters with the DE Students. These took place in corridors, the computer resource centre, library and refectory, all of which provided a rich source of data for field notes (which are introduced as a method of data generation in Section 5.3). I was meticulous about reminding the participants during these encounters that I was generating data for my study. The third and final difference in this section is the clear separation in the data between students who studied on the BEng1 programme and those who studied BEng2. In every other section, codes and themes play out with no discernible difference between the programmes of study, consequently the findings include no attempt to compare or contrast the two degree routes. But in discussing the practice of studentship, DE Students' accounts of the level of challenge and time spent studying suggest that those following the BEng1 programme faced a far greater degree of demand than those on the BEng 2 programme. Where that distinction is important, student participants in this section are referred to by the name of the programme on which they are studying; either DE Students BEng1 or DE Students BEng2.

This section portrays a picture of DE Students from both programmes (BEng1 and BEng2) who have risen with varying degrees of struggle to what they perceive as the

challenge in amount and level of study at university. My analysis also explores the studentship practices which the groups adopt that are distinctive to their experience of university level study, particularly independent reading (associated with self-study). Most of the excerpts from DE Students in this section include reference to 'we', 'us', or 'the guys', by which the DE Students mean the group of ASP Students that they studied with at college. The collective group of close peers provided a constant underpinning to DE Students' narratives about how they practice at university.

8.4.1 Working together - Coping with long hours and level of study at university

Long hours of study

In Section 7.4.2, I presented findings which relate to the way the students referred to the advice that they had received while in college about the amount of study they would have to undertake at university. One ASP Student characterised the advice as nothing more than "scare tactics". In this section we hear from the same groups of students, now at the end of the third trimester of study at university, in which they reported studying for exceptionally long hours to keep up with the requirements of course work and exam preparation. One University Lecturer provides further evidence of this observing that DE Students would 'often be the ones that are putting in the hours of study'. College Lecturers with experience of university study sought to manage the students' expectations of the amount of time and effort that would be required for undergraduate study. During interviews and focus groups in Phase 2, all the DE Students refer to the hard work required. I identified no evidence of resentment about this necessity, with the DE Students drawing on their inner resources to adapt their studentship to meet the requirement.

> Phase 2, DE Student Interview (BEng1)
>
> "Last trimester the first tri it was kinda – a big slap in the face as to how much work would be required and I was kind of falling back. So this trimester I said to myself 'get straight in'. So I was pretty much in the *computer resource centre* 'til about 7pm every night. But, it's paid off because I do feel this trimester, I feel like I'm on top of it."

Most of the DE Students were scheduling their studentship practices around a combination of some or all of the following commitments: part time work, family life,

commuting and caring for young children. Their strong commitment to succeeding at university meant that where required, they made adjustments in other parts of their life to accommodate the necessary amount of study time. The changes that were made to manage the workload were more or less palatable depending on the individual students' circumstances.

Phase 2, DE Student Interview (BEng1)

"… the added travelling time, the arrival of my son. I mean I've always managed. I call it the juggling act between work, college and the waines, and this year I've found it incredibly difficult and there have been times when I've had to ask my ex-partner to have the kids a wee bit more here and there and I've never had to that before … For me, all this is for them, and for me to not have as much time with them as I normally do, that's been the hardest thing about it. "

Phase 2, DE Student Interview (BEng1)

"For certain things I've had to ask for holidays off, shift shifts when I felt the workload getting … Because for exams I asked, I needed like two weeks off … I only work two shifts a week so it was easy enough to go the first week "did anyone want my shifts?". Okay yes that's fine and then I took all the rest in holidays so that was fine. I haven't had much problem"

Phase 2, DE Student Interview (BEng1)

"I do less *(part-time)* work. I was doing more work part time than I was doing college work to be honest. And going to the gym as well. Now I still go to the gym, but I only go 3 days per week. I feel bad for going because of taking out time from uni, but you need to. The way I look at it is you're only in classes 12 weeks out of a whole year, so I don't mind putting so many hours in."

The place where students lived during term time made a significant impact on their experience of transition to university. For those students who commuted from more geographically distant areas, the long hours of study were further extended by their journeys to and from university (Thomas & Jones, 2017). For some DE Students, the

routine activities associated with university undergraduate study were found to be unsustainable, consequently students adapted their engagement with the university to best accommodate their circumstances. Two students mitigated the travelling time during the revision period by studying in the library at the college where they had studied for their HN Qualifications.

Phase 2.DE Student Interview (BEng1)

"Near the end, when we didn't need any computer-based programmes we would go to *College 1* to study, to the college, into the library, to save on travelling time … You're talking two hours travelling, that's two hours revising … We'd start at 9 in the morning and we'd finish at 9 at night studying. That's what we were doing during the days leading up to the exams."

Not all of the students travelled together and of the three DE Students from College 3 which is the furthest distance from the University, one moved to a rented flat in the city centre (during term time), another used his own car to commute from home and the third made the journey to university by public transport. This third student noted the negative impact on his studies given the length of time spent commuting, reporting a journey involving both bus and train lasting 2 hours each way. He was the only DE Student who chose to complete their programme of study (BEng1) in 3rd year, citing the travelling time as his main reason for not progressing to the 4th year Honours. He had hoped to use the journey as a productive study time, but the public transport infrastructure did not support that ambition.

Phase 2, DE Student Interview (BEng1)

"I had my laptop, I actually got a laptop specifically for university so I could travel with it but the Wi-Fi on the train is just not good. Obviously, because the train I get runs along the coast, you lose signal quite a lot so it was quite difficult to read stuff."

The DE Students studying BEng2 had previously studied in College 4 which is located in the same city as the University, so travelling to campus was never cited by them as being problematic. This group accepted the long hours of study explaining that the self-study for their graded unit project and the continuous monitoring at college to ensure they had done their work prepared them for 3rd year study at university even better than their counterparts who had been there since first year.

> Phase 2, DE Students Focus Group (BEng2)
>
> **R1**: "We're used to going home and slogging it out every night over and everything and then coming and just …
>
> **R2**: We're also used to getting chased up about it as well
>
> **R1**: Yes, True
>
> **R2**: Whereas first and second year you probably just don't get chased up at all."

Some DE Students preferred to study at home using lap tops to access Moodle in order to review PowerPoint slides, to complete worked examples and to read through their notes made in lectures. But for those who remained on campus for study after and before lectures, the computer resource centre and the library were the most commonly used spaces. The Library was the DE Students' preferred option when 'peace and quiet' was needed for exam revision, and the computer resource centre for course work where the PCs with double monitors and relevant software were essential mediating artefacts for assignment completion. On every occasion that I encountered the students in these spaces, they were always seated with their former classmates from college, but two DE Students reported in interviews that they sometimes used these places on their own. The computer resource centre was commonly cited by DE Students (BEng1) as the space where former college groups worked together for long hours helping each other in order to try to work out what was expected in order to complete their course work.

Level of difficulty

Amongst the DE Students (BEng1) there was consensus that it was not just the amount of work that was challenging, but it was also the degree of difficulty in the assignments and exams. This was found to have shaken their confidence and undermined their ability to secure the grades that they had hoped for. I found examples where the DE Students acknowledged that the material being studied is at times difficult for all the students, and not just those coming from college.

> Phase 2, DE Student Interview (BEng1)
>
> "Even the people that were at *the University* (pseudonym) last year, they were finding it difficult, so I don't know what that says about the rest of us we were all finding it impossible! We got it, eventually."

There were examples where the DE Students commented that their background coming from college placed them at a particular and unfair disadvantage. This is especially the case when it comes to study topics which University Lecturers assert that the entire class will 'already know', 'be familiar with', or 'have already studied last year', and which students coming from college have not necessarily had any opportunity to learn. In one class test, students were expected to respond to questions which drew on knowledge from 2nd year study on a topic that HND students had not addressed and this was felt by them to be unfair. The excerpt below illustrates that as the students became oriented to their new context, they took action by emailing the lecturer to voice their concern. It is interesting to note the absence of any sense of 'unthinking compliance' (Wenger-Trayner & Wenger-Trayner, 2015) with the new regimes at the University. Instead the students seek to negotiate a response from the lecturer explaining the unfairness of their situation.

> Phase 2, Student Interview (BEng1)
>
> "I found it very, very unfair that a lot of the questions were based on stuff that we hadn't done since we arrived at Uni, but were based on last year … this was the first time I had done Materials as an Associate Student … I emailed him … and they came back with a massive email basically backing themselves up saying we should know this."

As I have outlined in the previous Section (8.4.1), for some BEng1 Students adapting to the requirements involved simply devoting far more time to study, but other students recognised that something other than hard work was required. Achieving academic success through working with close peers was mentioned by two DE Students (BEng1). They both expressed a degree of pride in how the group from their college had functioned in mutual support of one another, both independently referring in interviews to the group as a "4-man team" that had achieved good marks in group work as a result of their ability to work well together. Far from positioning the group as 'sticking together' as a defensive strategy as they anticipated while they were in college (referred to in Section 8.2), rather they saw their working together as bringing them distinct advantage since they knew one another so well.

> Phase 2, DE Student Interview (BEng1)
>
> "So we've worked together previously for the last two years so it was easy … And that shone through on our mark because the mark was quite high ... We got 68 for that between us so …"

A consistent theme is the extent to which all of the DE Students set high standards for themselves, being self-critical when they do not reach the level at which they expect that they should be working at. In both the excerpts below, the DE Students (BEng1) illustrate how self-critical they can be when facing material that they find difficult.

> Phase 2, DE Student Interview (BEng1)
>
> "The standard of the work that needed to be produced. It was like moving from second gear all the way up to fifth, I would say"

> Phase 2, Student Interview (BEng1)
>
> "There's some things I feel like I'm not getting a grasp of that I feel I really should have had a grasp of before now. You know sometimes when you sit in front of a computer trying to get your head round something doing some research and you can be sat there for 3 hours and yet you've still nothing accomplished and you just feel deflated, stupid, just you know ... it's not a good feeling. "

'Level of difficulty' at university is one of the areas in the study where the group of DE Students (Beng2) felt differently from DE Students on the other degree programme (BEng1), and about how they had performed academically. The DE Students (BEng2) agreed with one another that they had exceeded their expectations in terms of their level of academic competence during lectures and seminars and that they had also performed well in exams. During the Phase 1 interviews and focus groups, the ASP Students for both engineering programmes expressed the same sorts of concerns about coming to university; specifically, about the extent to which the curriculum was sufficiently aligned between college and university. These concerns were explored in Section 6.5. For the group of DE Students BEng2 (who had all attended College 4), despite their earlier concerns, their experience of boundary crossing from college to University had not been the academic challenge that they had anticipated.

> Phase 2, DE Students Focus Group (BEng2)
>
> **R1:** I just didn't find it as difficult as I thought it was going to be
>
> **R2**: I thought the jump was going to be higher than it was
>
> **R1:** Yes
>
> **R2:** I had the idea that university was really difficult and actually it's …
>
> **R3:** Yes, I expected it to be a lot harder but ….
>
> **R4:** I think they try to scare you in college. They told you, 'You've got it so easy right now, just wait for university, just wait for university.' Then we all got here we were like 'oh my God something's supposed to be happening right now. It's not!"
>
> **R1:** Certainly people I know that have come from college had done pretty well in the exams and stuff like that"

It may be relevant that the DE Students (BEng2) data was generated during an object-oriented focus group, whereas as it proved impossible to recruit DE Students BEng1 to take part. Instead, individual interviews were held as an alternative. It is worth considering whether or not DE Students would have given a different response when discussing the challenges of university study had they been speaking individually rather than with the group. However, their reported exam results, all in the range between 60–80%, are not inconsistent with their narrative illustrated above.

8.5 Seeking expert help

'Feedback' and 'Seeking help' are predominant themes in the Phase 2 data in this section which considers how DE Students engaged with the landscape of practice at university. A consistent message from DE Students on both engineering programmes was that they preferred to spend long hours trying to work things out for themselves, or with a group of friends, rather than ask for more expert help from a lecturer. This contrasted with the ASP Students' experience in college where during Phase 1 of this study I observed that lecturers were usually in the same room (or located in an office nearby) as the students, making themselves available to answer questions about course work and assignments. Working without that sort of close academic support suited some students more than others and I found examples where DE Students had enjoyed the freedom to work more independently, while others missed the informal contact and easy access to lecturers with whom they had had informal friendly relationships.

> Phase 2, DE Student Interview (BEng1)
>
> "I feel less inclined at Uni to go a lecturer than I did at college because, I appreciate that in lectures there's over 100 people so, I don't like to going to disturb the lecturer. I know people say well that's what they're there for, but at college it was different I think because the lecturer was in the class for three hours, and you're sitting - so you can just go up to them and say 'how do I do this?', but you don't get that in a lecture, you get the lecture and the lecturer leaves. In a way I've enjoyed that. "

Despite the reluctance to seek help from lecturers, DE Students appeared to be quite comfortable in their interactions with them, and during classroom observations I noticed several of the DE Students responding to the lecturer's plenary questions and on two occasions initiating questions. But contacting a lecturer on an individual basis for help with course work was not a regular part of DE Studentship practices at university. Indeed, asking a lecturer for help, typically on behalf of the entire group, was seen by one student as a last resort.

Phase 2, DE Student Interview (BEng1)

"I think I went in two weeks before and I said, 'I haven't done anything yet; I don't know what to do.' We'd been working on it for weeks and struggling and struggling and struggling and not getting anywhere."

University Lecturers can perceive this last-minute engagement with them as a sign of poor time management since the students' hours of engaging with the assignment are not made visible to them.

Phase 2, University Lecturer Interview (BEng1)

"And that's partly why I said "I'm not going to do any of the maths stuff with you after two weeks before the assessment is due because you've not given yourself enough time and I'm not going to take on that pressure of you having a panic" and the vast majority of people have taken that on board. It might seem a little harsh like "Don't come in"… You'll say to them, "You had six weeks to ask me a question. Don't ask questions in the last week".

Lecturers vary in the extent to which they expect and welcome students who contacted them for help and they commonly emphasised the importance of students contacting them early enough to leave sufficient time to act on the advice given in order to meet submission deadlines. During an induction session which I observed in Phase 2, one of the lecturers laid down a set of ground rules for students who he invited to post questions to the forum through Moodle forum rather than making direct contact with him.

Phase 2, University Lecturer Observation (field notes) (BEng2)

"If it's academic – then it's appropriate to knock on my door, but if it's 'I'm needing a form stamped', then it's the student hub … Monday was the first day of the revolution for me and for you. No more email … If you have a question, post it on the forum. This is how you communicate with me … I'd rather you didn't knock on my door – unless it's something really serious."

In an interview later in the trimester with this same Lecturer, when discussing his role in the university it became apparent that teaching DE Students formed only a small part of his role in the university. Only by proactively managing DE Students' interactions with him was he able to fulfil all his other research and teaching commitments. In contrast, another Lecturer explained that he positively encouraged DE Students to seek his help by knocking on his and his colleagues' office doors.

>Phase 2, University Lecturer Interview (BEng1)
>
>"I had a couple of cases recently where articulating students have come to see me about specifics of numerical problems or whatever and I'm happy, and I would like to think I give praise and a pat in the back when it's due … And I like to try and assure them and encourage them that if they have concerns and opinions, they will be heard and that they should approach colleagues and they have pretty much open door policy"

These two opposing practices of providing informal student support suggest that DE Students may receive inconsistent messages about studentship practices that are welcomed and those that are discouraged. While DE Students were reluctant to ask for help from their lecturers, there was evidence that they were more proactive about taking up opportunities to seek out feedback in respect of exams and course work. The excerpts from the interviews below provide examples of students seeking guidance from lecturers to help them to understand their marks; the first student had done worse than he had anticipated, and the second student had done better, but both had made an inaccurate estimation of how well they were performing.

>Phase 2, DE Student Interview (BEng1)
>
>"I've got a bad mark on one of my exams that I thought I'd done really well, and I'd got 45% but I thought I'd nailed it right through. But the lecturer did get it out for me to see me a couple of weeks ago and one of the sections I'd done completely wrong. I got 1 mark out of 20, but I thought I'd nailed it. "

Phase 2, DE Student Interview (BEng1)

"And when I went to get my result from him he said '55% - you know I was expecting a bit more from you sort of thing sort of thing you know', and I said to him 'well I was actually expecting less because I thought it was a rubbish report I'd submitted you know'. He said 'so you're happy then?', and I said 'well, yes, sort of you know'".

The findings in which relate to Phase 1, show that College Lecturers who provide transition support for ASP Students embedded in their teaching practice provide the academic support that students valued the most. The findings in this section from Phase 2, echo the same principle: embedded academic support, offered to *all* students during lectures, is the source of support that DE Students (both BEng1 and BEng2) found to be most helpful. Lecturers who took time in class to discuss the requirements of assessment with all students, and not just those coming from college, were frequently cited as "going above and beyond" in terms of their efforts to provide support for the students. This suggests that this practice is not the norm. One University Lecturer from Eng2 took the entire class to the computer resource centre. He showed them how to set up and format the document in the required style, demonstrating how to "drop in a reference" into the MS Word report for the first piece of course work in the trimester.

Phase 2, Lecturer Interview (BEng2)

"So what I show, okay, here's a Word document, this is how you create headings. This is how you automatically create headings so you can create a table of contents. This is how you drop in a reference … You show them that and they really, they can see the value of it. They think, oh wow. They don't always pick up and implement it as well as I would've hoped but it just gives them a starting point."

The DE Students (BEng2) greatly appreciated being shown how to structure a report and to implement correct referencing protocols by their lecturer. This finding is significant given that the data in Section 7.3 (Academic skills workshops) illustrates that the same group saw little value in the workshops provided the University Academic Skills advisors on these same topics while they were still studying at college.

For all students, organised help in the form of student support (as distinct from informal support from lecturers) is available at the University from two principle sources; academic skills support and learning support for those with learning disabilities. An advisor whose role is to provide academic skills support for all engineering students, particularly for those from widening participation backgrounds, direct entrants and international students, was available by appointment to meet with students on a one to one basis. This support service is advertised by word of mouth from University Lecturers, through the student portal, announcements in Moodle and on notice boards on campus. Although all the DE Students stated that they knew that this support was available to them, only one individual and one group reported that they had made contact with the advisor for help; the first for report writing and the second for a management group project. Those interactions had been found to be useful forms of support in helping students to understand the requirements at university.

> Phase 2, DE Student Interview (BEng1)
>
> "Yes, it was really helpful … I wasn't sure if writing essays for university would be different. In university, some lecturers were just, 'It's fine, it doesn't matter how you've written it.' Others were slightly more 'this has to be right, this has to be right'. At university, I know it's quite strict on how you do your referencing, how you lay it out. So we went to see him about it and get guidance on how to write it; that was really helpful."

The other form of organised help available to students is learning support. Two DE Students were offered and accepted this type of support as a result of their having formally declared their learning disabilities to the University with the guidance of transition support co-ordinators in college. These students were offered exam support in the form of extra time, and the offer of a reader and/or scribe. They also stated that lecturers provided support including giving permission to make audio recordings of lectures and issuing class materials such as PowerPoints and worked examples in advance of the lecture. A key difference between these two forms of organised support is that in order to access academic skills support students must self-identify as needing help and then proactively seek it on an individual basis. The second form is organised in advance for individual students who have made their learning disability known to the University while they were still in college, at which point the support on campus was arranged for them in advance of their arrival.

The academic skills workshops outlined in Section 7.3 were designed to address specific areas where it was anticipated that ASP Students would need support particularly in relation to report writing, referencing and Maths. An interesting finding is that despite the strong level of concern expressed by the ASP Students about Maths, during the Phase 2 interviews and focus group with DE Students and with University Lecturers, Maths was never named as a site of particular academic struggle. During a Phase 2 focus group I asked the DE Students (BEng2) group about their experience of Maths. Although they were able to recall an assignment where they hadn't understood what was required of them since they had not covered the topic at College, they had quite easily solved the problem.

> Phase 2, DE Students Focus Group (BEng2)
>
> **R1**: I just Googled up some number series and wrote about them.
>
> **R2:** That's what I did.
>
> **R3:** Yes, that's all you need to do.

One topic that was not identified by College Managers and Lecturers, nor by ASP Students as likely to present a challenge was the practice of reading associated with independent study. But three University Lecturers referred to the fact that DE Students seemed to be reluctant to read books, preferring instead to be given notes to accompany slides and for further explanation of topics.

> Phase 2, University Lecturer Interview (BEng2)
>
> "There's very little reading undertaken to facilitate learning ... I gave a lot of associated reading guidance and I was constantly asked, 'Where are the notes for this module?' 'Here's the reading, you go and do the reading; you increase your knowledge. You develop it through reading these sources', but it didn't work."

Some DE Students preferred e-books while others opted for borrowing hard copies of texts from the library, but they commonly referred to the challenges of engaging with the amount of reading that was expected of them. They also felt they lacked the knowledge about how to focus on the parts of the book that matter.

Phase 2, DE Student Interview (BEng1)

"before you could even ask him questions he was like, 'Have you read this book yet? Have you read that book yet?' Reading the books, there are 200, 300 pages of just calculations and descriptions, so it's quite difficult to find out what they're actually talking about."

Phase 2, DE Student Interview (BEng1)

"reading through the books, you weren't quite sure what to pinpoint. You were like, 'There's so much information here, I don't actually know what I need and what I don't need.' So it's hard to learn from that when it's not clear what you need."

Workshops in college did not specifically include topics relating to managing reading requirements at university, although in the revised schedule of workshops (delivered since 2015), 'thinking critically' is explored in the context of reading journal articles. The data from this study does not show whether or not the amount of reading that lecturers expect is an issue confined to DE Students or if it is distributed throughout the entire undergraduate group. The study does show that the amount of reading that was expected of the DE Student group was perceived as a challenge and this was acknowledged by University Lecturers.

8.6   Conclusions from findings

In this chapter a micro-level analysis was adopted which focused on DE Students' experiences and practices of studentship. The findings portray DE Students as highly motivated and committed to achieving their goal to gain well-paid employment in the engineering industry. Transition from college to undergraduate study was never in any doubt for these students, and the findings from this section point towards a transition that is always predicted and confirmatory. Their transition is shaped not only by the routines of undergraduate study at the University, but also by each individual's circumstances. The DE Students assume a positive identity as having 'come up from college', being proud of their roots and identifying differences between themselves and the continuing students in their attitude to undergraduate study, and in particular the continuing students' poor attendance at lectures.

As they had previously anticipated while they were in college, DE Students did not pursue new friendships on campus and neither did they engage in any co-curricular activities associated with joining sports team or university sponsored societies. This led to a very narrow and focussed engagement with the campus. The group make minimal use of the social spaces, preferring to limit their attendance to the occasions where their presence is required for scheduled teaching and learning interactions. The existing relationships within the DE Student groups deepened and became more sustaining as they supported one another throughout the academic year of 2015/16. The findings from interviews with University Transition Support Co-ordinators (UTSC) suggest that although the DE Students did not feel marginalised by their college backgrounds, they do to some extent marginalise themselves by their reluctance to seek help from lecturers or other forms of organised support available in the university. DE Students' limited interactions with the students who have been at university since year 1 of the programme mean that they are not accessing implicit knowledge and local stories about university study that could mitigate some of their challenges. There is consensus amongst the DE Student groups that the most valuable source of support is provided by lecturers who take time for dialogue with them and who make their coursework requirements explicit to the whole class and not just to those arriving as direct entrants.

The groups of DE Students coming from college enacted a distinctive form of engagement with the university which enabled them to juggle their studentship with the many other priorities associated part time work, families and in some cases long

commuting journeys. In Chapter 9 the way the group worked together will be discussed as a central aspect of their engagement with one another as a community of practice and in the landscape of practice at university.

8.7   Summary of findings from Chapters 6, 7 & 8

Tables 22 and 23 bring together the three strands of findings. This draws the focus back to the theoretical framework prior to the discussion.

Community	Most University lecturers have very limited engagement with the ASP community Their involvement is voluntary and based on informal professional and social networks that predate the ASP. Collaboration between colleges and the University is initiated and sustained primarily by UTSC. (Chapter 6)
	The relationship between college and University members of the community is mediated by location, and staff and student mobility. (Chapter 7)
Artefacts	Funding is not a significant mediating artefact for the ASP Students' learning and teaching experiences, but colleges value the additional income they receive from engaging with the ASP. (Chapter 6)
	Dual matriculation is a secondary mediating artefact for some ASPs, but for others it generates a tension depending on their personal circumstances and motivations. It also serves as a marketing tool for the University (Chapter 6)
	Curriculum is a primary mediating artefact and is subject to changes from external activity systems (SQA and the University). Changes to curriculum which support the ASP (particularly Maths) have an impact on all students and not just those articulating to university (Chapter 6)
	Skills focussed workshops represent secondary mediating artefacts: resisted by ASP Students, and promoted as valuable by UTSC and College Managers. (Chapter 7)
	Campus visits represent tertiary mediating artefacts and are valued by ASP Students whose mobility and other personal circumstances enable them to attend. (Chapter 7)
	Transition support embedded in the curriculum at college and at university is the form of transition support valued the most by those ASP Students. (Chapter 7)
Rules	ASP Students trust that if they meet the entry requirements stated in the articulation agreement, the University will solve problems that may arise for them as a result of any curriculum misalignment. (Chapter 6)
Roles and responsibilities	There are primary contradictions amongst the ASP community in respect of responsibility for preparing Associate Students for university study. (Chapter 6)
	Transition support, initiated by UTSC, takes the form of campus visits, skills workshops and support embedded in teaching practices at college. (Chapter 7)

	College lecturers encourage ASP students to attend campus visits, but do not seek to resolve quaternary contradictions that arise between the ASP and the University activity system in respect of the timing and location of initiatives. (Chapter 7)
	ASP Students prioritise HN study and meeting their personal and family commitments over transition support activities. Consequently their engagement with transition support is dependent upon their individual personal circumstances. (Chapter 7)

Table 22 Summary of findings from a macro perspective (Chapters 6 & 7)

Valuing support from close peers	DE Students tended to stay in their former college groups. UTSC suggests that lack of interaction with traditional-entry students disadvantages the DE Students since they are less able to access the tacit knowledge associated with undergraduate study on their programmes. In contrast, the DE Students saw their working together as bringing a distinct advantage since they knew one another so well.
Boundary encounters	Interactions between DE Students and traditional-entry students were cordial but very rarely for social purposes.

DE Students were proud of their college backgrounds, disparaging the "uni-boys" (traditional entry students) lack of application to their programme of study.

DE Students' use of the University campus is limited to learning and teaching spaces. Most DE Students avoid engaging with wider aspects of university life due to their mobility and other commitments in their home communities. |
| Shared practice of studentship | The former college groups studied together, juggled their personal and family commitments and helped each other to cope with assignment difficulties.

The concerns about Maths (expressed while the group were ASP Students) appear not to be have been realised, and no mention was made about any difficulty during third year of the programme. The extent to which DE Students felt they were prepared for university study depended on the college they had attended and the degree programme on which they were studying. DE students on BEng2 encountered fewer challenges than those on BEng1 programme. |
| Seeking expert help | DE Students preferred to work things out for themselves, or with their close peer group, rather than ask help from a lecturer. Since lecturers vary in the extent to which they welcome informal requests for help, DE Students may receive mixed messages about practices that are welcomed and discouraged.

Informal dialogue with lecturers was highly valued by DE Students as was written and verbal feedback on assessments.

Reading for academic purposes is recognized by DE Students and acknowledged by University lecturers as challenging. |

Table 23 Summary of findings from a micro perspective (Chapter 8)

Chapter 9   Discussion

9.1   Introduction

The discussion in this chapter links key findings with concepts relating to sociocultural theory, to the policy context for widening participation and to the literature relating to student transitions. In so doing, it provides responses to the research questions. I examine the Associate Students' experience in college, and I present dual matriculation as a double-edged sword which is on balance welcomed by the students, although it is inherently contradictory. I discuss the extent to which the Associate Student Project represents an asset or a liability for the students, the college and for the University. I position the student support offered under the auspices of the Associate Student Project as aligned with a student deficit discourse and I explore the contradictions that this creates for students who are achieving well in college. Finally, I discuss direct entry students' participation in the landscape of practice at university, theorising their participation as peripheral. I adopt Fenton-O'Creevy et al.,(2015) typology of students' imagined trajectories characterising them as 'sojourners' who are passing through the communities at university only peripherally, recognising themselves as being as on their way to employment.

9.2   "A University route whilst at college" – presence and absence

According to the Guidance for partnership between colleges and universities in respect of the ASP (Scottish Funding Council, 2013, p4), Associate Students should be made aware that they are on a "University route whilst at college". My findings assert rather that the students are on a college route to university, albeit one that is said by Meharg et al. (2017) to be enhanced by transition support. Findings outlined in Chapter 6 indicate an inherent contradiction in being an Associate Student in college since it involves both presence and absence of the university. Presence of the university is signified by dual matriculation, reified in the form of a University Associate Student card. Yet the students themselves are of course physically absent from the University campus throughout most of their two years at college. I argue that this represents a quaternary contradiction (Engeström, 1987), since it relates to an interaction, or rather an absence of interaction, between activity systems in college and in university. Occasional visits on campus for specifically organised events make the university potentially more visible, but not all Associate Students are able to take up the offer to attend. One of the University Lecturers sums up this contradiction:

"they have a matric number, so they do belong here, but they
are not here, they are at their colleges"

The offer for Associate Students that is implemented in the University's partner colleges is fully outlined in Chapter 6 but it is briefly reiterated in this part of the discussion. Funding and transition support are made available to partner colleges by the University under the auspices of the Associate Student Project. This provides the basis for the Associate Students' articulation being characterised as a "University route whilst at college" (Scottish Funding Council, 2013, p4). Transition support delivered at college goes some way to minimising the contradiction of the University's absence in the first two years of the Associate Students' programme of study. The University Transition Support Co-ordinators (UTSC) attend colleges to support matriculation, provide information about the University and deliver academic skills workshops; being present on college campus. University Lecturers are largely absent from Associate Students' two college years and findings in Section 7.2.3 indicated that there was very little interaction between University academics and other members of the Associate Student Project community (such as College Lecturers or University Transitions Support Co-ordinators). The University matriculation card provides Associate Students with access to some digital features of the campus such as the student intranet, library resources and Maths workbooks. This potentially augments the University's virtual presence while Associate Students are studying at College. Even those who do not make much use of these digital resources, valued the prospect they offered to engage with the University.

The presence of university is manifested fully in the 3rd and 4th year of study when students attend as fully matriculated direct entry students of the University. I note that the college is still present in certain respects even after transition to university. Gravett (2019), Taylor and Harris-Evans (2016), Ecclestone (2009) and Lawrence (2009) all note the multiplicity of identities involved in transition and the complexity of becoming one thing while at the same time unbecoming something else. While the students are becoming undergraduates at the University, it takes time for them to unbecome Associate Students from college. The discussion in this section about presence and absence resonates with this conception of transition as 'becoming' since it reflects the fluidity of the students' environment in which certain elements will be more salient than others at different points during transition. I found evidence that the identity of Associate Student is rarely fully displaced by that of undergraduate at University.

During the Phase 2 interviews and focus groups (see Section 5.4.5), several DE Students referred to themselves as 'Associates' and the continuing students as 'the Uni-boys'. This was despite the fact that at that point they themselves were attending University and they were no longer designated as Associate students. There was other evidence of students' ongoing identification with their college. For example some ASP Students previously attending colleges at more remote locations from the University campus made use of study spaces at their former college that were closer to home. Others stayed in contact with their College Lecturers referring to them for help as the need arose during their undergraduate study.

The Associate Students' socioeconomic status, their college educational background and the fact of their being first in family to go to university gave rise to tertiary contradictions (Engeström, 1987). During campus visits and skills-focussed workshops in first and second year, Associate students intersected with the range of discourses and practices in which they would eventually participate in third year at university. Whereas some mediating artefacts such as university campus, lectures and assessments draw the students towards university, others such as transport, friends and home push them back towards their college identity. This sense of emergence and fluidity of Associate Students' transition stands in contrast to time-bound models of transition (Gale & Parker, 2014) which see transition as a one-time, linear movement through an institutional setting.

Although the provisions of the Associate Student Project render the University present to some extent in college, its significant absence cannot be denied. Figure 11 below shows a comparison of models of articulation: first a typical articulation route between college and university without transition support (see Section 2.5 for further details) and secondly, an Associate Student's route. Transition support and dual matriculation manifest the University's presence to Associate Students. But for all students attending colleges which have well-established articulation routes, the University is made present to some extent by access to information about the University and its corresponding degree programmes. This is so, to a far greater extent, for Associate Students. The absence of the University expressed through lack of contact with University Lecturers as well as limited access to the campus during the college years, makes it unlikely that despite dual matriculation, Associate Students would see themselves as being on a "University route whilst at college" (Scottish Funding Council, 2013, p4). The ASP Students in this study were however proud of themselves and of their decisions to take a college route to University.
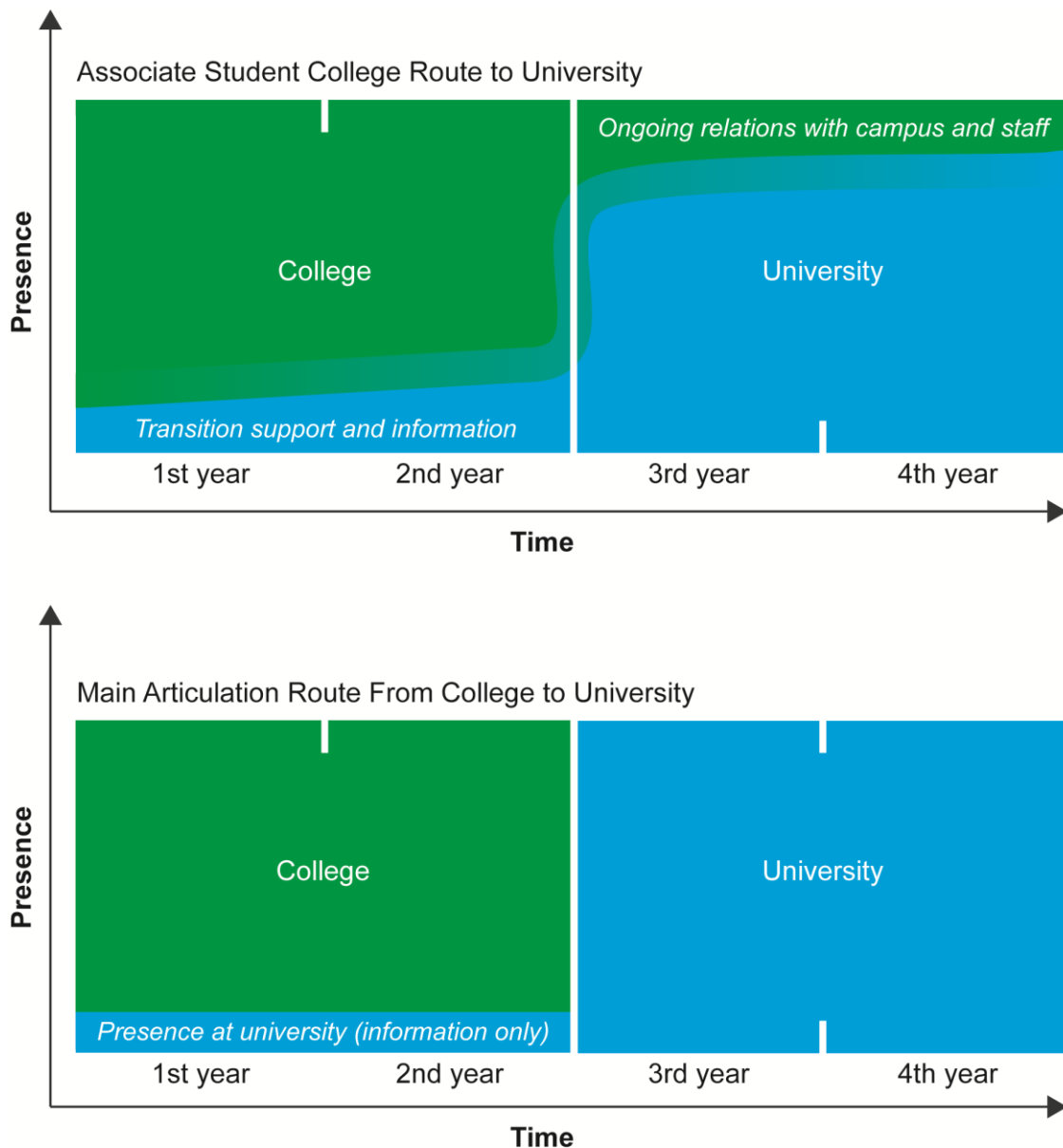
Figure 11 Comparison Models of Articulation

9.2.1   Dual matriculation – a double-edged sword

Dual matriculation signifies to Associate Students the University's commitment and intended ongoing relationship with them during their period of HN study. It also invokes a guaranteed offer on a named degree as a direct entrant into third year at the University. The offer is contingent upon successful completion of HND with at least a B pass in the HN graded unit. My findings suggest that the guaranteed offer represents a double-edged sword for Associate Students. On the one hand it provides certainty from the outset about the university and programme of study that Associate Students will follow in their third year. On the other hand, it requires students to make a choice of

degree subject at the beginning of their first year at college. Bloomer and Hodkinson's (1997) study of the learners' experiences in further education reported the high frequency of young people choosing to change their intended courses of study in full-time post-16 courses. This is not an option available to Associate Students. College students out with the Associate Student scheme would have a choice of five applications to make through UCAS in the mid-point of their second year. But despite their status as Associate Students and their guaranteed offer, they are still required to make an application through UCAS in order to realise that guaranteed offer. If they fail to do so, the college will not receive funding for them and their place could, if demand were to be high, be reallocated to another applicant. Some Associate Students perceived this aspect of the guaranteed offer to be a liability resenting the restriction on their choice of university and degree subject. Others appreciated the certainty and considered the guaranteed offer which accompanied dual matriculation to be a key asset of being an Associate Student.

9.3   Macro perspectives of ASP – asset or liability?

This Section illuminates the tensions and contradictions that flow in the dynamic Associate Student Project Activity system as the elements systems interact and change over time. By considering the sociocultural context of transition, it extends the focus beyond the question of whether the Associate Students' achieve their goal which is to accumulate sufficient academic credit to graduate and to gain well paid employment in the engineering industry. The activity system perspective makes it possible to understand the nature of the rules, roles and responsibilities, and mediating artefacts at play in the Associate Student Project system. Key tensions are represented in the diagram below (Figure 12).
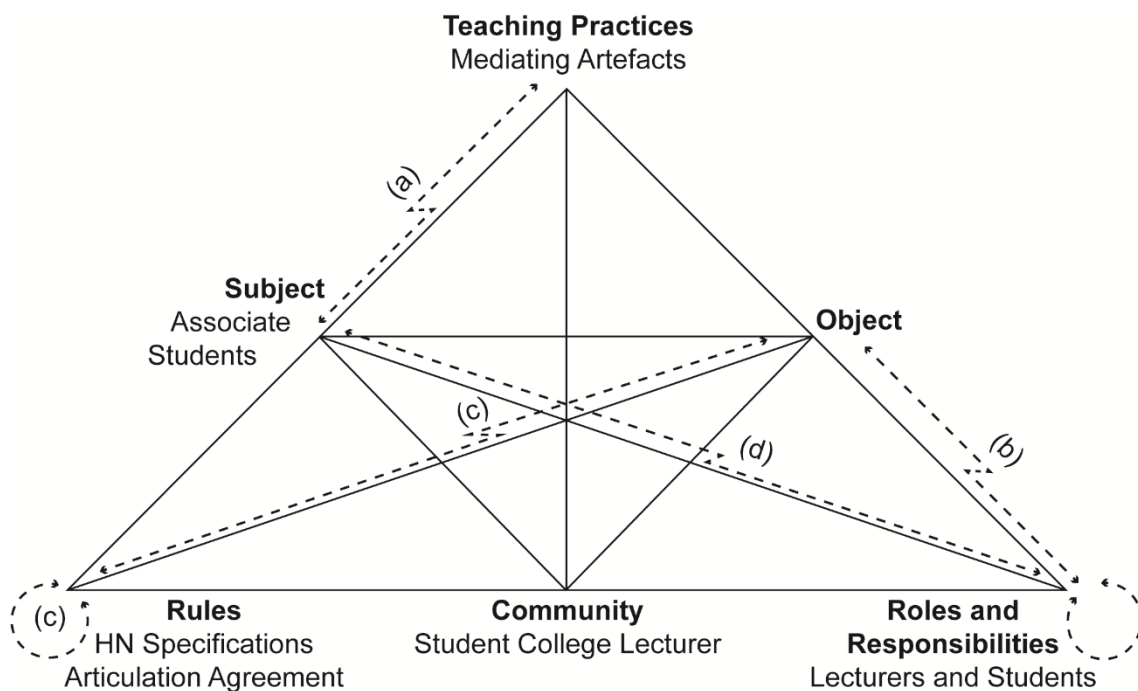
(a)   Students are concerned that teaching practices and how the curriculum is enacted may not ensure their readiness for university study

(b)   College lecturers experience a conflict in priorities between Articulating Students and to those going straight into employment

(c)   Maths units included in the HN framework (in 2014) contradict those required for University study

(d)   There are tensions between students and College Lecturers regarding whose responsibility it is to prepare Associate Students for university study

Figure 12 Tensions in the Associate Student Project Activity system

Associate Students appreciated the level of one to one support from College Lecturers, however they anticipated that these practices would not develop the academic literacies that would be required of them at university. The guidelines for the Associate Student Project issued by Scottish Funding Council in 2013 recommends that 25% of the funding allocated by SFC for the ASP should be used at least in part for the purpose of aligning curriculum to achieve ease of transition and providing support for Associate Students. This guidance suggests that curriculum alignment is a concern shared between colleges and university and that that resource should be allocated to further develop existing structures. In its written guidance to the ASP community (Scottish Funding Council, 2013) the SFC appears to make the distinction between the prescribed and enacted curriculum although not using those terms. It recommends that collaborating teams should explore opportunities for mapping curricula (prescribed curriculum) (Bloomer, 1997), and to 'align learning, teaching and assessment methods' (enacted curriculum). At the annual meetings between the University Transition Support Co-ordinators (UTSC) and their counterparts in colleges, curriculum alignment was always included as an agenda item. But it was the prescribed curriculum (Bloomer, 1997) and the topics inscribed in unit and module descriptors, that were discussed in most detail. The enacted curriculum which Miller et al. (2010) refer to as "the choreographing of people, spaces and artefacts in the enactment of practices – cognitive and practice" (ibid, p228) received far less attention from the ASP community members. Findings in Section 7.2.3 note that lecturers in university maintain a peripheral and voluntary involvement in the Associate Student Project community. This makes their involvement in discussing the alignment of teaching and assessment with their counterparts in college very unlikely. The enacted curriculum was unlikely to feature in discussions amongst the University Transition Support Co-ordinators (UTSC) since very few lecturers from colleges or from the University attended the meetings.

There are obvious structural reasons (e.g. timetabling, increasing workload and fiscal restrictions) which makes university-college collaboration at lecturer level difficult to achieve. But these difficulties may be overcome if the University mandates collaboration on the enacted curriculum as part of future articulation agreements. Of interest here is that the ASP Students trusted that any gaps in the prescribed curriculum would be addressed by the university due to their status as Associate Students. They were more concerned that the way the curriculum was enacted would not prepare them sufficiently for undergraduate study at SCQF level 9 and above. This tells us two important points; about ASP Students' expectations, and about the

consequences of the present arrangements for collaborating between a university and its partner colleges.

For the Associate Students and for the University, the Associate Student Project represents an asset. This route to university offers certainty for the students which engenders confidence in their future as undergraduates. The Project supports the university in the achievement of its Outcome Agreements as a source of students recruited from the 20% and 40% most disadvantaged areas of (further information is available in Section 2.5.2). There are tensions which arise in college as attempts are made to further align curricula between college and university. This is because the HN Engineering framework and the way it is taught in colleges shapes the learning experiences not only of students who are going to university as direct entrants, but also those who are not. This point can be illustrated by reference to the number and level of Maths units which are included in an HN Framework. While most HN engineering frameworks include Maths for Engineering 1 & 2 (or a close equivalent depending on the exact engineering framework), each college chooses from a range of optional units which include Maths for Engineering 3 & 4. Associate Students would be better prepared for University study by taking more maths modules at HN level. Students who are not planning to progress to university could be better served by a different choice of units. For this latter group, the presence of ASP could be said to represent a liability.

The practices which enable the college route to university for Associate Students are enmeshed in college-wide activities. These include managing, recruiting, teaching and supporting learning with a diverse range of college students. The Associate Student Project activity system does not sit in isolation but rather it is nested within, and overlaps with, other activity systems in colleges and to a lesser extent the University. This is significant since college management's perceptions of the Associate Student Project and the extent to which there is a sense of 'business as usual' in colleges can be better understood if we recognise that the Associate Student Project represents just a fraction of activity in these complex organisations.

As outlined in Section 2.4, Scotland's colleges are operating under tight financial constraints. The ASP is acknowledged by College Managers in all four partner colleges to be a source of much needed income. From their point of view, the ASP represents an asset. The administrative procedures associated with securing the funding for the Associate Students are time-consuming and frustrating given the fluctuating cohort of HN students who intend to articulate to university. This is the case most especially for

University Transition Support Co-ordinators (UTSCs) but also for college management. There is no doubt on the part of the College Managers that the reward of funding outweighs the effort required to procure it. In Section 6.3.1, I outlined the absence of formally recorded data in respect of the allocation of funding to specific projects connected with the Associate Student Project either in college or at the University. This suggests that while the funding is acknowledged as an asset, it is not in any obvious sense mediating the Associate Students' transition to university. Throughout the two years of this study I did not identify an expectation amongst College Managers that the funds would be allocated to shape any aspect of the Associate Students learning or teaching practices.

The advent of the Associate Students' route to university through college has not significantly changed academic practice in colleges. There has however been a development in the way that HN programmes are marketed to potential HN students. The title of Associate Student, the transition support offered by universities and the guaranteed offer on a named degree which gives full recognition for HN study, now features on the marketing literatures for all four partner colleges. An improved recruitment offer for potential students represents a further asset to college management. However, the need to align HN curriculum with the articulating programme at university can represent a liability for colleges.

9.3.1   Curriculum alignment – confidence and concern

Curriculum alignment between HNs and degrees provides the basis for articulation agreements between colleges and universities. Such agreements give confidence to potential students and institutions that articulation is feasible, and that degree level study is attainable by those coming to university from college as direct entrants to 2nd and 3rd year. The findings in Section 6.5.1 point to the differences between Associate Students' college experiences despite their common HND programme and of their following the same articulating pathway onto BEng 1 at University. These differences are illustrative of the systemic contradiction that exists between the articulation agreement which specifies the entry requirements, (the rules in activity system terms), and the way that institutional differences in teaching practices mediate the students' ability to achieve their object and outcome. In this study, ASP Students and University Lecturers are generally confident in the alignment of the prescribed curriculum, but there are concerns from the students and University Lecturers about the extent to which the enactment of the curriculum at college prepares the former Associate Students to achieve at university.

9.3.2   Student expectations of university

This study provides evidence that some students' expectations about studying at university are being shaped (at least in part) by campus visits and information provided by the university. For other students however, their expectations are informed by friends who are at or have been at university and by College Lecturers with university backgrounds. All the ASP Students had realistic expectations about the difference between academic literacies they practiced in college and those that would be required of them at university. None of the students in this study reported a gap between their expectations and their experiences of undergraduate study, despite such a disconnect widely reported upon in the literature (Farrell, Brunton & Trevaskis, 2019, Tett, Cree & Christie, 2017, Leese, 2010, and Flaga, 2006). The fact of the Associate Students' well aligned expectations with their experience of university is an important finding for this study. Its significance relates to evidence from empirical studies which identify a disconnect in expectations as contributing to disengagement and a risk of withdrawal amongst students coming to university from widening participation backgrounds. The provisions of the Associate Student Project appear to enable the management of ASP Students' expectations of study at university.

The ASP Students' insight into university life led them to believe that their College Lecturers had not understood that the way they were being taught in college would not prepare them to participate in the academic practices required at University. But students' fears were not always realised and at the end of their initial year at university, and former Associate Students from Colleges 3 & 4 found themselves to be well-prepared for University by their college experiences. However, students from the remaining colleges found themselves unfamiliar with academic practices such as referencing conventions and report formatting as well as certain software packages which were time-consuming to learn and this, they felt, had adversely affected their transition. These findings point to the singularity of each college's delivery of the HN curriculum. Further, it suggests limitations of an articulation agreement which relies on curriculum mapping as the primary mechanism for shaping students' transitions, with insufficient detail specified in respect of academic skills that would support entry into third year. Even in the case of the Associate Student Project which introduces further funding for the University which is intended to support students' college experience, my findings concur with those of Miller et al. (2010) who observe the differences that there can be between enacted curricula in different institutions.

The provisions of the Associate Student Project increase students' confidence in their route to university, increase their commitment to undergraduate study, and shape their expectations about what to expect. But their readiness for university study is shaped not only by the units in any HN framework, but also by the teaching and learning experience which is to some degree distinctive to each college.

9.3.3 College Lecturers' conflicting priorities – dual purpose of HN qualifications

HN students on the same programme all learn together in a single class comprising a blend of those who are hoping to gain employment on completion of their HND together with students who will be progressing to University. Transition support provided by the University is intended to differentiate the experience for Associate Students. Skills workshops, university campus visits and access to online resources are all intended to represent enhancements (Meharg et al. 2017) to the HN programme. This study has found that decisions about which HN units to include in the framework, and approaches to teaching and student support may prove to be contradictory, favouring one group of students while disadvantaging the other.

The different levels of Engineering Maths required for HN study at college and the equivalent year at university provide an example, and illustrates the interdependence and connections between different activity systems in college and at university. As outlined in Section 6.5.2, changes to the SQA's suite of Maths Units and the restructuring of the BEng 1 programme brought about a tertiary level contradiction (Roth & Lee, 2007). It arose due to the unexpected lack of alignment between Maths at college and corresponding degree programmes at University. The history and power relations between colleges and universities meant that in order to resolve this misalignment it fell to colleges to adjust their HN provision rather than to the University having to revise its degree programme specification. Accordingly, Colleges sought to introduce more of the optional Maths units in their framework. Although this change gave rise to confusion and concern amongst the Associate Students at the time, it surfaced their certainty that because of their status as Associate Students, the University would resolve any issues which might arise for them.

In resolving the discrepancy between college and university Maths for the Associate Students, a further contradiction arose which was recognised by College Lecturers and managers. Including additional Maths units in the HN framework could be at the expense of HN Units favoured by employers to meet local industrial needs. Furthermore, for some students preferring to go straight into employment rather than

university, additional Maths units may present barriers to their achievement. This tension is represented in the diagram in Figure 13 (below). Although I use Maths in this discussion to illustrate the tensions between the dual purpose of HNQs, there are other examples where teaching and learning approaches encourage studentship which is well aligned with university study. These may disadvantage learners who require one to one support in order to meet the demands of an HN programme. The need for students from widening participation backgrounds to be supported in developing sufficient independence and autonomy in their learning is commonly cited in the literature as essential for higher education study (Lowe & Cook, 2003, Leese, 2010, Harvey, Drew & Smith, 2006, Christie et al., 2006, Christie et al., 2005, Barron & D'Annunzio-Green, 2009, Wilcox, Winn & Fyvie-Gauld, 2005). Some College Lecturers in this study do promote independence and autonomy amongst their learners. These lecturers may be helping some students to prepare for university level study while at the same time disadvantaging other students not going to university and who would benefit from more, rather than less than one to one support.
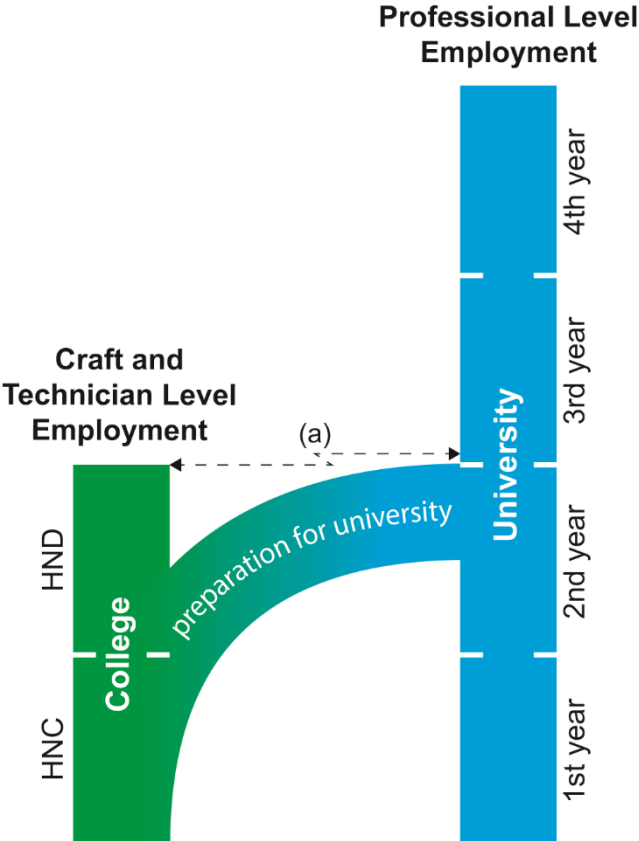
Figure 13 Tension shown as (a), arises from the dual purpose of HN qualifications

The Scottish Government's targets for increasing articulation as part of the post-16 education strategy are outlined in Section 2.5 indicating that for 2019/20 there is a target of 5,500 students to articulate with advanced standing. University Outcome Agreements reflect these national targets suggesting that HN qualifications will increasingly provide the basis for direct entry to second and third year of Scottish universities. What currently presents as a tension between the different uses of HNs, if not resolved, may result in HNs becoming less fit for purpose either as transitioning qualifications, or as routes to employment.

9.4 Making connections, filling gaps, and support embedded in the curriculum at college

The analysis of findings in Chapter 7 outlines three types of transition support. They are campus visits which in my analysis I characterise as 'making connections', skills focussed workshops characterised as 'filling gaps', and lecturer support, characterised as support 'embedded in the curriculum'. In this section, I examine the assumptions which underpin the guidance from the Scottish Funding Council (2013) about universities' obligations to provide support for their Associate Students. I then discuss the contradictions which arose when skills focussed support was provided by one institution for students attending a different type of institution, each of which has distinctive structures and social and academic practices. I further discuss the discrepancy between the value placed on the support by those who provide it as compared to the response to it from Associate Students who are its intended beneficiaries. Finally, I discuss the issue that while the academic skills support does not work in opposition to the students' HN programme requirements, neither is it in complete accord with it since the support is offered in anticipation of the problems which it is designed to address.

University campus visits were scheduled throughout the academic year prior to Associate Students' direct entry to university in third year. I use Wenger-Traynor's modes of identification in a landscape of practice to theorise students' participation at these events and I explore the significance of the fact that not all the Associate Students are able to travel to visit the campus to participate. The section concludes with an assertion that there is not a single Associate Student experience, but instead each college offers a different college route to university, depending upon its geographical location, the educational background and practice of its lecturers and the individual circumstances of the Associate Students.

9.4.1 Assumptions about student support

Arrangements for the Associate Student Project specify that the 25% of funding universities received for its Associate Students should be allocated at least in part for providing support for associate students (Scottish Funding Council, 2013, p2), in order to ease their transition. The nature of the support is not specified in the Guidance from the Funding Council, but it is indicated that the support should be offered as an integral part of the University route to college. This notion of Associate Students being in need of support prior to transition to university draws attention to the obligations which Cree et al (2016) suggest that universities have to students coming from widening participation backgrounds. Further it presupposes a misalignment between the 'University route whilst at college' and the university route which starts in the first year of the degree programme. The presupposition is that this misalignment can be reconciled through curriculum alignment and student support at college. There is no suggestion in the Guidance that the funding should be used to put support in place once students have joined the degree programme, nor that Universities should be expected to resolve contradictions between college and university provision by making any adjustment to their degree structures. Neither is it suggested that academic practices at university which disadvantage students with different educational backgrounds and experiences should be reconfigured. Instead, the Guidance to universities from the Scottish Funding Council is underpinned by an assumption that support of Associate Students should help them to fit in with existing academic structures and practices as well as to manage their expectations of undergraduate study in third and fourth year.

In Section 9.2, I assert that the Associate Student Project enables universities to establish a certain amount of presence during a student's college years, despite being largely absent from almost all of the interactions that take place throughout the HN programme. Transition support is a key mediator of university presence during the Associate Students' two years at college.

My analysis draws attention to the multiple contradictions associated with the ASP Students' experience of the skills workshops provided by the university on campus during their HND year at college. First a contradiction is apparent between the skills discourse which underpins the UTSC's activity and the academic literacies discourse which appears to be espoused by the Associate Students. Secondly there are contradictions between the practices which enable achievement of the HND and the different set of skills required for university study being promoted at workshops. Finally,

there are opposing demands on the students' time. They may have to choose between engaging with current personal, employment and academic demands, versus engaging with the university's provision of pre-entry transition support. This presents further tensions for Associate Students which are discussed in the sub-sections which follow.

9.4.2 Mixed messages for Associate Students

The idea that Associate Students need support suggests that those on this articulation route to university will be unable to achieve the intended outcomes of their activity in an unsupported way. This is consistent with Ivanič's (2004) perspective which recognises that skills support is aligned with a remediation and student deficit discourse. Haggis (2006) explores the implications of the discourse in which students from widening participation backgrounds entering university with qualifications lower than traditional-entry students may be conceived of as 'dumbing down' academic standards in higher education. The offer of skills workshops for Associate Students speaks to that same discourse since the traditional-entry students studying at university (instead of college), are seen as being able to function without additional support whereas Associate Students are not. Traditional-entry students may not require extra support because the development of skills is already embedded in induction activities and first year modules rather than offered as "disembodied skills programmes" (Clerehan, 2002, p77 cited by Keane, 2011). Further, the idea of study skills suggests an individual accomplishment (Saltmarsh & Saltmarsh, 2008) which places the deficit in the students, rather than in the educational opportunities (or lack of them) inherent in the route that they are taking to university. Yet the Associate Students who are positioned by the University as in need of support, are at the same time treated as the "cream of the crop" by College Managers and lecturers, since they are recognised as being amongst the most academically able students studying at college. The mixed messages which students receive about their academic potential is further complicated by the fact that Associate Students already have a guaranteed offer of a place at university. My study has shown that dual matriculation endorses the ASP Students' confidence and commitment to take up their places at university upon successful completion of their HND, irrespective of whether they attend skills workshops or engage with other forms of transition support. This degree of confidence in the route that they were taking suggests an explanation for the ambivalence felt by the ASP Students towards the workshops offered by the university.

In Chapter 7 my analysis indicates that although the students appreciate the fact that skills focussed workshops are made available to them by the University, they do not

value them highly, so much so that one student recalled that he thought the workshop was 'a joke class'. In some cases, ASP Students had only the vaguest recollection of participating in the sessions. Others indicated their understanding that although skills such as notetaking, referencing and report writing would be useful for their 3rd and 4th year of study, these would be best learned in the context where they could be practiced rather than learned in isolation. The ASP Students' response to the workshops seemed to convey an understanding that becoming academically literate and learning about the practices that would be required at university involved more than mastering techniques and memorising information. Rather it would need to involve participation in the social and academic structures of the community where the techniques would be used. The academic literacies discourse stands in opposition to the skills discourse which underpinned the workshops. I refer to a skills discourse, being one where skills are understood as something that can be developed and transferred independent of context (Hallett, 2013). As the UTSC advocated the value of the workshops in colleges, I suggest that the coordinator subscribed to this skills discourse in that he believed that if students could learn the skills that they would require before they started at university, they would be able to apply them when the time came for assessment in approximately six months' time. The skills promoted by the workshops were related, but different from those which would have supported the achievement of HND study. Tett, Cree and Christie (2017) observe that some of those practices and understandings which support learning at college may need to be unlearned, or deconstructed (Keane, 2011) once at university. Deconstructing the Associate Students' more dependent approach to learning while the students are still in college, could send further mixed messages to these students.

Attendance at the workshops is not positioned as part of the conditions for realising the university's offer for direct entry to third year. Instead, attendance at workshops which were additional to HN requirements, competed for students' attention amongst other more immediate priorities such as college assignments, part-time employment and caring responsibilities. When the University Maths lecturer offered to provide additional Maths tutorials during one week of the summer break after the students had completed their HND, no students took up this offer. But despite the concerns expressed by the Associate Students about the alignment between their HN Units they were studying and what would be required of them as direct entry to University, they preferred to trust in the University's commitment to the Associate Student Project to solve issues as they arose, rather than to undertake transitions support made available to them.

The findings from this study are important since they illuminate a contradiction between the students' expectations of the university, and the University's expectations of the Associate Students. Associate Students confidently expect the University to ensure a seamless alignment between their experience of the HN programme and their undergraduate study, whereas the University's expectations of the Associate Students are that they will engage in the transition support provided at college in order to prepare themselves for 3rd year undergraduate study. The model of transition support currently practiced offers only limited opportunity for Associate Students to develop discipline-specific academic literacies that will enable them to participate as full members of the academic community at university. These contradictions may be resisted by future Associate Students or the University, or, they may elicit change.

This study suggests that there may be possibilities for pre-entry support to be aligned more closely with the students' current activity goals, or even repositioned as post-entry support offered at the start of and throughout the first year of study at university.

9.4.3 University campus events for Associate Students – making connections

In terms of the Associate Student Project, campus events are positioned as pre-entry transition support for Associate Students, but they also serve an important marketing function for the University. Events take place typically two or three times per year; an initial induction in October, followed by invitations to attend guest lectures and/or lab sessions in the following trimester. The rate of uptake of Associate Student places at college and the rate of their conversion to accepted places in third year are measures of the University Widening Participation team's success in managing the Associate Student project. Success in recruiting Associate Students from college into third year makes an important contribution to meeting the University's targets for widening participation set in the University's Outcome Agreement, particularly in respect of National Measures 1[4] and 2[5]. It is not surprising then, that University Transition Support Co-ordinators (UTSC) who organised initiatives in colleges and in university sought to promote "positive messages about University" at these events, or messages which had

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[4] National Measure 1 – The number and proportion of Scottish-domiciled learners articulating from college to degree level courses with advanced standing

[5] National Measure 2 – the number and proportion of Scottish-domiciled undergraduate entrants from the 20% and 40% most deprived postcodes.

"an emphasis on (*offer)* conversion". For the UTSC the campus events represent an opportunity to develop Associate Students commitment to taking up their offer for direct entry to third year. They also serve as opportunities to manage students' expectations for direct entry and in so doing, make the Associate Students retention in 3rd and 4th year more likely.

For Associate Students, University campus events create opportunities for making connections with staff at University such as academics, librarians and transition support co-ordinators (UTSC). Lave and Wenger's, (1991) exposition of practice theory offers potential for understanding the nature of students' experience of engaging with campus events. On entry to a community of practice according to Lave and Wenger's model (1991), newcomers are positioned as legitimate peripheral participants who with experience may become full participants. Learning in this perspective is distributed across groups of people, spaces, activities and time and represents a sociocultural view of transition into new identities. In the case of campus events hosted by the university for Associate Students, the students are involved in some ways in the university communities of practice, yet in others they are kept at arm's length (O'Donnell & Tobbell, 2007).

Despite their matriculation as Associate Students, their status at most campus events was that of visitor to the community, rather than as a member of it. As opposed to fully participating with the cohort of students that they would join in the forthcoming academic session, the Associate Students were escorted by University student ambassadors for campus tours, library visits and to meet with academic staff. Associate Students had the opportunity to join the student cohort at one of the lectures and to eat in the main student refectory. However, the issuing of meal vouchers and the presence of staff amongst the Associate Students in a reserved section of the canteen, emphasised their role as guests rather than as full participants. Participation in the practices of the undergraduate community may be a prospect too far in the distance for Associate Students to warrant the role of legitimate peripheral participant at these events. However, in an extension of the original ideas which underpin the community of practice model, Lave and Wenger's conception of landscapes of practice provide a framing that fits well with the campus visits and offers insights into the students' role as 'visitor' at these events.

Of Wenger-Trayner's (2015) three modes of identification (engagement, imagination and alignment) which explain how participants function within the communities in a

landscape of practice, imagination most closely reflects how Associate Students take part in campus events. Given the ASP Students' status as guests at the campus events, there were only limited opportunities and insufficient access for direct engagement in the practices at university. This is also the case for alignment which involves a two-way process of collaboration. However, imagination as a form of participation involves creating a mental picture of oneself participating in the community. The campus visits created ample opportunity for this type of identification. Associate Students attended a lecture (as guests), and were able to imagine themselves as direct entrants sitting in the lecture theatre when they would join the rest of the undergraduate community. As they were guided around the campus classrooms and labs, they could imagine themselves occupying the spaces and making them places where they can learn as a member of the University community. Although the Associate Students' form of engagement with the university at campus events may not warrant the label of legitimate peripheral participants as it is most commonly used in the scholarship of student transitions (O'Donnell & Tobbell, 2007), imagination does offer a mode of identification with which they locate themselves in the community at university which is apt.

Whereas some of O'Donnell and Tobbell's (2007), adult student participants on an access programme experienced frustration and anger at being kept at the periphery of university's higher education community, the Associate Students in this study expressed no such antagonism. Instead, they valued the experience more so than the skills workshops which have been delivered in college, expressing appreciation for the support which they understood that the University was offering them. Whereas the campus tours signify an optimistic impression of the places, resources and relationships that Associate Students imagine themselves encountering in transition to university, the skills focussed workshops in college engender concern that their college route to university will leave them in need of remedial support. When viewed from this perspective, it becomes even more understandable that the campus visits were valued more highly than the skills workshops.

In the previous section, I discussed the fact of Associate Students' competing priorities and that time spent attending workshops impacted on time available to address the students' other priorities. This is also the case for campus visits where only some of the Associate Students took part. The next section discusses the possible reasons for this and its implications for the Associate Student route through college to University.

9.5   Associate Studentship: in practice a variable offer

Campus visits create a "viewpoint" (Lave & Wenger, 1991, p96) from which Associate Students are enabled to assemble ideas and understanding about the practices of the university. While there were some limited opportunities for personalisation and choice at these events, typically a one size fits all approach to transition support was adopted. Provision took no account of ASP Students' personal circumstances nor of their individual entanglements in their own localities, employment and family commitments (Carruthers Thomas, 2019). The regularity with which students enquired about car parking, transport, timetables, funding, and opportunities for flexibility with tutorials suggested these issues would be significant influences on their subsequent engagement with the university, just as much as the academic side of life which was displayed to them at campus events. I argue that Associate Students' transition to university depends not only on their academic experience at college, but also on the interplay between the institution and individual factors which differentiate the experience of being an Associate Student.

While the 'rules' of the Associate Student Project advise universities to provide pre-entry transition support, the terms of the guaranteed offer from university do not specify a requirement for students to participate in any events. The decision about whether or not to attend campus events varies for students according to their institutional and individual circumstances. Campus events were designed around the availability of space, and of University personnel who would meet Associate Students. The availability of Associate Students was considered, but only in so far as the events were scheduled during college trimester. It failed to take into account Associate Students' HN timetables which is unsurprising given the difficulty of co-ordinating of four different college teaching schedules. The tension for Associate Students as this point was to choose between attending campus events which might support their achievement of longer term goals at university, or to prioritise instead achieving a shorter term object to achieve their HN, while at the same time balancing commitments to part time employers as well as family responsibilities.

My study found that spatial mobility was a significant mediating artefact in shaping an Associate Student's experience. In Section 4.2, I present the relative travelling distances between college and the University campus for students attending the four colleges. For those attending the college located furthest away, travel by public transport to the campus would take in excess of two hours. Those who attended

colleges nearest the University were far more likely to engage with university campus events than those from colleges further afield. In fact, no Associate Students in this study from the most geographically remote college (College 3) attended campus events, nor were skills focussed workshops delivered on that college campus. However, at the end of their first year at university, the Associate Students from College 3 considered themselves to have been well-prepared for university study. This finding suggests that pre-entry support was found to be a weak mediating factor shaping students' expectations and success upon making direct entry to third year of university. Associate Students' academic experience, their disposition to learning in terms of motivation and willingness to work hard were of course important. However, the way the curriculum is enacted in college appears to be at least as significant as transition support provided by the university in the experience of Associate Students.

As direct entrants reflected on their transition experience, informal advice from College Lecturers who had recent experience of university was cited as their most valuable source of transition support. This reinforces the argument that Associate Students are aware of the differences in academic practice between college and university. They recognise the fact that their college experience creates barriers for them in the development of the academic literacies that they will need to practice at university. In sociocultural terms, the UTSC may be conceived of as a boundary worker crossing the boundaries between university and college, but Akkerman and Bakker (2011) remind us that the practices being brokered may not always be accepted and this was certainly the case in this current study. In fact, the conceptualisation of boundary worker is not entirely apt in this case of transition support since the direction of transfer and the sharing of practice is unidirectional; from university to college. The expectation is that Associate Students' college practices will be subsumed by those of the university.

I have argued that the timing of the workshops is incompatible with the Associate Students' needs in that it is given long before the students will be able to use what has been taught. However, it is interesting to note that the advice from College Lecturers was more readily taken on board, even though it was also given before it was needed. It may be that some of the ambivalence towards the workshops arises from a lack of trust of the UTSC and with them being too closely aligned with the University rather than the college. Not all of the Associate Students had had the benefit of advice from their College Lecturers and in some cases the advice that they had been offered in respect of working independently without support from lecturers may have militated against the students' success. In the section which follows, I argue that the practice of

working for long hours, struggling with assessments and avoiding seeking help may have stemmed from advice they had received in college.

9.6 Direct entrants' engagement in the landscape of practice at university

This section will discuss the DE Students' experiences of their first year of transition to university and the factors which shaped them. Tett, Cree and Christie (2017) and Jindal-Snape (2010) characterise the transition of students into first year as 'ongoing'. This applies also to Direct Entry students in this study whose ongoing transition to undergraduate study begins before their arrival at university while they are still at college. I deploy Wenger-Traynor's modes of identification in a landscape of practice to discuss the DE Students' participation in their degree programme in third year. This sociocultural perspective conceives of DE Students' learning and practice at university as being shaped by the body of knowledge located in the complex landscape of practice at university. Fenton-O'Creevy et al. (2015) characterise trajectories of participation in a landscape of practice which offer potential for understanding the patterns of peripheral participation embodied by the DE Students in this study.

9.6.1 Transition to university: an ongoing process

ASP Students never doubted that they would succeed in achieving the object of their transition; to achieve sufficient academic credits to graduate and obtain well-paid employment in the engineering industry. Their collective identity in each college was that of enthusiastic and committed Associate Students on their way to undergraduate study at university. I attribute this optimistic anticipation to the fact of their being dually matriculated with the university during their college years. This shaped their expectations and supported the development of their identity as direct entry students when the time came to progress to university. At the start of third year, far from regarding the transition to university as a culture shock (Christie et al., 2008) their perspective was one which emphasised continuity and development (Beach, 1999). Each DE Student was happy to share their sense of accomplishment and pride at having reached the university stage of their route to graduation and ultimately to employment. Students from widening participation backgrounds, such as those in the Christie et al. (2008) study, and who experienced a sense of dislocation and loss in transition to first year, were those who entered an elite university from college. But in this study, DE Students progress from colleges to third year in a post-92 university where they would experience far less of a sociocultural and demographic discontinuity.

They also maintained a network of other relationships which shaped the experiences of their transition to university from college. In reconciling the demands involved in managing multi-membership of communities of practice, DE Students modulate their identification in the landscape of practice, engaging only peripherally with the communities they encounter there.

During each interview in Phase 2, students discussed how their programme of study at university intersected with their life beyond the physical campus. One of the students lived in the University city in their parental home, and another had moved there during term time. The rest, none of whom lived in the city, spoke of managing childcare, part time employment, sporting commitments, travel arrangements and finding space to study at home. For the students in this study, university was only one amongst many networks that competed for their time and attention. Becoming a university student involved a "multiplicity of relations" (Lave & Wenger, 1991, p114) which intersected with home, college and university. For these students, transition to university was only a part of a whole-of-life ongoing process (Jindal-Snape & Ingram, 2013, Tett, Cree & Christie, 2017, Taylor & Harris-Evans, 2016, and Gravett, 2019). Rather than seeing transition as happening at a fixed point – most obviously during the first few weeks of the university academic session - for this group of DE Students their transition was practiced more or less every day. Recognition of the individual embodied complexities of transition to university leads to further possibilities for pre-entry support for this group of students.

Although I depict the students' transition as ongoing, the movement between college and university study did represent a turning point or at least a significant qualitative change in studentship. The pace of teaching, the amount of reading required, the level of effort and the standard of work did not seem to come as a surprise to the DE Students, but some students described a sense of academic struggle. This increase in workload and their understanding of the academic level and effort required of them resulted in all of the DE Students working longer hours than they had ever done before. During interviews and focus groups in Phase 2 they described academic practices and regimes of competence which they had developed at college and which they felt served them well during the first trimester at university. Well-established friendships, a strong work ethic and consistent attendance were all practices initiated at college and which they practiced with pride at university. But these students also discovered practices in the landscapes with which they dis-identified. It is the pattern of participation and non-

participation in the landscape of practice at university which I now explore using Wenger-Traynor's three modes of identification (introduced in Section 4.4.3).

9.6.2   Peripheral participation and marginality

Developing the identity of a third-year engineering undergraduate can be thought of as a journey through the landscape of practice at university. Each different form of identification in a landscape of practice shapes the development of a person is or a group's identity in a different way. DE Students developed modes of identification which involved different forms of participation. Sociocultural conceptions of learning suggest that close connections with fellow students enables learning through participation in the practices of the community. Ongoing engagement can enable newcomers to move inwards from the periphery to the centre as full participants of the "sociocultural practices of the community" (Lave & Wenger, 1991, p29). The distinction of DE Students in this study is that they did not seek to participate as full members of the landscape of practice at university: their activities were more closely aligned with peripheral participation.

Peripheral participation enables sufficient access to practices so as to contribute to one's identify (Wenger, 2010), but does not necessarily lead to full participation. Even before the students in this study had progressed to university, their stated goal was always to gain well-paid employment in the engineering industry. A degree was regarded by this group as a 'ticket' that was required in order to obtain that goal which lay beyond the university. DE Students in this study are not unique in this regard, and this form of peripheral participation is echoed in other studies of this same population of students from widening participation backgrounds (Ingram & Gallacher, 2013, Carruthers Thomas, 2019). None of the DE Students in this study had become active members of the Students' Association or university clubs and societies and only one of the group established friendships with other students. They made very limited use of campus spaces, attending lectures as required, and choosing to study together mostly in one particular place. Peripheral participation was an active choice made by students who elected to have this distinctive mode of engagement with the university as a means of reconciling their multiplicity of identities (Taylor & Harris-Evans 2016, Ecclestone, 2009 and Lawrence, 2009).

During the Phase 1 focus groups, Associate Students constructed representations of themselves as undergraduates. The Mr Potato Head model building activity (see Figure 6 in Section 5.4.3) elicited the view from the students that the challenges of university

would be best encountered with the support of the peer group. Most ASP Students anticipated that support from the former college group would be a short-term necessity until they made other friends and settled into new networks at university. As predicted, the group provided a valuable asset for negotiating the boundary between college and university during the first few weeks of trimester. What was less expected was that the DE Students remained almost exclusively in their former college peer groups throughout their entire third year. University Lecturers accepted that the former Associate Students preferred to work with their college friends for the purposes of group work. This was not a laissez-faire attitude taken by lecturers towards the direct entrants in their class. Rather, it was aligned with the practices of collaborative pedagogy (Hockings et al., 2018, Hughes, 2017, Tinto, 2003), which asserts that students learn better together when they are enabled to become part of communities of learners.

The salient identity as former Associate Students and their close group of peers may explain why the DE Students did not experience the sense of social isolation and anxiety commonly reported upon in studies of student transition into first year at university (Christie et al., 2008, Krause & Coates, 2008). However, by engaging with one another at the expense of developing new social networks, the DE Students may have marginalised themselves from some of the potential resources of the other students.

9.6.3   Marginality

The way marginalisation is experienced, depends on the extent to which a member identifies with the community (Wenger, 2010). The findings in Section 8.3 provide examples where DE Students explained they preferred not to pursue what they referred to as the 'student life'. Rather, they said that they were at university to work hard and gain their degree as a means to a professional end. As the DE Students encountered the various communities of practice at university, they established the limited extent to which they felt accountable to the regimes of competence in each of the communities. Boundary encounters with traditional-entry students who had a history of learning together since first year, gave rise to modes of identification with practices associated with the continuing cohort. Unlike Hodge's (1998) experience of dis-identification and exclusion on a teacher education programme, DE Students made a decision to resist some of the practices of the community. Far from feeling excluded or made to feel insecure by the boundary encounters with their fellow classmates, they felt proud of their college roots, more committed to their programme of study and more

conscientious than the continuing students. The practices of the community that DE Students resisted included "being a party animal" and poor attendance at lectures. Instead, the former college students sought to engage only peripherally with the traditional-entry students to whom they sometimes referred as "uni-boys". In rejecting the identity of "uni-boy", the DE Students were constructing their own identification of what it meant to be a DE Student *en route* to employment in the engineering industry.

The goal to achieve well paid employment in engineering was established in college and it continued to shape activity at university. The DE Students made a confirmatory transition (Bloomer, 1997) to university, 'passing through' the landscape of communities of practice at university as peripheral participants, since they perceived their trajectory as carrying them out into employment in industry.

9.7   Chapter summary

In this chapter I have discussed my findings in the light of all three research questions. I summarise my findings as follows.

1. Dual matriculation was valued by students since it provided them with optimism that they would articulate to university and confidence in the University's commitment to them. It was not an unalloyed benefit, since it was also associated with an early restriction on their choice of university and course.

2. The activity system perspective reveals the sociocultural context of the ASP as it was implemented in the University and in partner colleges. Tensions and contradictions arose within and between closely related activity systems. Contradictions gave rise to changes, but activities that could potentially mediate the achievement of the Associate Students object and goals may have been resisted, depending on ASP Students' individual circumstances.

3. The offer of transition support was valued differentially. Those who attended colleges furthest away did not access the support on campus at university to the same extent as the others. They preferred to prioritise their HN study and other commitments. The Associate Student experience varies according to the college attended and the personal circumstances of the student. While the UTSC and College Managers valued the skills focussed workshops provided by the university for Associate Students, the students themselves saw less value in the sessions. They experienced a contradiction. They were acknowledged as being academically strong in college in comparison with other students in college, and yet skills

workshops play to a deficit discourse which positions them as needing support in order to be able to participate fully at university.

4. As direct entrants navigated the landscape of practice at university, they dis-identified with their traditional-entry classmates, strengthening their identification with their former peer group from college. They tended to engage with the university at its margins and did not see themselves on a trajectory to the centre of the academic community. Direct entrants participated peripherally in the landscape of practice as sojourners (Fenton-O'Creevy et al.,2015). As such, they were passing through the university on their way to well-paid employment in the engineering industry.

Chapter 10   Conclusions and responses to research questions

In this section I provide responses to the three research questions which this study addresses. I then outline the significance of the study and the contribution to knowledge that my findings make. This is to the broad field of student transition, and in particular to the transition of direct entry students who comprise the target of widening participation initiatives such as the Associate Student Project. Finally, the thesis finishes with an acknowledgement of the limitations of the study and suggests further avenues for research.

10.1 Response to research questions

Research Question 1 - How do staff, students and artefacts interact at university and college in order to achieve the local objectives of the Associate Student Project?

The ASP is represented as an activity system which shows how its sociocultural elements are constituted by internal and external influences. These in turn shape the Associate Student's experience at college and their preparation for undergraduate study. My findings positioned Associate Students' dual matriculation with college and university as contradictory and as a powerful mediator of students' expectations. Associate Students were physically absent from University during their two years of HN study in college. During that time, matriculation with the University shaped their imagined trajectory from college to undergraduate study and beyond into employment. Dual matriculation in the first year of HN study was seen by some Associate Students to limit their choice of university and of degree. It engendered certainty about their transition to university and a sense of confidence that difficulties arising from incomplete curriculum alignment between their institutions would be resolved by the University. Contributions from University Lecturers to the Associate Student Project were extremely limited and voluntary. Most interactions between engineering lecturers in college and university are based on friendships between former colleagues or with previous students now teaching in college. College Managers and lecturers, as well as their Associate Students recognised the need to engage further with University academic cultures and practices.

A contradiction arose due to the dual purpose of HN programmes; as entry qualifications to the labour market, and as transitioning qualifications for university.

Colleges that included more advanced Maths units in the framework and that promoted independent learning and more rigorous assessment protocols were seen by Associate Students as promoting readiness for university study. However, College Managers recognised that HN students intending to go straight into employment from college may be disadvantaged by the practices which support transition to university. This has significant implications for the delivery of a single HN programme for both sets of students.

Research question 2 - How are transition support practices enacted and valued in the transition space between college and university?

During the Associate Students' college years, Campus visits to the School of Engineering and skills focussed workshops served two purposes; pre-entry support and marketing opportunities for the University. Co-ordinating transition support was a complex undertaking for UTSCs who were characterised in the discussion in Chapter 9 as boundary workers. The complexity arose from contradictions between and within different elements in the activity system. In the community element, structural issues such as distance between home and university, and timetabling (see Section 7.2.1) created tensions for the subjects and the achievement of their goal. Meanwhile, the different roles and responsibilities of Associate Students, college and University Lecturers impacted on their availability to engage with one another in activities located on campus during term time at University (see Section 6.5). Although Associate Students valued the opportunities to make connections on campus to meet lecturers and find their way about, they prioritised their HN study, part-time employment and other commitments in their home communities. Associate Students from the college which is closest to the School of Engineering attended far more campus visits than any other group. Those from the most remote college attended none. The offer of transition support and its uptake is not equally distributed amongst the University's Associate Students. The perception of the positive value of campus visits amongst those who attended and even those who did not, suggests the importance of students' imagined participation on campus. This study concludes that transition to university for this group is spatial, embodied and relational.

Opportunities to attend campus visits at University were valued, whereas skills workshops delivered by the University were not acknowledged by the students as valuable transition support. The provision of skills workshops conveyed to Associate Students that an HN programme of study would not on its own provide sufficient

preparation for University study. Yet participation in transition support is not a mandatory part of the Associate Student offer, and as with the campus visits, participation is voluntary. The Associate Students' object was to accumulate sufficient academic credit to progress to university and from there to well-paid employment in the engineering industry. They did not see the skills-focussed workshops as mediating artefacts which would support the achievement of their outcome and goal. Instead, they gave rise to interesting tensions between the high value placed on the workshops by the UTSC on the one hand and the Associate Students' low valuation. Their confidence in their college route to university led them to prioritise their HN studies and other commitments over pre-entry support at university. A further contradiction arose due to Associate Students being recognised by College Lecturers as the most academically able students in college, whereas the offer of skills support suggest that university conceived of these students as being in deficit and unable to function in an unsupported way. Students' clearly stated preference was to develop the skills in the context of their undergraduate study at the point when they were most needed.

There are differences within the activity system in respect of roles and responsibilities for supporting Associate Students' transitions. Some College and University Lecturers created opportunities to provide support and guidance embedded in the context of their disciplinary teaching, but others did not. This was the form of support that all student participants valued the most. All the participants specified lecturers either in college or university who had, or who had not taken time to explain the tacit assumptions which underpinned assessment at university. Various forms of interactions between students and lecturers, either in class or more informally, were acknowledged by the students as having greater or lesser impact upon their transition to undergraduate study. This finding points to the significance of the lack of contact between College Lecturers and their counterparts at university. The guidance offered to Associate Students may not always encourage a form of participation at university which is to students' best advantage. DE Students' participation in the landscape of practice at university provides the focus for the third and final question in this study.

Research Question 3: In what ways do former Associate Students engage in the landscape of practice as direct entrants into third year at university?

Peer groups comprising former Associate students made only limited use of institutional spaces on campus at university. They offered one another academic and emotional support as they coped with the perceived increase in level, pace and outputs

required from third year study. DE Students' interaction with those who had been at university since first year of the programme were limited. My findings suggest a peripheral form of participation which potentially marginalises DE Students from broader sources of peer support. Some DE Students dis-identified with their traditional-entry peers, disparaging their less committed work ethic and showing no desire to become a part of that community, or of what they refer to as 'uni life'. Most DE Students made contact with their lecturers only as a last resort, preferring to engage with their close peer group to resolve difficulties with their understanding of taught material or for help with assessments.

These students' identification with the landscape of practice at university represented a trajectory of participation which is peripheral and which can be understood using Fenton-O'Creevy set al. (2015) characterisation as 'passing through'. Most DE Students in this study saw themselves as only passing through university on their way to well-paid employment in the engineering industry. They neither sought nor expected to participate in ways that would take them to the centre of the university community. Their peripheral form of participation provided sufficient access to the practices at university that would shape their emerging identity as direct entrants and future employees.

10.2 Recommendations

Institutional and governmental targets to widen participation in higher education demand the continuing development of new articulation pathways and the expansion of the use of existing ones. In the light of my findings I make three recommendations for development of the articulation route for Associate Students:

First, I recommend that articulation agreements should be defined in greater detail by the university. Academic skills requirements for 2nd and 3rd year of the degree programme could be further specified, beyond the present stated entry requirements. This would create opportunities either for colleges to make small changes to their provision to accommodate the development of these skills, or else, for Associate Students to use the resources of the university to gain these skills before their start as direct entrants.

Secondly, I recommend the development of opportunities for shared professional development between college and University Lecturers in relation to their academic programmes.

Thirdly, I recommend that transition support should include opportunities and encouragement for Associate Students to engage frequently with traditional-entry students and lecturers during 1st and 2nd year of the degree programme. This would create openings for Associate Students to engage with the academic cultures and practices in which they will participate at university.

10.3 Contribution to knowledge and research

This study has methodological and practical significance. At a national Scottish level, this is the first to offer a sociocultural interpretation of the practices of students who progress from college to university as direct entrants, under the auspices of the Associate Student Project. It challenges the rhetoric offered by the SFC that Associate Students are on 'a university route whilst in college' given the University's absence in their first two years of the HN programme. The study also speaks to policy makers nationally and internationally since it challenges the assumptions about learning transfer that underpin flexible routes to university, particularly for those who make the transition from one educational sector to another.

The SCQF's representation of credit transfer between different educational sectors is essential to the design and operation Scottish articulation pathways. The conclusions of this study are also relevant to other routes which are devised on the understood equivalence of post-school qualifications. Attracting and supporting students with qualifications other than those gained during compulsory years of education is only one of many initiatives discussed in this thesis to facilitate the representation all social groups in higher education. It is nevertheless an important one. Learning transfer from one educational sector to another is not currently explored in the literature from the point of view of direct entrants. It has significance for countries such as US, Australia and UK where bridging and pre-entry programmes offer routes to university for students from widening participation backgrounds. Further research which unsettles the assumptions that underpin learning transfer on these routes is warranted, and this study contributes to the field.

From a methodological point of view, this study has shown the value of using sociological concepts from CHAT (Engeström, 1987) and from Lave and Wenger's (Lave & Wenger, 1991) landscapes of practice. Conceptual tools from these authors were used to highlight how practices in college and university can either enable or militate against the achievement of students' object and outcomes. Concepts from Lave and Wenger's communities of practice have effectively underpinned many transitions studies. However, concepts from landscapes of practice have not been used before to analyse the participation of direct entry students. This study of former Associate Students' peripheral participation, 'passing through' in the landscape of practice at university, draws from the work of Fenton O'Creevy et al. (2015). Joining the university in third year rather than in first has important implications for the students' academic and social enculturation.

This study then not only offers insights into students' experience of making the transition to university as direct entrants from college, but it also contributes to wider research which seeks to understand the broader experience of students from widening participation backgrounds. In challenging normative expectations of linear, timebound transitions, this study recognizes the multiple communities to which widening participation students belong, highlighting the significance of students' spatial mobility and personal circumstances. These are perspectives which warrant further empirical investigation. Landscapes of practice offer a theoretical lens, not yet widely used in this regard, through which to investigate the boundaries of students' experiences and to focus on transition support.

The use of creative visual methods is not completely novel as a means of engaging students in qualitative research projects. Most studies discussed in Chapter 3 have generated data through the use of traditional interviews, focus groups and surveys. My study used object-oriented focus groups and interviews involving model building and mapping exercises to generate data with student participants and is unique in this regard. The use of Mr Potato Head artefacts, maps and poker chips engaged the students in discussions which aligned with their sense of fun, their creativity as engineers and my ethical stance towards this research project. My study makes a contribution to the field of qualitative research methods in its approach to talking with students and generating data for the purposes of research. The stories that the student participants have shared in this study position them as important contributors to contemporary and international understandings of inclusion in higher education.

10.4 Limitations

The group of Associate Students in this study represents only a subset of the Associate Students articulating to degree level study in Scotland. In the University, Associate Students were recruited by the Schools of Computing and of Engineering. This study is limited to the latter. The entire population of Associate Students in the University in 2014/15 was 104, whereas in 2013, the SFC funded 1020 of these additionally funded places across Scotland. My research therefore represents a subset of the whole Associate Student Project and its findings relate to the practices of Associate Students in only one discipline in a single university. This places limits on the generalisability of the study.

The conclusions that I have drawn offer insight into the ways that the Associate Student Project has shaped the transitions for HN students articulating on to two engineering degree programmes. It does not however speak for other groups of Associate Students in different universities and on different degree programmes.

Although this study is longitudinal, it spans only two years out of the students' four-year programme. This excludes any opportunity to explore students' developments in the first and fourth years of their programme. Apart from one individual, the students would have all been continuing to their fourth year, by which time they could have extended their friendship group and developed different forms of identification and participation at university. This limitation could be remedied by further research as indicated in the Section 10.5.

10.5 Further areas of research with Associate Students

There are three areas where I have identified further research to be necessary. First of all there is a need to extend the period of data generation to include the first year of HN study and the fourth year of undergraduate study. This would offer a more complete picture of Associate Students' ongoing transition and of their emergent sense of identification in the landscape of practice at university.

The second area relates to the fact that the degree subject, engineering, was not a focus in this study. Students' imagined trajectory saw them 'passing through' university and out into well paid employment in the engineering industry. The dynamics of the engineering industry labour market and role models in the industry may have contributed to this trajectory. Research which investigates Associate Students'

experience of following different degree subjects and entering different labour markets would provide useful comparative data.

The third and final avenue for research is a follow-up study with the same student participants. That study could investigate the students' careers further to graduation and prompt reflection on their experience of college and university.

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Appendix 1 Ethical Approval from University of Stirling

****PLEASE COPY THIS FORM ONTO YOUR OWN COMPUTER PRIOR TO COMPLETION****

RESEARCH PROJECT
REQUEST FOR ETHICAL APPROVAL FORM
For all SoE Staff and Student projects

UNIVERSITY OF STIRLING

SCHOOL OF EDUCATION

Principal Investigator/Student	Julia Fotheringham
Full Title of Project	A CHAT analysis of Associate Students in transition from college to university
Funding Agency/Course	
Proposed Start Date	October 2014
Proposed End Date	May 2016

Is Ethical Approval required?

Yes (my research involves human participants) [X] Please fully complete the form   **No** (there are no human participants in my study) [ ] Students – your supervisor should complete the 'For student applications only' section at the foot of the page.

Date by which ethical approval is required	September 2014

Is this a full or staged application?	**Full** [Yes]	**Staged** (are further applications for this project anticipated at this stage?) [ ]
Is Chair's interim ethical approval sought? (see p. 2)	**Yes** [Yes]	**No** [ ]
Is ethical approval required from another governing body/agency?	**Yes** [Yes] (please provide details and attach any supporting documentation)	**No** [ ]

DECLARATION:

This proposal has been submitted for approval by the School of Education Research Ethics Committee.

I confirm that the Research will be undertaken in accordance with (please select one):

(a) British Educational Research Association's Revised Ethical Guidelines for Educational Research (2011) [X]

(b) Scottish Educational Research Association's Ethical Guidelines (2005) [ ]

(c) Other [ ] (please detail) [ ]

Signed		**Date**	

FOR STUDENT APPLICATIONS ONLY:

Supervisor's decision:	**N/A** [ ]	**Approve** [X]	**Refer to the SoE Research Ethics Committee for consideration** [ ]
Supervisor's signature:	R G Edwards		

Research Project Request for Ethical Approval Form – revised March 2013   Page 1

Appendix 2   Ethics Self-Assessment form from the University

Version 1.2 (April 2012)

Appendix 2 - Self-Assessment Form

To be completed by the Gatekeeper[1] and the researcher.

Project Title :						
	A CHAT analysis of Associate Students in transition from college to university.					
Very brief Description:	Lecturers teaching on Engineering programmes in Edinburgh Napier University and in partner colleges, transition-support staff and Associate-students will be observed participating in teaching, learning and transition support activities in college and in University. Participants will be asked to take photographs of their practice. Photographs will be used for photo-elicitation interviews and for focus groups which will take place once each trimester throughout the study. The data (photos, observation notes, interview/focus group transcripts) will be stored as password protected digital files and will yield insight in to the practice of Associate studentship and student transition from college to university.					
Type	UG	PG	**Research Degree** X	EU / contract research	Research council	KTP / Commercial

People Involved

Name	Role
Julia Fotheringham	Researcher
Alistair Stupart	Project Manager of Associate Student Project
Iain Smith	Head of School of Engineering and the Built Environment

Issue		If 'yes" give brief details.
Children under 16 involved	N	
Interaction with patient groups, disabilities or older potentially vulnerable people	N	(I will be interacting with students, and some of these may have disabilities)
Potential impact on physical health and safety of participants, researchers and the general public	N	
Potential impact on the mental health and safety of participants, researchers and the general public	N	
Data protection, intellectual property and permissions required	N	
Socially or culturally 'controversial' investigations (e.g. pornography, extremist politics)	N	
Privacy issues (e.g. use of social media, ethnographic studies) • See the assumed consent form	N	

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[1] A gatekeeper is an experienced member of staff who is familiar with ethical good practice. This gatekeeper will typically be the student's supervisor or module leader. For members of staff this may be the project's principle investigator, centre or Institute director.

Appendix 3   Consent Form

Associate Students in transition from College to University

The University of Stirling requires that all people who participate in research studies

give their written consent to do so. Please read the following and sign it if you agree with what it says.

I freely and voluntarily consent to be a participant in the research project on the

topic of 'Associate Students in Transition from College to University' which being conducted by Julia Fotheringham who is a postgraduate student at the University of Stirling and a member of staff at xxxxxxxxx.

The broad goal of this research study is to explore practice amongst staff and students in relation to the Associate Student scheme. Initially, I am being asked to give consent to being observed in class and at transition support events taking place at xxxxxxx. Subsequently, I will be invited to participate in focus groups or an interview which will last no longer than an hour, but I will be asked to sign a separate consent form at that time.

I have been informed that photographs may be taken during observed sessions and that photographs containing my image will only be shared with my express permission.

I have been told that all of my contributions will be anonymised and that my name will not be linked with the research materials, and I will not be identified or identifiable in any report subsequently produced by the researcher.

I understand that it may be possible to identify my College or University in project reports, given the novelty and limited scope of the Associate Scheme in Scotland.

I have been informed that my participation in this study is completely voluntary, and I may withdraw from it without negative consequences. However, after data has been anonymised or after publication of results it will not be possible for my data to be removed as it would be untraceable at this point.

I have been given the opportunity to ask questions regarding the project and my questions have been answered to my satisfaction.

I have read and understand the above and consent to participate in this study. My signature is not a waiver of any legal rights. Furthermore, I understand that I will be able to keep a copy of the informed consent form for my records.

Participant's Signature ………………………………………………….. Date

Participant's Name (please print)

I have explained and defined in detail the research project in which the respondent has consented to participate. Furthermore, I will retain one copy of the informed consent form for my records.

Researcher's Signature ………………………………………………..… Date

Appendix 4   Research Information Sheet

Associate Students in transition from College to University

Julia Fotheringham is a part time PhD student at the University of Stirling and a member of staff at *the University*. She would like to invite you to take part in her research project. To help you to decide whether or not accept this invitation, this Research Information Sheet explains what the research is about and what it would involve for you if you decide to take part.

Background and Purpose of Study

As you know, the Associate Student scheme provides a route for students to transition from College HN programmes onto 3rd year of undergraduate degree programmes at University. The Scheme is relatively new, (being introduced in 2013) and it is important that we learn as much as possible about staff and student practice relating to the Associate Student Schemes in Colleges and in Universities.

This is a longitudinal study (taking place over two academic sessions) which is intended to discover more about the impact of the Associate Student project on staff and students and on the role of the University's transition support initiatives in preparing students for undergraduate study at university. The research project will be written up as Julia's PhD thesis and the findings will be relevant for educators and policy makers in Scotland and further afield.

Why have I been invited to participate?

The context for this project is two University engineering degree programmes which are linked with the Associate Student Scheme. The programmes are BSc/BEng Civil Engineering and BEng Energy & Environmental Engineering. You have been invited to participate in the project either because you are on an Associate Student at College articulating on to either of these programmes, or because you a member of staff working with Associate Students on these courses. Your experience and practice is central to my research interest.

What does taking part in the research involve?

There are several types of research activity involved: observation of your practice in class and at transition support events at the University, taking part in focus group discussions or one to one interviews. Further details are as follows:

1. Julia would like to observe your practice in formal teaching contexts (classroom, lecture theatre, lab) in College on four occasions during this academic year (2014/15) and on four occasions in University next year (2015/16). She will take notes of what is happening in class, she may take some photographs and would like to chat informally with you and your colleagues after class or during break times.

2. Several transition support events are planned for Associate Students which will take place at XXXX Campus (*the University*). Julia would like to observe these events, make notes and take some photographs, and spend some time with you (likely to be 45 minutes) as part of that day in a focus group. An audio recording of the focus group will be made which will be transcribed for analysis.

Do I have to take part?

No, taking part is entirely voluntary. If you decide not to take part, Julia will fully respect and honour that decision. Even if you do give your consent to take part in the research and you later change your mind, you should feel free to withdraw your consent at any time, without any fear of any negative consequences.

Are there any risks that I should be aware of or potentially negative consequences that could arise for me if I take part?

No, there no significant risks associated with participating in this study.

What happens to my data if I withdraw from the study?

If you decide to withdraw from the study, you will be given the option to request that the data which specifically relates to you should be destroyed and removed from the research database. In that case, none of your contribution will be included (for example your quotes) when the research is written up. Since this is a longitudinal study, you may decide to end your involvement with the project after the first year, but not to withdraw your consent to use the data generated so far. In that case, data relating to your contribution will remain in the database, but you will not be involved in any further part of the project.

Will my contribution be kept confidential?

All the data from observations including notes and photographs will be anonymised. It should not be possible for anyone to trace a connection between you as an individual and the information which is written up and disseminated. It may however be possible that with a very little deduction your college or university may be identifiable.

If you personally appear in any of the photographs that are generated in the course of the research, your image will only be used with your explicit permission.

What about data security?

All data will be held on password protected hard drives organised in digital databases.

How can I give my consent to take part in the research?

You will be provided with a printed Consent Form. Before you sign the form, please make sure that you have read this Research Information Sheet and that you have asked for further information if anything is still unclear. Julia's contact details are provided below.

What if I give my consent and then I have concerns about the research?

If you are worried about any aspect of this research, please speak to Julia or email her. Contact details are provided below. For more serious concerns, please contact to the relevant research supervisor at the University of Stirling: Dr Kevin Brosnan (k.d.r.brosnan@stir.ac.uk)

How can I get in touch with you for more information or to discuss this project?

Julia would welcome any correspondence with you, so please do contact her by **email J.Fotheringham@xxxxxx** , or by work **phone xxxxxx.**

Appendix 5 Phase 2 Interview questions

(Follow on from mapping exercise)

How have you found the last two trimesters?

What have you been enjoying at University?

What have you found challenging?

What sort of transition support is available for you at University? (Did you take part in the Student led induction event for direct entrants out at xxxx)

What do you do if you need help with your course work?

How do you use Moodle on your modules – any differences between college and university?

Are there differences between the university system and the college system?

What about for assessment?

How has College prepared you for university study?

How well matched are the curricula in college and at university

Do you see differences in the rules at college and university?

How does the relationship between lecturers and students differ between college and university? (Does it make any difference)

How involved do you feel with the University as a whole?

What about the social side of university life – who do you mostly mix with?

Has anything surprised you about University life?

Is there anything that college could have done to make your transition to university easier.

Appendix 6 Full list of codes

APPENDIX 6	Number of Sources	Number of extracts coded at this node	Definition of the code and brief explanation of how it is used and where relevant, brief mention of its link to the thematic framework of the study.
Former Associate Students' (AS) engagement with the community at university			This code is about students' engagement with other people in the community at university. The sub-codes explore who and for what purpose and the degree of accountability that they report. Engagement is a key relation in Wenger's landscapes of practice.
accountability	2	3	To what extent do the former AS express accountability with the various communities at university – how invested are they.
Other	5	10	Other aspects of engagement - such as with the university overall
Purpose of engagement	7	10	For what purposes (such as social or academic) do former AS engagement with the community at university
with academic staff at uni	8	15	AS engagement with their lecturers at university
With AS students	16	36	AS engagement with others in their own AS group
With continuing students	13	24	AS students engagement with continuing students (those who have started at University in first year)
With other staff	0	0	AS students engage with other groups of staff at university (such as support staff, articulation support advisors, learning support)
with other students from college	4	5	AS engagement with other students who are direct entrants from college
Compliance with the rules, the norms in the system			Compliance with, or acknowledgement of the rules and the norms in the ASP college and university systems. The main code relates to Cultural Historical Activity Theory where 'rules' is one of the 6 elements of the activity system.

Aware of the rules	9	16	Aware of the rules of the institution or of the Associate Student Project
Being unaware of the rules	4	5	Participants being unaware of the rules
Other	4	4	Other responses to complying or acknowledging the rules of the systems
Rejecting the rules	5	5	Students or staff acknowledging the rules, but rejecting them
Staff compliance with the rules and norms of the system	10	17	Staff complying with the rules of the ASP system, and with college and university norms
Students' compliance with the rules	11	18	Students' compliance with the rules and the norms of the system
Curriculum alignment	0	0	This code is about the extent to ways in which participants understand how the HND qualification will align with what is required for 3rd year study at university. Curriculum could be seen to be a mediating artefact, a key concept for CHAT and one of the six elements of the activity system, but in the context of the Associate Student Project, it may also be seen as one of the 'rules' of the activity system. This code also includes roles and responsibilities for curriculum alignment which also maps to the element with the same name in CHAT.
Concern about curriculum alignment	13	24	Participants concern about curriculum alignment
Confidence in curriculum alignment	10	19	Participants expressions of confidence in curriculum alignment
Maths alignment	15	43	Alignment of Maths taught in college with requirements at University
Other aspects of curriculum alignment	16	37	Other aspects of curriculum alignment
Responsibility for curriculum alignment	10	19	Responsibility for curriculum alignment between college and university.

Recognising differences between college and university	0	0	Recognising differences in the transition space. This code relates to 'community', being one of the six elements of CHAT. It also relates to the concept of landscapes of practice and concepts associated with boundary and boundary crossing.
College staff see differences between Coll & Uni	11	33	College staff see differences between College & University
Students see differences between college and university	17	87	Students see differences between college and university
Uni staff see differences between college and university	9	46	Uni staff see differences between college and university
Dispositions for learning	1	1	Dispositions for learning include values, attitudes and beliefs about learning and preferences for own learning. This concept is a key idea associated with Bloomer's studentship.
Attitude toward learning	21	117	
Preferences for learning	13	34	Preferences for learning
Recognising extrinsic reward of learning	14	25	Recognising intrinsic reward of learning
Recognising intrinsic reward of learning	11	24	Recognising intrinsic reward of learning
Expectations of achieving outcomes of ASP	0	0	This code reflects the confidence that participants have of Associate Students' ability to graduate with an engineering degree,
College staff's expectations of AS student to achieve	12	29	College staff's expectations of students' ability to achieve and graduate with an engineering degree
Student expectations of self	17	55	Students' expectations of their ability to graduate with an engineering degree

Transition support advisor's expectations for students	2	4	transition support expectations that AS will achieve their desired outcomes at Uni
Uni staff expectations of students achieving desired outcomes	8	33	Uni staff expectations that AS will achieve their desired outcomes at Uni
Factors influencing TS practices	0	0	Factors influencing TS practices
Beliefs	7	14	
Funding	4	5	Funding
Limited resources	5	8	Limited resources in college and uni
Other factors	9	18	Other factors
Recruitment	5	8	
Relationships	19	54	Relationships with staff and students which are enabling or inhibiting of TS practices
Time & timetables	15	23	Finding time for students to engage with TS initiatives
Mediating artefacts	0	0	Mediating artefacts
Feedback	3	7	Feedback from tutors as a mediating artefact
Other	6	7	Other mediating artefacts
Prescribed curriculum	8	10	Prescribed curriculum such as HN units, modules,
Spaces	16	65	Spaces in college, uni and off campus
Teaching	15	29	Teaching as a mediating artefact
Technology	20	56	Mediating artefacts technology (PCs, etc), hardware and software

The (AS) group	6	9	The original AS group as mediating artefact
Transition and other support	14	40	Transition and other support interventions as mediating artefacts
Out of formal degree course practices	0	0	The students' landscape of practice extends beyond the formal practices of the course. These sub-codes capture how associate students refer to these practices and their significance in relation to the course.
Family life	4	6	How family life is treated in relation to the course
Friendships out of uni	3	6	Friendships with people not on the course, at uni or college and their significance to the course
Leisure activities	5	10	Sport, gym and other leisure activities and their relevance to the course
Other practices	0	0	Other categories of practice which are beyond the course.
Paid employment	11	20	How paid employment is referred to in relation to the course
Transport	5	13	
Partnership under the ASP	0	0	Partnership under the terms of the ASP – *I'm not sure this will stay in.*
Funding	6	21	Who recieves what funding when and for what purpose
Implications of ASP for staff	6	15	Implications of ASP for staff
Implications of ASP for students	15	36	
Other	5	12	Other implications
Recruitment of students	15	36	
Understanding the partnership roles	16	31	Understanding the partnership roles.

Quotes of interest	23	56	Interesting quotes
Recognising transition support practices	0	0	Recognising the place of transition support (TS) in the ASP. Transition support is a mediating artefact where students interact with the artefacts in the form of workshops, visits, Moodle resources and others in the environment to make new meanings and knowledge about what lies ahead at University. They engage in these activities in order to achieve the object of the activity system.
College academic staff engage in TS	11	23	College academic staff engage in TS
Other transition support practices	9	13	Other transition support practices
Pastoral or administrative support	7	19	Pastoral support provided for students either at college or at university in the context of the ASP and being recognised as some sort of transition support.
Students' views of TS	14	49	Students perspectives of TS and its contribution
TS advisors' view of TS	3	15	TS advisor's view of provision and its contribution
Uni academic staff engage in TS	14	65	Uni academic staff engage in Transition Support
Roles and responsibilities	0	0	This code captures how staff and students talk about their respective roles and the roles of the other actors in the ASP system. 'Roles and responsibilities' is one of the six elements of CHAT.
Acknowledging differences between similar roles at coll and at uni	6	20	Acknowledging differences between similar roles at coll and at uni
Preparing students for study at uni	18	46	Who does the community think is responsible for preparing students for study at uni.
Responsibility for ASP admin	6	8	Responsibility for ASP admin

Teaching and support roles at college	17	36	Roles and responsibilities for teaching and support roles at college
Teaching and support roles at university	15	49	Roles and responsibilities for teaching and support roles at university
Students act on learning experiences			Students act on their learning experiences to make their own curriculum as Associate Students. This code is at the heart of Bloomer's concept of studentship practices
Attending lectures, seminars, labs	15	33	Acting upon learning experiences by attending lectures, seminars or labs
Being stressed	3	3	
Having fun	3	5	
Other practices	13	23	Acting upon learning experiences with other practices
Revising	8	13	Acting upon learning experiences by revising either on own or with peers
Seeking help	11	27	Acting upon learning experiences by seeking help from staff or fellow students
Self direction	16	22	Acting upon learning experiences through self direction
Studying at home	10	21	Acting upon learning experiences by studying at home
Studying in JKCC or Library	9	17	Acting upon learning experiences studying in JKCC on course work or exam revision
Submitting work and seeking feedback	9	12	Acting upon learning experiences by seeking feedback from academic staff
Working things out	16	23	Acting upon learning experiences by working things out either with peers or on their own (toughing it out with the guys)
Working with supporting peers	9	16	Acting upon learning experiences by supporting peers

Appendix 7 Summary of data generation during Phase 1 (2014/15) and Phase 2 (2015/16)

Phase of study	College	HN/Degree	Method	Participant
1	1	HND1	Focus Group	Associate Students
1	1	HND1	Interview	College Manager
1	1	HND1	Informal interview and observation	Lecturer and Ass Student
1	1	HND1	Informal interview and observation	Lecturer and Ass Student
1	2	HND1	Focus Group	Associate Students
1	2	HND1	Interview	College Manager
1	2	HND1	Informal interview and observation	College Lecturer
1	3	HND1	Int	College Manager
1	3	HND1	Inf int	Ass Students
1	3	HND1	Observation	College Lecturer and Ass Students
1	3	HND1	Observation	Associate Students
1	4	HND2	Focus Group	Associate Students
1	4	HND2	Focus Group	Associate Students
1	4	HND2	Interview	College Manager/Lecturer
1	University	HND1 & 2	Int	University transition support co-ordinator
1	University	HND1 & 2	Observation of induction for Associate Students	Induction all direct entrants

Phase of study	Former college	Degree	Method	
2	1	BEng1	Interview	Direct entrant
2	2	BEng1	Interview	Direct entrant
2	1	BEng1	Interview	Direct entrant
2	1	BEng1	Interview	Direct entrant
2	3	BEng1	Interview	Direct entrant
2	3	BEng1	Interview	Direct entrant
2	3	BEng1	Interview	Direct entrant
2	N/A	BEng1	Interview	University Lecturer
2	N/A	BEng1/2	Interview	University Lecturer (Maths)
2	3	BEng1	Informal Interview	Former Coll 3 Group of Direct Entrants
2	1	BEng1	Informal Interview	Former Coll 1 Group of Direct Entrants
2	N/A	BEng1	Observation	Whole BENg1 class
2	N/A	BEng1	Observation	Whole BEng1 class
2	4	BEng2	Focus Group	Direct entrants
2	N/A	BEng2	Interview	University Lecturer
2	N/A	BEng2	Interview	University Lecturer
2	N/A	BEng2	Observation	University Lecturer Induction Lecture for all Direct Entrants
Both	N/A	N/A	Interview	University Transition Support Co-ordinator
Both	N/A	N/A	Interview	University Transition Support Co-ordinator

Appendix 8 Transition Maths topics

MATHEMATICS GROUP

TRANSITION MATHS TOPICS

October 2014

As a result of changes to the HNC/HND maths modules, made by the SQA, and changes to the maths modules at Edinburgh Napier University, there will be some gaps in knowledge for College students. These depend on whether the College students have taken just Maths 1 and Maths 2 at College, or whether they have taken some (or all) of the new SQA modules; Maths 3, Maths 4 and Maths 5. The omissions are given below:

Direct Entry Year 2 SQA Maths 2.

- Calculus - product rule, quotient rule, parametric and implicit differentiation and inverse trig functions. Integration by substitution, integration by parts, integration using partial fractions.
- ODEs - simple integrable 1st and 2nd order, variable separable, integrating factor.
- Probability and the Normal Distribution.
- Series - Binomial, MacLaurin and Taylor.
- Matrices - add/subtract and multiply, inverse of a 2x2, determinants and Cramer's rule, applications.
- MathCad
- Complex algebra - Euler and de Moivre

Direct Entry Year 2 SQA Maths 3.

- ODEs - simple integrable 1st and 2nd order, variable separable, integrating factor.
- Probability and the Normal Distribution.
- Series - Binomial, MacLaurin and Taylor.
- Matrices - add/subtract and multiply, inverse of a 2x2, determinants and Cramer's rule, applications.
- MathCad
- Complex algebra - Euler and de Moivre

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Appendix 9   Titles and topics in Maths Support Booklets provided by the University

Foundation Maths Part 1

* Arithmetic

* Basic Algebra

* Indices and Logarithms

Foundation Maths Part 2

* Linear Functions

* Quadratic Functions

* Exponential Function and Logarithms

Trigonometry

Calculus

* Differentiating powers and functions

* Differentiation rules

* Integrating powers and functions

* Applications

Further Calculus Part 1

* Basic differentiation revision including hyperbolic and inverse functions

* Series

* Implicit, parametric and logarithmic differentiation

* Partial differentiation

Further Calculus Part 2

* Integration including substitution, partial fractions and by parts

* First order ODEs including integrable, separable and integrating factor

* Second order ODES using CF – PI method