Illuminating the interactions between ideologies, academic subjectivities, and practices in a hybrid graded/gradeless learning environment: An ethnographic study deploying the practice lens

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Abstract

This thesis examines the relationships between educational ideologies, the conceptualisation and enactment of practices, the factors and structures conditioning practices and academic subjectivities in nine course-sites within a hybrid graded/gradeless education (HGLE) context at a large research-intensive public university in Singapore. The study adopts a practice-based ethnographic approach and draws rich, varied data from participant observations, dialogic interviews, focus group discussions, artistic representations, and artefacts.

Social practice theory (SPT) is applied within the research, composed of Schatzki's site ontology and Trowler's analytical construct of Teaching and Learning Regimes (TLR). The study investigates how the site-based social practices are constituted and conditioned in actuality through Sedlačko's four-part methodology.

The study has established six overarching findings within a HGLE context: 1) the partial approach to gradelessness did not demand a significant change in the choice of practices but necessitated a change in conceptualisation and enactment of practices; 2) workgroup communities, structures and interactions impact the conceptualisation and enactment of practices but this impact is moderated by an individual's agentic and ideological positionings; 3) individual agency and ideological positionings play a key role in how practices are enacted; 4) practices are enmeshed with each course-site's practice architectures, and thus 'sayings, doings, and relatings' of a practice draw on the cultural-discursive, material, and social arrangements that exist

within or brought into the course site to make a practice possible; 5) practices are interconnected and inter-related, and so learning in and across practices occurs; 6) no definitive validated approach to effective practice exist and are generally determined by significant moments of TLR that operate within specific contexts.

A model mapping tool is developed to capture the ecologies of practices—the intended, experienced, and enacted practices—alongside the significant TLR moments. The model is aimed at informing and supporting reflexive teaching and academic development.

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This thesis results entirely from my own work and has not been offered previously for any other degree or diploma.

I confirm that the word-length of this thesis conforms to the permitted maximum for this programme.

Signature .....

Chapter 1: Introduction to the study

1.1 Study context, aims and rationale

This doctoral research is conducted in a large research-intensive public university situated in Singapore. The university introduced a hybrid form of gradeless system for its first-year students in 2014, in response to the calls for de-emphasising grades from the Ministry of Education (MOE) that demanded a shift from learning for grades towards learning for mastery in its schools and universities. This system is only partially gradeless, as grades are still awarded for every completed course. But what makes it gradeless is that students have the freedom to make it gradeless for courses of their choice, i.e., students decide whether to accept the grade or replace the grade with no grade—a pass or fail. A key feature of this system is that it employs student-specific retroactive 'gradelessness' approach as students make their choice, turning the learning environment into a 'hybrid graded/gradeless education' (HGLE) site, and referred to as the 'gradeless environment' in this study. This unique HGLE system is both pedagogically- and ideologically- motivated to provide first-year students 'a formative year', but at the same time maintain university's academic standards. Further details of the 'hybrid graded/gradeless education' system and 'gradeless environment' are included in the research contextualisation chapter.

The study's rationale addresses the issues raised by previous research by McMorran and Ragupathi (2020) that focused primarily on understanding the perceptions of academics and students on the gradeless system to identify the system's strengths and weaknesses, but not on the factors that shape

their perceptions, their beliefs, their practices, and the elements that form the basis for conditioning academic subjectivities. For the policy change to be impactful, McMorran & Ragupathi (2020) argued that academics and students need to reflect on their epistemological stances. Furthermore, if the benefits of the gradeless system are to be maximised, they concluded that there is a need to reflect on and discuss the underlying beliefs about grades and gradeless learning, the purposes of and the nature of teaching and learning itself, as well as other unsustainable or untoward practices and policies of the university community. Likewise, another study by Anderson (2018: 21) established that “grading policies and practices are grossly under-researched fields” and called for “more empirical evidence and thoughtful dialogue”. This research study fills these gaps.

The setting for this study resides in the university’s nexus of situated human practices and material arrangements. It uses the concept of site ontology, which Schatzki (2005: 467) describes as being “tied to a context (site)” and is “central to analysing and explaining social phenomena”. Within such sites, social practices are seen as inherent property of the entire social site, and not confined to that of individuals. Moreover, as human practices are interdependent and interrelated, the study also embraces what Kemmis and Mutton (2012: 15) refer to as “ecologies of practices” to consider the interconnected mutually-necessary activities that sustain or change the practices within the context. The research, therefore, focuses on examining the nature and enactment of practice-based-knowing (PBK) by academic and student practitioners, the interconnected practices that condition and shape

other practices, the change in the epistemological stance and the development of their academic identities as teachers and learners. The locus of the study or 'the site' referred to here is within a specific context of the university's HGLE system that is situated in an ingrained grade-centric educational culture following years of conditioning in grade-centred schools (Heng, 2015; McMorran & Ragupathi, 2020; Ministry of Education, 2018).

1.2 Research questions

The social practices of interest to this study concern those related to teaching, learning and assessment performed by academic and student social group within the university context. Accordingly, the research study investigates the following research questions:

1. In what ways do educational beliefs and ideologies influence the conceptualisation and enactment of teaching, learning and assessment practices in a gradeless environment?
2. What are the conditioning factors and structures that develop and/or reinforce academic subjectivities of its community?
3. To what extent and in what ways does social practice theory illuminate enactment of practices and conditioning towards grades and gradelessness?

These research questions require interrogation and reflection upon "how the people involved in order-making come to be or, indeed, put themselves in the position to be able to participate as competent players" (Alkemeyer & Buschmann, 2017: 8). Theorising of pedagogy and education could benefit

from a practice turn (Schatzki, 2001), that is, a practice-based approach to understanding and developing education which shifts the focus from practitioners to practices (Nicolini, 2012). This approach to taking on both the ontological and epistemological view underpins the study's adopted method/ological framework of social practice theory, which is inherently an embodiment of ideas/knowledge and the practitioners' engagement with a range of interconnected practices, and discourses that unfold in the day-to-day realities of practices within a given practice landscape (Grootenboer et al., 2017). As Kemmis et al., (2014: 218) posit the ontological view directs the attention on to seeing "the social world as it appears in all its materiality and actuality, not just in terms of what practitioners' know, i.e., the epistemological view".

Essentially, PBK can be conceptualised as the ability for academic and student practitioners to participate as competent players in the multiple practices within the HGLE environment at the university, but these practices are also conditioned by the material and discursive dimensions. They are thus engaged in a recurrent social process negotiating their competence and performance over an extended period, which are also further conditioned by "proto-practice reservoirs to constitute practices" (Trowler, 2020: 158) that are "embodied, agential, and socially-historically constructed" (Higgs, 2012: 3). By participating in the educational practices, academic and student practitioners are not only developing, but also transforming their own professional identities in the process. This thesis, therefore, also seeks out to identify the

conditioning factors that influence their developmental trajectory as teachers and learners.

1.3 Research methodologies and methods

To study situated practices, Trowler (2014: 19) advocates a practice-focused ethnography, which he describes as a

> *"fine-grained, usually immersive, multi-method research into particular social activities aimed at developing 'thick description' (Geertz, 1983) of the structured behavioural dispositions, social relations, sets of discourses, ways of thinking, procedures, emotional responses and motivations in play. Beyond that descriptive agenda the approach seeks to uncover broader reservoirs of ways of thinking and practising which are being differently instantiated locally".*

The thickness described here is situated "within the distributed process of epistemic work that involves multiple methods and ways of being in the world" (Niewöhner & Beck, 2017: 74). This kind of ethnographic research therefore requires a systematic yet flexible data collection strategy (Delamont, 2016).

Trowler (2014: 27) asserts that data collection methods chosen for a practice-focused ethnography would need to "access the multiple dimensions of social practice: saying, doing, relating, feeling, valuing". The multi-method approach to data collection for this study, thus comprises:

(a) participant observations of teaching, learning and assessment practice, which draws on Nicolini's (2017: 20) call for the researcher's capacity

"to describe important features of the world" that academic and student practitioners inhabit, and are "routinely made and re-made in practice, using tools, discourse, and bodies",

(b) dialogic interviews, which employs Knight & Saunders's (1999) principles of interviewing, to construct explicit accounts of academic practitioner's experience and tacit knowledge,

(c) focus group discussions to uncover moments of practices, actions, and shared experiences of student practitioners,

(d) fictional vignettes to analyse and represent practice (Nicolini, 2009: 209),

(e) participant personal artefacts to explain their practice and its effectiveness or otherwise, and

(f) researcher reflexivity which draws on Sedlačko's (2017: 56) call for the researcher to create a re-constructed, non-identical projective understanding of representation. This process attends to the relationships and associations through which the researcher is woven into the situational assemblage and its effects on the rest of the assemblage by taking her own position within the environment as well as her cultural or personal background.

The analysis of research data collected employs Sedlačko's (2017: 57) four principles: "focus on what people actually do (and the materials they 'converse' with); focus on everydayness; focus on the work of assembling, structuring, and ordering; and reflexivity". To place participants' voices at the

centre of the research, their individual artefacts and vignettes are utilised to integrate the presentation, analysis, and discussion of the data.

1.4 Theoretical foundations

To view this in operation, this study combines social practice theory (SPT) and the new modified teaching and learning regimes (TLR) model from Trowler (2020) as the two approaches, particularly since the underpinning theory behind TLRs is in itself the social practice perspective.

A social practice approach brings together a specific set of theoretical and ontological positions such as subjectivities, observable actual doings, interactions, nexus of practices (Sedlačko, 2017). It also shifts the focus away from “individual actions, behaviours, and choices”, and instead places emphasis on “situated practices, on recurrent behaviours in which groups of people regularly engage” (Trowler 2020: 28). Importantly, this theory emphasises that individual identities and subjectivities are critical to be considered within its social context and the social practices. That is, practices are to be examined locally with attention given to “their bundled and nested character, seeing workgroups as situated within institutional practice architectures and national ideological policy frameworks” (Trowler 2020: 169), which is pertinent to this study.

As Nicolini (2017) claims the real benefit is not in actual doings but in understanding the social phenomena in terms of associated practices, and in how it governs methodological options and methods of inquiry. The ontological positions that Nicolini puts forth and the strategies offered to

interrogate practice favour and support the study's research design. The strategies include investigation and analysis that focus on actual doings; on sites and situatedness of practice; on constellation of practices; on everydayness; and on reflexivity. The use of social theory simplifies and provides illuminative ways into describing the process, considers individual backstories that provide explanation into the enactment of practices (Trowler, 2020) while also identifying how stability of practices (Ashwin, 2009) are achieved. Thus, a social practice approach is valuable in understanding and appreciating the context, and to make meaning of the phenomena and processes that occur in specific ways within the site. This practice sensibility will provide the necessary "filtering and sense-making" to produce "empirically grounded accounts foregrounding sociomaterial practice" (Sedlačko, 2017: 57).

Furthermore, an important part of sociological and anthropological study of organisations is its focus on social phenomena "from the very micro (what people say and do); to the meso (routines); to the macro (institutions)" assert Miettinen, Samra-Fredericks, and Yanow (2009: 1310). This angle of a practice-focused research that looks at micro-meso-macro levels is incredibly important in illuminating the nexus of past and current practices as well as the institutional culture to offer fine-grained ways to understanding enhancement opportunities and change initiatives that may be possible.

1.5 Significance and original contribution

The recent calls from universities and educators globally argue for a shift from the prevailing neoliberal ideology that supports sifting, sorting, and selecting towards a truly democratic, public university ideology. This study is a step towards testing and understanding how gradeless education can be seen as an approach to understand the discrimination between the two ideologies. The study contributes to knowledge and practice in the following areas:

- New insights into the role of subjectivities, practices and ideologies in positioning university academics and students in practice within a gradeless environment.
- Develop illuminative ways of understanding processes that occur in these contexts to help academic and student practitioners operate in a more considered and better-informed way in how they approach teaching, learning, and assessment. Though, not generalisable, but offers illumination and new knowledge of value in the broader context to the academic community and specifically to institutions that may plan to implement a gradeless system.
- Discover teaching and development practices that play a role in a gradeless environment. This will lead to contributions to the field of academic development in providing opportunities that are necessary to change the culture of assessment and grading in a grade-centric community.
- Discern specific and significant TLR moments that constitute to “not-so well-understood” institutional cultures of the university.

Chapter 2: Research contextualisation

This chapter sets the scene for the upcoming chapters on engaging with literature and data analysis by contextualising the research setting. It provides the context for the research with a brief overview of the national cultural context on educational competitiveness and the nation's efforts to de-emphasise grades. It then moves on to describe the University ('the site') where the study is conducted and situates the institution's position, the teaching and learning context within which it operates. Finally, it also goes down another level within the institution to contextualise the sites of the research. As such, the chapter offers a discussion of the environment in which gradeless education occurs with a brief review on the models of gradeless education and describes where on the spectrum does the gradeless education system practiced at the study site resides and the specific features of the gradeless courses examined at the site of study. Consequently, this research may have wider reach than would be implied by the specific context of the institution alone and have relevance to other institutions supporting the ideal of a public, democratic university.

2.1 National context: Educational achievement and competitiveness

Tao and Hong (2000; 2014) argue that in an Asian society (which Singapore is part of), students see academic achievement more as a social endeavour than as an individual endeavour as they feel obliged to demonstrate their achievement and gain social approval. They further claim that the effect of academic achievement on educational competitiveness is influenced by cultural values gained from various sources such as parents, school system,

university education system, as well as employers (Tao & Hong, 2014). This, they say, motivates students in these countries to go the extra mile and frequently put in hard work to ensure high performance outcomes in academic settings resulting in high anxiety. The goal to obtain high grades also undermines their engagement with educational activities that are more likely to result in better learning.

Learning and high grades are two goals that go hand-in-hand and are seen to have positive correlations between them (Yamamoto & Holloway, 2010; Tao & Hong, 2014). Even in Singapore, which is highly regarded as a global leader in education (Barber & Mourshed, 2007; Hallinger, 2010), the emphasis on competitive grades still exists. In fact, McMorran, Luo, and Ragupathi (2017) highlight the grade-centric thinking among students and academics, and the Singapore society in general, and how competition is still apparent and ingrained in the Singapore culture. Indeed, the nation's Education Minister argued that grade-focused education has been especially prevalent in this and other Asian nations, in their attempts to jump from third- to first-world status. Along its way to gain a first-world status, Singapore has developed a "narrow focus on grades and exams" which has led to "a spiralling paper chase and expanding tuition industry" declared the minister (Heng, 2015: 3). While a focus on grades can sometimes be a strength, he continued, it "can be over-done and become a weakness, as we leave little time to develop other attributes that are necessary for success and fulfilment". Like scholars concerned with an overemphasis on grades, the minister outlined the

pervasiveness of the problem and recognised the possible negative impacts it can have on the country's future (Demirel 2009; Kohn 2011).

> *"Employers choose not to invest in employees, relying wholly on academic qualifications to determine who gets the job. Educators drill and test and see their duty as helping students obtain the best exam grades possible. Parents obsess over grades and spend ever-increasing amounts of resources to give their child an edge over other children. And students chase the next point and spend most of their time going for more [extra-curricular] tuition and enrichment in very narrow areas. Stress levels in society climb, and the system churns out students who excel in exams but are ill-equipped to take on jobs of the future, nor find fulfilment in what they do"* (Heng, 2015: 3).

Singapore is known for the government-led transformation of its society, and such transformations are no different within the field of education. The country made serious attempts to transform its higher education over the last two decades by employing "strategic and systematic" policy measures to achieve its strategic goals (Mok, 2015: 8). Indeed, it boasts of the "high value placed on education as well as a strong cultural belief in the central role of educational attainment for social mobility further strengthen societal receptivity to educational reform" (Hallinger, 2010: 413).

This perceived excessive stress on competitiveness and grades led to a nation-wide reform to "go beyond learning for grades to learning for mastery" in its schools and universities (Heng, 2015: 5). For the nation to reverse the

trend, Heng called for a major transformation of the education system from “a race amongst our children” toward a “holistic education” that builds every student’s “capacity to learn”. He added, in this reformed system “students flourish through a range of academic and co-curricular activities, take different pathways to success and grow up to be well-rounded” (Heng, 2015: 3–4). To take this path forward, he sought the collective will and action by employers, teachers, parents and students, and society at large. This proposed shift also aligned with the recent calls from educators globally that argue for a shift from the prevailing neoliberal university ideology towards a truly democratic, public university ideology.

2.2 Institutional context: Towards gradeless education

This research was conducted in a single public-funded university. This section is not meant to provide a detailed description of the institution. However, some relevant background is necessary to enable the reader to understand the context of the study.

The institution is a research-intensive, flagship university in Singapore with over a 100-year history. As a state public-funded university, the university is highly responsive to the country’s needs and works closely with government and industry to meet national and industry demands. It provides both formal and informal education that extends from the classroom environment to a larger institutional culture outside the classroom that includes the residential living-learning opportunities. The university has a conventional operational

structure, arranged into faculties/schools, subdivided into departments based on subject areas supported by a range of centralised services.

Most faculties/schools follow a modular system except for professional schools (e.g., Medicine, Dentistry, Law). This modular system combines the rigour and depth of the British university system with the flexibility and breadth of the American university system. Moreover, it takes on both the Asian and international identity that enables it to retain a global outlook while drawing from and reflecting upon the character and resources of the region. Programme requirements provide a structure for students to take the required courses for specialisation. However, students have the freedom to choose their own courses, progress at their own pace, and even accelerate their completion when they study a greater number of courses in a semester. Each course typically has 13 weeks of instruction, and the weekly classes are in the form of lectures, seminars, tutorials and/or laboratories. Different modes of assessment (e.g., essays, tutorial presentations, laboratory reports, projects, class participation, mid-term tests, final examinations) are used to monitor academic performance. Under this system, students receive letter grades, and their academic performance is measured by grade points on a 5-point scale, the cumulative grade point average (GPA). A grade distribution is applied flexibly at the discretion of faculty members.

In 2014, to fit the broader national education agenda of learning beyond grades, the university introduced a policy that allowed for a spectrum of gradelessness into its grading practice to facilitate a transformation in students' mindsets towards grades and learning. This policy endeavours to

address century's worth of scholarly concern about the overemphasis on grades. Moreover, it was an attempt to undo years of examination-focused learning, high-pressure that its student body has successfully navigated to gain admission to the university. In essence, this university environment ingrained in a grade-centric educational culture (Heng, 2015; McMorran & Ragupathi, 2020; Ministry of Education, 2018) yet one that adopted gradelessness makes a fertile ground for researching and studying the nexus of practices—teaching, learning, assessment, and grading practices; and ways in which gradelessness shapes academic identities and subjectivities of academics and learners. This study is also a step towards understanding gradelessness as an approach to comprehend the differences amongst the different ideologies of individuals and how they condition the different aspects of their practices. The next section examines the various models of gradeless education worldwide by positioning it within the scholarship on assessment and grades in higher education and finally describes the gradeless education system implemented at the research site.

2.3 The hybrid graded/gradeless education context at the study site

This section is not aimed at providing a comprehensive overview of gradeless education systems and practices around the world. But what it offers is a broad spectrum of gradelessness and narrows it down to a working definition that covers the HGLE practice used to provide a greater context to the study site.

The grading practice in higher education is largely driven by assessment ideologies that academic practitioners hold. However, in the recent years, educators and institutions in higher education have reimagined the role of grading in assessment and a gradual shift from ‘grades’ to ‘going gradeless’ have surfaced. Gradeless systems have been implemented in a small number of universities around the world (for an overview, see McMorran, Ragupathi, and Luo, 2017). The reasons for going gradeless are varied among higher education institutions. Their rationale ranges from wanting to help students adjust to the demands of higher education or being better prepared to become lifelong learners (McMorran & Ragupathi, 2020) to improving the well-being of students by reducing stress and anxiety (Bloodgood et al., 2009). This concept of gradeless education is sometimes contended as one important shift towards a democratic future in higher education promoting the notion of public university (Tannock, 2017) that favours the ideology of social reconstructionism and encourages agency, dialogue, self-actualisation, and social justice in students (Stommel, 2017).

Gradeless education typically refers to a grading practice in which there are no assignment of letter or numerical grades for student work (McMorran, Ragupathi, & Luo, 2017). Amongst those which have, it is common to find it being applicable only to students in the first year/semester of undergraduate programs or extended only to students in certain courses such as medicine or law (McMorran, Ragupathi, & Luo, 2017). The spectrum along which gradeless education policies and practices are adopted vary and different models exist within higher education institutions (see Table 2.1).

Models	Description	Variations to implementation	Underpinning rationale
Fully graded policy	Grades are provided for every course taken by students, and constitute the cumulative GPA		Sorting and sifting people
Pass/fail grading policy	A simple pass, fail (or distinction) grade is used as opposed to letter or number grades to courses taken by students of undergraduate programs	• Limited to first-year, non-major, elective courses, or students in specific programs • Limited to specific number of courses per semester or during a student's undergraduate career	Ideologically-motivated (rejection of sorting and sifting people; elimination of competitive pressure)
Grade exclusion policy	Grades are excluded from the cumulative GPA	• Limited to first-year students only • Limited to specific number of courses per semester	Pedagogically-motivated ('first year is a formative year')
Grade elimination policy	Failing grades are eliminated from appearing on student transcripts	• Limited to a specific number of courses, say 3 courses, during a student's undergraduate career	Ideologically-motivated (maintaining university's performance standards)
Entirely gradeless policy	Entirely gradeless, only narrative evaluations are used as opposed to letter or number grades	• Narrative evaluations as opposed to letter grades • Grades may be made available upon request	Ideologically-motivated (rejection of sorting and sifting people)
Hybrid graded/gradeless education policy	Students are given the freedom and power to drop the grades for courses of their choice. Applicable only to first-year students for a specific number of courses	• Practised in the institution where this study takes place	Pedagogically-motivated ('first year is a formative year'); ideologically-motivated (university's academic standards are maintained by not compromising difficulty of modules/ assessments)

Table 2.1 A summary of the spectrum of grading policies in higher education

The most popular models range from the simple pass/fail grading to no grades (entirely gradeless). In most UK universities, first year grades do not count (grade exclusion) while US universities adopt different variations. Not all higher education institutions, however, have implemented an entirely gradeless system. Amongst those which have, it is common to find it being applicable only to specific groups of students or certain courses and records a pass or fail for assessed student work. In these institutions, grades are still highly relevant as they are used in those semesters, years, or courses, where they are still issued. Rarer still are the institutions which go entirely gradeless and eschew letter grades for narrative (or descriptive) evaluations. In these colleges, assessments are processes through which academics continually monitor their own teaching and student learning (Akyea & Sandoval, 2004). In between these two dominant models—pass/fail and entirely gradeless—there exists two other alternative models, the grade exclusion, and the grade elimination models.

2.4 Research setting

The HGLE system at this study site differs from most pass/fail systems practiced elsewhere at other higher education institutions. In this system, grades are still centrepiece to assessment, as students receive a letter grade for every completed course at the end of the semester, but students are empowered to accept or drop the grade. Dropping the grade will impact students' GPA while the course still appears on their transcript. Thus, this system is a unique case of retroactive application of gradelessness after students are awarded a grade.

This research gathers empirical data about practices occurring in a HGLE environment within a large research-intensive public university in Singapore. The cases selected for the study focused primarily on gradeless courses (see Table 2.2). They include courses that were offered either with a pre-determined pass/fail grading option (hereafter, referred to as 'entirely gradeless', EGL) or with a retroactive student-specific grading option (hereafter, referred to as 'hybrid gradeless', HGL). Table 2.2 provides a comparison of features between the two grading options.

	Mandatory	Student-specific	Retroactive pass/fail	Graded	Impact on GPA	Other features
Entirely gradeless (Ideologically motivated)	✓	×	×	×	×	University offers a very small number of pre-determined pass/fail modules.
Hybrid gradeless (Both pedagogically and ideologically motivated)	×	✓	✓	✓	×	Senior students (not eligible for gradeless option) are enrolled in the same module alongside first year students who can opt for the gradeless option. Academics are unaware of whether students will eventually accept or drop the grade in their course.

Table 2.2 Comparison of features between 'entirely gradeless' and 'hybrid gradeless' courses at the study site

Even though a comparative analysis of these two options were not performed, they were useful in the interpretation of data with regards to grading practices and the change in teaching, learning and assessment practices.

2.5 Why is a study in this context important?

The ingrained practices of grading resulting from the long years of formal schooling inhibits substantive changes in grading policies and practices within higher educational institutions (Anderson, 2018). Moreover, outside of the university, grades are still an important part of the conversation with employers and parents within Asian societies. There is a strong association of grades with educational achievements for these societies, where failure is never really an option (Yamamoto & Holloway, 2010). These factors are likely to play a role in influencing how students and academics view assessments and grades. Therefore, this study's focus on the sociocultural context to understand the values upon which assessment and grades are considered within higher education, and in particular, within the Asian and Singaporean education system is important.

Though perception studies have been conducted on the impact of this hybrid gradeless education policy implementation (McMorran et al., 2017; McMorran & Ragupathi, 2020), an analysis into how it has shaped the assessment beliefs and practices, nor how teaching and learning practices are developed have not been studied. This study is especially important given that there are cases of universities reversing their gradeless policies from a gradeless system back to one with grades (e.g., UC Santa Cruz 2014).

Chapter 3: Engaging with the literature

In this chapter, I start with a critical examination of practice and practice architectures, as well as social practice theory, and in particular, SPT for university contexts as envisaged by Trowler (2020: 162), both of which form my main theoretical framework. SPT is the lens through which I visualise and understand the social reality of the university, unpack how practices are conditioned by various factors—materiality, relationality, agency, and structure— within the higher education practice context. Thereafter, I engage with three other bodies of literature that are closely related to my research aims. The first envisages educational ideologies of individuals in the university context and how their ideologies condition their practices, specifically the teaching, learning, assessment, and grading practices. The second focuses on broader societal frame of assessment practices and ideologies while the third focuses on practices of teaching and learning in higher education. Whilst each of these areas is discussed sequentially it is important to stress that the study's strength rests on the entwined and interconnected nature of these concepts.

3.1 Theory of practice and practice architecture

I take a practice-based approach (Schatzki, 2001) that shifts my focus from practitioners to practices (Nicolini, 2012) to theorise pedagogy and education. A unified definition of practice is uncommon (Schatzki, 2001; Nicolini, 2012) even though practice theorists generally claim that the study of social life should begin with an analysis into social practices (Spaargaren, Weenink & Lamers, 2016: 7). Therefore, the view of practice that I adopt in this study

draws on recent advances in practice theory by Schatzki, 2005; Kemmis, 2009; Gherardi, 2012; Hui, Schatzki & Shove, 2017, and as applied to university settings.

This study examines the variations in students' approaches to learning and assessment and the different ways in which academic practitioners experience their teaching within the classroom settings where gradeless practices are employed. This is done by examining both the "organised arrays of action" by the workgroup—the academic and student practitioners—and unpacking their evolving "character of action and sequences of performances" (Hui, Schatzki & Shove, 2017: 2). I further observe how this workgroup's practices link to form organised constellation of activities when they work together within the site. It investigates how they relate to each other's "fairly consistent patterns" to develop a "mutually constructed (but circumscribed) reality" while interacting with the material elements of the site that co-constitute the practice (Trowler, 2020: 29). For this, I draw on Schatzki's (2005) concept of site ontologies, the consistent patterns and practices located within this particular site and time (Kemmis et al., 2014: 33), what is unique to the site and how they are supported by a specific set of arrangements (or the practice architectures). Taking this approach provides me with a means to understanding practice as being constituted locally, i.e., discovering the local nuances of enacted practices as the context-specific and time-specific knowing, saying, doing, and relating are uncovered (Mockler, 2017; Trowler, 2020).

At the same time to unravel the issues of how practices are transmitted and reproduced and how they are accomplished in situated praxis, I use the theories of subjectivation to complement the study. What this means is that not only should education and educational practice be seen in terms of knowledge, but what happens through embodied individuals (e.g., academics, students) who live and work in sites need to be given considerable importance. The emphasis, however, does not limit itself to the "actions, behaviours, and choices" of individuals in the site, but pays greater attention to their "situated practices", the recurrent behaviours in which students and academics regularly engage and on the "structured dispositions of the way practices are conditioned on the ground" (Trowler 2020: 28–29). The complex constellation of practices constituted by the practices of teaching, learning, assessment, and grading within this study site relate to and connect with one another to form a nexus of practices (Hui, Schatzki & Shove, 2017). This nexus forms the basic domain of this study and is central to the understanding of organisational and social phenomena (Giddens, 1984: 2). Likewise, this theory

> *"contributes a new way of understanding the doubleness of educational practices, and the particular cultural-discursive, material-economic and social-political arrangements that hold particular educational practices in place – that is, education as it happens in actual local sites"* (Kemmis et al., 2014: 37).

Besides, this practice context is crucial to establishing the criticality of the workgroup's individual subjectivities through their "meaning making, identity

forming and order producing activities" (Nicolini, 2012: 7) within its social context. These are primarily explored within the current study context in the research question: what are the conditioning factors and structures that develop and/or reinforce academic subjectivities of its community?

Moreover, using this theory of practice architecture identifies what practices exist, how those practices are shaped and mediated, and what is the relationship between those practices. I use Mahon et al.'s (2017) two-pronged approach that begins with interrogation into current practices to create new possibilities for practice and then challenge the unsustainable or untoward practices within a site. This approach provides three concurrent lenses for an investigation into practices: (1) a theoretical lens for comprehending educational practice; (2) an analytical lens for illuminating conditions in which practices are enabled and/or constrained; and (3) a transformational lens for changing untoward educational practices.

Thus, the use of social theory provides an explanation into the enactment of practices and meaning making of the phenomena and processes (Trowler, 2020), but also throws light into how the practices are conditioned and steadied (Ashwin, 2009). In this regard, Trowler's theory of social practice offers more room for agency in the manipulation of both material and teleo-affective influences on the enactment of practices and the potentialities that these present.

3.2 Trowler's social practice theory for higher education contexts

The use of SPT in education is not new, but relatively recent (Grootenboer et al., 2017). However, its application within the university context has been sparse, even though the value of applying SPT to higher education is clearly apparent (Trowler, 2020). Thus, in this research, I focus on the socially produced and reproduced meanings and practices of student and academic practitioners within the material and structural conditions of a university setting. This is achieved by examining both theoretical and method/ological agendas that shifts the understanding from the classic cognitive level to an applied level and how these make an impact on their lives when working in the site.

The three key characteristics that Trowler applies to university contexts include: proto-practice reservoirs, social practices, and teaching and learning regimes (TLRs). The proto-practice reservoirs refer to the source from which the social practices emerge and include ideologies, beliefs, values, structures, meanings, theories, and discourses (and is closely related to answering my first research question). The social practices of interest within universities, and for the purposes of this current research, concern those related to teaching, learning, assessment, and grading in higher education. The TLRs refer to the constellation of practices performed by the university community within the site over an extended period of time. The three are intertwined in that the proto-practice reservoirs "structure the dispositions which infuse practices through the moments of a TLR" (Trowler 2020: 33).

The different courses observed (called ‘course-sites’) are points of social interactions where small workgroups of academic and student practitioners engage in a set of practices that are unique to them (and their classroom) which may result in recurrent social patterns of behaviours and meanings. These course-sites are likely to produce “a multiple cultural configuration, with different clusters of social practices” (Trowler, 2012: 32). This highly contextualised mix of “features, concepts, and characteristics of social groups” within these course-sites offered me with interesting possibilities. These are used to examine how their individual subjectivity is “shaping and being shaped” (Trowler, 2012: 33). In addition, it also highlighted “how they interact in various social settings under different relations of power between actors, discourses, tools, and rules” (Trowler and Knight, 2002: 149). Seeing how practices in different social contexts (e.g., the lectures, seminars, tutorials, labs, group work, the individual study) change, and how those changes are related to the elaboration of structure, offers an access into “practice-as-entity, to the templates behind performances” (Trowler, 2014: 23). The attention is on the meso level of analysis which Trowler (2014: 20) describes as the point of social interaction “at the level of relatively small groups engaged in their everyday activities” such as those existing in the classroom. Individuals have personal trajectories within practices (Warde, 2005), but these trajectories are inherently unstable and evolving depending on how the groups of practitioners integrate artefacts, and make meaning (Trowler, 2012: 37), that is the material influences on practices. Hence, the individual histories, backstories and experiences of the past are explored to see how they play a significant role in the production and reproduction of

practices at the micro level. As Warde (2005) argues, in addition to the material and structural conditions that are specific to the universities and their classrooms, other associated practices from which lessons can be learnt and procedures derived are also considered.

Trowler refers to these long-term social interactions of workgroups within universities and their classrooms as TLRs. He argues that TLRs arise from a unique constellation of practices where the workgroups in interaction, “both construct and enact culture” (Trowler & Cooper, 2002: 222). Particularly since, it is within these classrooms that academic and student practitioners develop “distinctive approaches to learning and teaching as they engage on these tasks together over time” (Trowler, Fanghanel & Wareham, 2005: 436). Importantly, “rather than focusing just on the workgroup and its particular set of contextual concerns, the analytical eye [of the TLR concept] accommodates the fact that social practices are always bundled and nested within a larger system of practices”. Such an application of SPT in higher education context unpacks TLRs within universities as it ‘concentrates on recurrent behaviours in group contexts and the ways in which these are underpinned by tacit theories and sets of assumptions, meanings, and emotional responses’ as well as “the significance of different ideological positions” of the university workgroup (Trowler, 2020: 5).

TLRs are thus referred as a “constellation of rules, assumptions, practices and relationships related to teaching and learning issues in higher education” (Trowler & Cooper, 2002, p. 221). Lisewski (2020) highlights how workgroups are likely to have both shared and contested beliefs, assumptions, and

practices amongst its members. Given these differences amongst members, he argues TLRs are highly porous, dynamically constructed and have blurred boundaries. In this study, I use this concept of TLRs to understand how the HGLE system plays out differently within different course-sites (and sometimes referred to as 'locales'). This will help to characterise the way in which teaching and learning contexts operate at these course-sites based on how HGLE initiative is filtered through different TLR moments at the course-sites. These moments (Trowler, 2020: 45) include:

1. Power relations (TLRM-PWR): how patterns of power take shape, regulates itself and influences the practices of workgroups;
2. Implicit theories of teaching and learning (TLRM-TTL): the bigger and broader assumptions that the workgroups have about teaching and learning that inform their practice;
3. Conventions of appropriateness (TLRM-CAP): understandings developed within a site about what constitutes appropriate or divergent behaviour in relation to teaching, learning, assessment, and grading;
4. Recurrent practices (TLRM-RPT): the ways in which things are done within a site;
5. Tacit assumptions (TLRM-TAS): taken-for-granted practices, the collective assumptions, and meanings in which workgroups operate;
6. Codes of signification (TLRM-CDS): socially conditioned layers of meanings attributed to concepts, terms, and activities within a particular site, both in the cognitive and the affective sense;

7. Discursive repertoires (TLRM-DSR): ways of talking about teaching and learning practices that relate to specific ways of thinking about these processes;
8. Subjectivities in interaction (TLRM-SUI): how personal and professional identities of different people in the workgroups may be negotiated to accommodate different practice contexts;
9. Materiality in interaction (TLRM-MTI): the way in which practices are conditioned by artefacts, the physical environment, and the physical layouts; and
10. Backstories in process (TLRM-BSP): the histories, institutional sagas, and national backstories which form the basis for enactment of current practices and shaping of individual subjectivities;
11. Regimes in interaction (TLRM-RGI): include features of the context which go beyond the boundaries of the regime(s) of interest.

The use of TLRs coupled with the theory of practice architectures illuminates how practices enable and constrain aspects of the TLR in quite different ways in different settings, such as the university classrooms (Turner, 2018, as cited in Trowler, 2020). For example, in a gradeless education environment, the TLRs are influenced by the educational ideologies of the workgroups, the macro-level institutional and national policies, the ingrained assumptions on grading, the varying interpretations of assessment and grading requirements. Thus, Trowler argues that an analytical and illuminative traction illuminates

> *"processes occurring in higher education, giving a perspective which goes beyond individual personalities, choices, and difficulties. It lights up the structural reservoirs which underpin practices and appreciates the emergent and contingent nature of the present day and the significance of context, practice architectures, and the operation of power"* (Trowler, 2020: 159-60).

In this study, I use the moments of TLR as an investigative tool to analyse the data gathered from classroom observations and interviews alongside the three lenses offered by Mahon et al. (2017) to uncover the practice architectures within the different course-sites. This reveals how the development of teaching, learning, assessment, and grading practices are influenced by the bundling of other practices and by nesting, i.e., how they are influenced by more structural factors, including static or dynamic proto-practice reservoirs.

3.3 The practice sensibility and the different forms of articulation

To investigate the social practices within the course-sites and to access the different moments of TLRs requires an analysis done with a "sensibility for practice" (Sedlačko, 2017: 47) while keeping the key research questions in mind. This approach helps to go beyond individuals, that is beyond their individual ideologies, conceptions, beliefs, attitudes, behaviours, and choices, and rather see it in wholesome as to how their actions and performances are entangled in a nexus of practices. The concept of practice sensibility is thus

used as a tool to untangle, filter, and make sense of practices and the openness in fieldwork to gain an explanation into the stories from the course-sites, and act predominantly as a "filtering and sense-making device" (Sedlačko, 2017: 54). Furthermore, the sensibility approach questions:

> *"how such practices are performed, and how connected practices make a difference; they ask why it is that the world that results from the coming together of several practices is the way it is, and how and why it is not different."* Nicolini (2012: 8)

Nicolini (2012: 220) argues that a constructivist–interpretivist position is appropriate for composing the ethnography of social practice. Likewise, Trowler (2014: 29) confirms a categorisation of the nexus of social practices provided by the concept of TLRs together with practice sensibility makes it simple to work with data. Taking these into consideration, I use Sedlačko's (2017) four key principles that guides towards a sensibility for practice approach to analyse and investigate the social practices and to work through the data collected: (1) zoom in on the enactment of practices; (2) focus on everydayness within the site and the situatedness of practice; (3) focus on how the practices are connected and assembled; and (4) tell the story through understanding, interpretation and reflexivity.

3.4 Educational ideologies in the higher education context

This section builds the groundwork for addressing the first research question: In what ways do educational beliefs and ideologies influence the conceptualisation and enactment of teaching, learning and assessment

practices in a gradeless environment. The design of teaching, learning and assessment processes within a given educational setting does not occur in vacuum, but is rather dependent on the beliefs, values, and practices of individuals in the workgroup and other contextual influences. Hence, investigating their ideologies will also throw light into and provide insights into the third research question that relates to the extent to which SPT can illuminate understanding on the enactment of practices and their conditioning. Within the SPT framework, Trowler contends that practices and how they are practised are highly conditioned by local articulations of educational ideologies found among the individuals involved (2012: 42).

Ideology is defined here as a framework for systematically structuring the values and beliefs about social arrangements and the distribution and ordering of resources, which in turn, guides and justifies behaviour (Hartley, 1983: 26-7). Simply put, it refers to how an individual perceives things based on one's own existing knowledge, attitudes, values, experiences, conceptions, and other interconnected cognitive structures to systematically guide their actions and performances. Thus, ideologies are the best indicators of judgments that individuals make throughout their lives (Bandura, 1986; Dewey, 1933; Pajares, 1992), and are usually held for multiple reasons—epistemic, practical, and theoretical.

Thinking specifically from the education context, those aspects of ideology which relate to the nature and purposes of education (Skilbeck, 1976: 10, as cited in Trowler, 1998) are termed as educational ideologies. These are formed gradually drawing from literature and/or past experiences of enacted

practices (which include ingrained, commonly understood, and deployed practices within the sites that they work) to colour the subsequent practices during an individual's lives (Pajares, 1992). They also depend on how individuals are initiated into forms of understanding, modes of action, and ways of relating to one another and the larger world within the process of education (Kemmis et al., 2014). Thus, educational ideologies are far more influential than knowledge, in determining how one's educational practices are developed, how their goals and values are prioritised and are therefore better understood by making informed inferences from what individuals say, feel, intend, and do.

An essential characteristic of ideology that is critical to this study is also that it "is developed and maintained by social groups, and thus is a socially derived link between the individual and the group" (Hartley 1983: 27) with a primary focus on the "discourse" rather than that of "language" (Eagleton, 1991: 223). Ideology is therefore better "understood, perpetuated or challenged through discourse" (Leonardo, 2003: 207) and therefore would require studying the ways in which meanings or codes of signification serve to sustain power relations (Eagleton, 1991: 5).

Furthermore, Hartley advises considering three other aspects when studying and researching ideologies: the level of analysis (the group vs. the individual), the level of abstraction (endorsement of generalised vs. context-specific aspects), and the degree of articulation. This articulation as Trowler (1998: 65) claims is shaped primarily by three key elements: the larger purposes of higher education; the content and skills involved, and the key functions taking

place. Building around these three axes, educational ideologies in the higher education realm are classified into traditionalism, progressivism, enterprise, and social reconstructionism (see Table 3.1).

Educational ideology	Conceptions of teaching
Traditionalism	Teaching is about transmitting information (*information transfer/teacher-focused approach*) that links to disciplinary ways of thinking and practicing.
Progressivism	Teaching is about developing students' minds (*a conceptual change/student-focused approach*) that defends their interests, provides equal opportunities, and favours widening participation, such that students have a strong voice and become self-directed learners.
Enterprise	Teaching is about giving students transferable and vocationally relevant skills (*a vocational/competence-based approach*) that prepares students to thrive in their future careers by adapting to the influences from the industry and professions for future employability.
Social Reconstructionism	Teaching is about empowering students to think for themselves, see the inequities and critically analyse/address prevailing social norms, and help change them for the better (*a social change approach*)

Table 3.1 Educational ideologies and the related conceptions of teaching (adapted from Trowler, 1998, 2010)

Using this classification as a categorisation tool can be dangerous as very often interview discourse is likely to show how "individuals often do not fit easily into only one ideological slot" (Trowler, 1998: 78), but they are a useful way to represent "preferences which actors [the workgroup] can to some extent choose or reject in any given social context". These four ideological clusters stem from the way in which they are related differently to how the workgroup thinks about the question what matters most in higher education and are linked to issues such as the teaching/learning quality, the

teaching/learning methods and strategies, the supports and scaffolds provided for development and who and what influences teaching and learning the most. These take place within a complex interaction of intrapersonal, interpersonal, structural, and contextual influences which creates specific teaching and learning cultures representing their educational ideologies with the given educational setting.

Thus, as practices of teaching and learning in higher education, and the related policies are generally driven by educational ideologies of academics and institutions, these four ideological clusters when employed in a more or less systematic manner is likely to provide plausible explanations and justifications for social behaviour of the workgroup in the gradeless education context. This also warrants for a closer examination into the assessment ideologies and practices and how they are associated with these four educational ideologies of the workgroup are necessary and is further explored in the next section.

3.5 The practices and ideologies of assessment in higher education

This section builds towards further answering the first research question specifically related to assessment practice. Assessment practice in higher education drives both student learning (Elton & Laurillard, 1979; Crooks, 1988; Frederiksen & Collins, 1989; Watkins, Dahlin, & Ekholm, 2005; Boud & Falchikov, 2007) and institutional learning (Biggs, 1996; Ramsden, 2003). To understand the practice of assessment, considering the differing beliefs,

conceptions and/or ideologies of the workgroups about assessments is useful (see Table 3.2).

Assessment ideology	Corresponding beliefs and views on assessment
Assessments as *irrelevant* (irrelevance)	Assessment is unfair and interferes with teaching Assessment is an imprecise process and prone to measurement errors Assessment results are ignored and have little impact on teaching
Assessment *of* learning (teacher-focused, institutional accountability-oriented)	Assessment provides evidence of student learning Assessment is an accurate indicator of institution's quality Assessment is a good way to evaluate an institution
Assessment *as* learning (student-focused, accountability-oriented)	Assessment determines a grade/level to student work Assessment determines if students meet qualification standards Assessment sifts and sorts students into ranks
Assessment *for* learning (teacher/student-focused, improvement-oriented)	Assessment improves students' higher order thinking skills Assessment improves student learning with frequent feedback about their performance and learning needs Assessment information modifies ongoing teaching
Assessment for sustainability (student-focused, sustainability-oriented)	Assessment contributes to students' long-term needs Assessment allows transfer of skills from one domain to another, and connect to real-world issues and problems Assessment develops students' self-assessment skills
Assessment for social justice (student-focused, justice-oriented)	Assessment needs to be socially just, and fair Assessment needs to be transparent Students are considered as partners in decisions about assessment
Assessment as transforming (student-focused, utilisation-oriented, feminist perspective)	Assessment includes elements of care and allows for failure Assessment allows students to make informed choices in their lives Assessment generates conversations with peers and/or wider communities

Table 3.2 Assessment ideologies in higher education

These conceptualisations are based on the ways in which scholars foresee the purposes and uses of assessments (e.g., Brown, 2008; Carless, 2007; Boud, 2000; McArthur, 2016, Akyea & Sandoval, 2004). They also differ

based on their own experiences and emotions towards assessment (Brown & Harris, 2016), and are likely to cause resistance to fundamental change in assessment practices and policies (Boud & Falchikov, 2007; Black & Wiliam, 2009; Sambell et al., 2013; Carless, 2015). At the same time, they are also influenced by ideological considerations and situational factors such as social, cultural, and political context (Gipps, 1999) even as their assessment beliefs and practices are grounded in local contexts.

Similar to educational ideologies, there is a danger to attributing a single assessment conception to a workgroup (Reimann & Sadler, 2017; Sadler & Reimann, 2018). They are likely to endorse more than one assessment ideology at any one time and they are generally not mutually exclusive. Their ideologies arise out of context and are further reinforced by practices and outcomes of the many years of schooling. A considerable variation thus exists over time to align against their own experience of partaking in certain assessment practices, the specific environments they work in and/or the associated teaching and learning practices.

Assessment is thus a social practice and is rather difficult to study assessments objectively without considering the social conditions and context in which it is practised (Read & Francis, 2005; McArthur, 2016). Academics are generally immersed in their ideologies, and their judgments are largely permeated with the culture as well as with other associated values and discourses specific to their identities. Likewise, students' learning and assessment culture are developed through their interactions between their personal dispositions and the teaching, learning and assessment strategies

that they experience within their own specific context (Ecclestone, 2007). Table 3.3 provides a mapping into the close relationship between assessment ideologies and the four educational ideologies.

Educational ideology	**Assessment ideology**
Traditionalism	Assessments as ***irrelevant***
	Assessment ***of*** learning
Progressivism	Assessment ***as*** learning
	Assessment ***for*** learning
Enterprise	Assessment for ***sustainability***
Social Reconstructionism	Assessment for ***social justice***
	Assessment as ***transforming***

Table 3.3 Mapping educational ideologies with assessment ideologies

Even as students generally accept university assessment systems and policies, they are never passive recipients. Indeed, their humanistic approaches to assessment such as their learning orientations, educational ideologies, attitudes, and strategic approaches to learning shape their practice (Ecclestone, 2007). Hence, it is essential to critically examine and analyse assessment beliefs of both academic and student practitioners within universities to understand assessment practices through an analytical microscopic lens. Studying a workgroups' assessment practice requires an examination into their teaching and learning practices and how they are impacted by their individual educational ideologies. This is of great importance as these three practices—teaching, learning and assessment—are closely connected together and result in the everyday experiences and constitutive accomplishment of academic and student practitioners in the classroom and the university. Drawing from tables 3.1, 3.2, and 3.3, Table 3.4 summarises

the characteristics and maps out the educational ideologies with the conceptions of teaching, learning and assessment in higher education.

Educational ideology	Related conceptions of teaching, learning and assessment
Traditionalism	• Teaching is about transmitting information; • Learning is about acquiring disciplinary knowledge and skills; • Assessment is about accountability and gauging quality of student, teacher and/or institution. (information transfer/teacher-focused approach)
Progressivism	• Teaching is about developing students' minds to defend their interests and have a strong voice; • Learning is about becoming independent and self-directed; • Assessment is about providing opportunities for improvement and self-monitoring. (a conceptual change/student-focused approach)
Enterprise	• Teaching is about giving students transferable and vocationally relevant skills for future careers; • Learning is about contributing to the social and economic good of the society; • Assessment is about preparing for long-term needs and transferability of skills to other domains. (a vocational/competence-based approach)
Social Reconstructionism	• Teaching is about empowering students to think for themselves, see the biases/inequities and critically analyse/address prevailing societal norms; • Learning is about critically addressing prevailing social norms and transforming society for the better; • Assessment is about connecting students' work to the wider social world issues and problems with students as partners in the teaching-learning process. (a social change approach)

Table 3.4 Mapping educational ideologies with conceptions of teaching, learning and assessment ideologies in higher education

3.6 Site-based practices of teaching and learning in higher education

The previous sections referred to conceptions of teaching and learning as ideological and considered the impact of TLRs on teaching and learning practices; this current section explores these viewpoints further to inquire how

the site-based social practices related to teaching and learning are constituted in actuality at a specific site during specific times. This study critically engages and deploys SPT perspective to investigate the site-based practices of teaching and learning through classroom observations and interviews with students and academics. The social and material arrangements pertaining to the course-sites and the factors that enable and/or constrain specific kinds of practices are examined and studied.

Holley (2009) contends that much of the developmental change in the university occurs through time spent in the college classroom and that they transpire across multiple and overlapping dimensions of development—the cognitive, social, and personal—to form a unique nexus of practices within the classroom. It is here that learners engage in learning and teachers decide what and how to teach, but more importantly they consider the uniqueness of the site they are in: particular students, particular resources, particular physical and virtual spaces, particular artefacts, and particular others with whom to interact. Thus “learning and knowledge are created in very particular social contexts” (Beyer, Gillmore, and Fisher, 2007: 12), where these social workgroups when engaged in taking a common course over the duration of the semester perform recurrent practices (Trowler, 2020: 158). These practices occur in classrooms through interactions between teachers and students, when students participate in learning activities, have discussions about teaching and learning, perform assessments and are being assessed for their work by teachers and/or peers. As universities are generally “goal-directed, boundary-maintaining, socially constructed systems of human

activity" (Aldrich & Ruef, 2006: 4), the common goals that shape university practices, the distinctive patterns of institutional behaviour, and the recurrent practices nurtured through repeated interactions within and amongst workgroups residing within the site are gleaned from class observations and interviews. Their performance in these acts is further conditioned by their educational ideologies, structures, and discourse, and the proto-practice reservoirs (Trowler, 2020). The TLR concept discussed in the earlier section is used not only to theorise the relationships between contexts and the dynamics within the workgroup (Fanghanel, 2009; Lisewski, 2020), but also to better understand how and why some TLR moments play a dominant role than the others within a course-site (Fanghanel, 2009: 206).

3.7 Developing collective declarative knowledge in a university context

Trowler & Knight (2002) found that universities possess a distinctive yet dynamic and diverse cultural configuration. The emergence of knowledge or the "knowing-in-practice" of the university is therefore studied as a situated activity that comprises "both individual and collective" knowledge produced within its context and is "anchored by (and in) material supports in that context" (Gherardi, 2012: 20). The differences manifested in ideologies, values, beliefs, attitudes, conceptions, taken-for-granted practices can seem rather small when viewed telescopically but can reveal a larger diversity of practices and interests when analysed microscopically. This ethnographic study therefore focuses on the systematic observation of the routine activities of student and academic practitioners within their classrooms, their interaction and participation within the classroom as well as the artefacts used and

generated within the environment. The study's interest is in gathering thick descriptions to unpack the different aspects of the workgroup's collective working practices within the situated contexts of HGL and EGL course-sites while paying attention to both constant and variant practices during analysis and interpretation of their everyday working practices and performance.

Gherardi (2012: 174-5) notes that when "knowing-in-practice" becomes knowledge and "when the 'know' is enacted in actual knowing", then the practical knowledge becomes institutionalised. Consequently, she highlights this development of knowledge is based on an analysis that focuses on four levels of observation: "individual, collective, organizational and societal", which "are interwoven and co-present in the texture of practices". In this study, an interwoven nexus of practices and their interconnected relationships of the social groups that transcend boundaries are developed to represent the conception of the university course-sites.

Finally, a consideration of the disciplinary orientations can also have both pragmatic and cultural elements tightly linked to epistemological beliefs favoured by the discipline, the disciplinary research practices, and the social norms and/or values of the discipline (Yeo & Boman, 2019). For this reason, belief systems become more localised than globalised and are largely influenced by the historical, cultural, social, and policy contexts within which they operate (Brown et al., 2019). Hence, I take a closer into the individual's accounts of their values and perspectives considering their viewpoints (Hopfenbeck, 2018) to provide deeper insights into how and why practices are

formed, and what may trigger the boundary crossings into new conceptual and ontological territory.

3.8 Summary and conclusion

In this chapter, I have argued that academic and student practitioners construct meaning in relation to teaching, learning, assessment, and grading through their engagement with each other inside (and outside) the classroom, their experience and work, the artefacts produced, their own ideological positions, and the university environment. The meanings that are constructed relate to the cognitive, social, cultural, political, and physical contexts within which teaching and learning is carried out. I have also considered how meanings are also associated with the ideologies they hold, in this case, the educational and assessment ideologies, which are often interrelated and interdependent, are further reinforced by ingrained taken-for-granted practices and are dependent on their humanistic approaches to teaching, learning and assessment such as their teaching and learning orientations, and their strategic approaches to teaching and learning.

This chapter has also provided a detailed description and a summary of the educational ideologies, assessment ideologies and the related conceptions of teaching and learning within the higher education context. This breadth of background knowledge has informed the identification of the research questions for this research study, as explicated in this chapter. This critical analysis and engagement with literature has not only informed the formulation of the research questions, the design of the interview questions and

development of fictional vignettes but are also subsequently used to enrich the discussion and analysis of the research results.

Moreover, this critical engagement with literature situates the current study within its theoretical and empirical context. Additionally, it has validated the highly situated nature of relationship between knowledge and practice and the notion of knowing-in-practice as a useful concept to understand practice as a collective knowledgeable doing, saying, and relating. It has provided a definition of practice and practice architectures, and the utilisation of an SPT approach within the HGLE site ontology to:

- Examine the ideologies, conceptualisations, and enactments of the workgroup (academic and student practitioners) at the ground level, and their associated identity (or subjectivity) formations within the situated contexts of the HGL and EGL course-sites;
- Identify the conditioning factors that influence their developmental trajectory as academic and student practitioners;
- Illuminate the significant TLR moments within each course-site and workgroup context using the eleven moments as an analytical tool and a theoretical model to describe what the institutional culture looks like in order for the workgroup to operate in a more considered or a better-informed way; and
- Apply the practice sensibility to filter and make sense of the phenomena and process to gain explanation into the enactment of practices while considering the heuristic relationship between practice as a connected entity and practice as performance.

The theoretical framework that I have outlined in this chapter underpins my research design and methodology. The next chapter details the research design, its underlying theoretical and methodological rationale and multi-method approach to data collection that accesses the multiple dimensions of social practice necessary to answer the research questions.

Chapter 4: Research design, methodology and methods

This chapter describes the research design approach taken in terms of the methodology used, the cases selected, the participants involved, the data collection methods adopted, and the approach to analysing the data. It begins with an overview of the research design and how they are related to the research questions before discussing the chosen research methods, the methodological considerations, and the data analysis methods. Researcher's positioning and ethical considerations surrounding this inquiry are also described.

The aim of this chapter is not to provide an exhaustive and comprehensive account of the methods, or the issues related to them. Instead, it highlights key ideas central to the chosen methodological approach taken and the likely impacts they have on the findings and conclusions.

4.1 Overview of the research design, methodology and methods

The research methodology is an emic single-site practice-based ethnographic study in a large research-intensive public university in Singapore. This chapter explains how the ideas of ethnography are used to develop a research design of mutually supportive investigative elements, from in-person and virtual course-site observations, interviews to focus group discussions, documentary to artefact analysis. It focuses on the conceptualisation and enactment of practices in nine courses which adhere to the HGLE system discussed in the research context chapter. The study examines academics and students' educational practices—teaching, learning, assessment, and grading

practices—both within and outside the classroom of the selected nine courses. It further investigates how in actuality the site-based social practices are constituted and conditioned by the ideological positions of academic and student practitioners and their relationships with the nexus of situated human practices and material arrangements. The research design adopts Sedlačko's (2017: 57) four-part methodology: (1) zooming in on the enactment of practices—the actual doings, the interactions, and the relationship of these interactions with spaces and material artefacts; (2) focusing attention to sites and situatedness of practice, the taken-for-granted aspects of social reality and making sense of the situation; (3) reconstructing and deconstructing the complex socio-material arrangements to explain how the various elements are connected and assembled; and (4) building thick textual renditions of these connected practices through understanding, interpretation, and reflexivity of the researcher.

The research questions are:

1) In what ways do educational beliefs and ideologies influence the conceptualisation and enactment of teaching, learning and assessment practices in a gradeless environment?
2) What are the conditioning factors and structures that develop and/or reinforce academic subjectivities of its community?
3) To what extent and in what ways does social practice theory illuminate enactment of practices and conditioning towards grades and gradelessness?

This research seeks to inform and illuminate our understanding of the social ontology at this particular site rather than to produce generalisations of experiences. This study is therefore positioned “not to provide general laws or explain casual or associative relationships between constructs; rather, it aims to provide a set of discursive resources to produce accounts, overviews and analyses of social affairs that enrich our understanding of them: a social ontology” (Nicolini, 2017: 24).

The study’s theoretical framework is SPT consisting of Trowler’s (2020) new and modified analytical construct of a TLR and Schatzki’s (2005) concept of a site ontology within which the academic and student practitioners are situated in association with the bundles of human practices and material arrangements that exist at the University. Trowler (2013: 3) asserts that SPT usage that focuses on the practices of ‘relatively small groups engaged in their everyday activities’ (in this case, the academic and student practitioners within a HGLE context) favours an ethnographic research design. Finally, the ethnomethodological research design follows Sedlačko’s (2017) sensibility for practice as the fieldwork tool to analyse context-specific processes of human and non-human carriers of actions by using elements such as actual doings, interactions.

Trowler (2014: 27) confirms the data collection methods chosen for such practice-focused ethnography studies need to “access the multiple dimensions of social practice: saying, doing, relating, feeling, valuing”. Thus, this study setting entails the use of an immersive, multi-method approach, which was the one undertaken for this study and comprised:

(a) participant observations over thirteen weeks within nine university courses;

(b) nine dialogic interviews with academic practitioners;

(c) nine artistic representations by academic practitioners;

(d) twelve focus group discussions with student practitioners;

(e) participant personal artefacts from the nine courses (consisting of course syllabus, student work, lecture notes, presentation slides, video lectures, learning journals);

(f) insider-researcher reflexivity.

A reflexive thematic analysis, both deductive and inductive analysis (Braun & Clarke, 2022) was employed to analyse the qualitative data evolving from these research methods. The analysis consisted of five key phases:

1) initial familiarisation with the data;
2) a deductive approach that utilised the identified educational and assessment ideologies to code and interpret the data;
3) a deductive process that used the eleven TLR moments as theoretical lenses to interpret the data;
4) an inductive process that employed Attride-Stirling's (2001) multi-level theming method to identify what was missed out from the analysis using the ideologies construct and the TLR analytical construct;
5) an interpretive analysis to produce descriptions that are empirically grounded accounts of the site ontology.

The academic and student practitioners were situated within the historical, material, and social contexts of the gradeless classrooms—the HGL and EGL classrooms—and their linkages to the University environment. To place the practitioners' voices at the centre of the research, their classroom conversations, their individual personal artefacts, and artistic representations are also integrated the presentation, analysis, and discussion of the data.

Although the data analysis is presented as different stages, these phases were implemented in a recursive fashion, moving back and forth between the different processes during the analysis (Braun & Clarke, 2022). Through this process I was able to identify themes that were personal to each practitioner's experience, but also themes that extended across the practitioners' stories. The descriptions were produced through an interpretation, analysis, filtering, and sense-making of the thematic data patterns by applying a sensibility for practice framework within a socio-material interpretivist approach. As academic and student practitioners are immersed in their everyday educational practices, they also develop their own academic identities as teachers and learners. Therefore, this research also identified the conditioning factors and structures that develop and/or reinforce academic subjectivities of the academic and student practitioners. Finally, the study examined how and to what extent the SPT analytical approach illuminated our understanding of the academic and student practitioners' enactment of their practice-based knowledge in the site ontology.

4.2 Rationale for the sample

The purposive sample for this study was chosen to provide a rich mix of subject/discipline cultures, teaching, and curricular environments. It was selected to take into account factors which were deemed important in influencing teaching, learning, assessment and grading practices. To understand the crucial aspects and the conditioning factors, we need look into ordinary settings such as classrooms and university spaces, rather than focusing on abstract domains populated with structures, functions, and the like. The University setting is thus an intriguing site in which multiple activities necessarily combine and coordinate in routine and observable ways. The multiple teaching and learning activities that go on in a university (both in and out of the classrooms) and their orchestration to make learning happen, means that university is a place in which the connections and interconnections are especially visible. Thus, this university site provided an illuminating setting to pursue the goal of understanding social ontology of the site and the dynamic interplay of how different types of connection between practices matter for each other and how these connections matter for the reproduction of complexes of practices over time.

4.3 Selection of cases

This research gathers empirical data about practices occurring in a hybrid graded/gradeless learning environment within a large research-intensive public university in Singapore. Pseudonyms are used for the names of the courses, and study participants discussed in this study. The cases include

both the ‘entirely gradeless’ (EGL) and the ‘hybrid gradeless’ (HGL) types of courses offered at the site (refer to chapter 2 for detailed features of these types of courses).

For each case selected, supporting materials were also gathered about the departments in which the course-sites were situated. Such additional material collected were incorporated as part of the case records, and no separate case reports were prepared for departments/disciplines. These materials were used to inform my understanding of how various kinds of practices in the disciplines were also shaped by the ways in which the intersubjective spaces were already arranged and how individuals in these spaces accept and interact with one another.

Cases were purposively selected and involved identifying courses and academic practitioners who meet specific criteria. Each case is a course within the university setting (see Table 4.1). The selection process first identified courses that belonged to either one of the two categories: the hybrid gradeless, the HGL category or the entirely gradeless, the EGL category. Second, the selected courses had to be taught by full-time academic faculty, as they typically are empowered with more opportunities to shape, change, or challenge the design of curriculum and assessment. Third, each of the courses selected represented the major faculties (disciplines) within the university and had varying class sizes ranging from 15 to 1200. Academic practitioner’s experience, academic track, academic rank, local/international member, and gender were also considered when choosing a case. This was

to ensure the necessary diversity is established amongst the selected cases, as represented at the institution.

Course-site	Academic practitioner					Class Size	Course type
	Pseudo-name	Gender	Local/ International	Teaching experience	Discipline		
HRC2101	**Aidan**	Male	International	5-10 years	Biomedical Engineering	31	HGL
ERC1101	**Bryan**	Male	International	<5 years	Public Policy	17	EGL
HGE1101	**Charles**	Male	Local	10-15 years	Physics	193	HGL
HGE1102	**Ethan**	Male	Local	5-10 years	English Language	163	HGL
HGE2204	**Grace**	Female	International	10-15 years	Environmental studies	81	HGL
HFM1101	**Harvey**	Male	Local	>20 years	Human Geography	60	HGL
ERC1102	**Sophie**	Female	Local	>20 years	Marketing	28	EGL
HFM1301	**Nicole**	Female	Local	<5 years	Biology	175	HGL
HID1000	**William**	Male	International	>20 years	Chemistry	1200	HGL

Table 4.1 List of courses and study participants within the nine course-sites

One limitation that occurred when deciding on the choice of courses for observation was that there were not many predetermined pass/fail courses, i.e., the EGL course types that were offered across the university except at the residential colleges. Male and female academic practitioners were included to gain a more comprehensive representation although gender differences were not examined in this study. A selection of new or early career academics, more experienced ones, and well-established ones were made to provide a broad perspective on academic professional experience, level of seniority, and worldview patterns. Thus, this sample catered for discipline and curricular cultures, institutional environment including discipline articulation while seeking to be representative in terms of gender, local/international, level

of seniority in experience, academic track, mode of instruction (in-person/virtual), and varying class size distribution.

This research describes cases of practices of teaching, learning, and assessment as enacted by the different individuals who participated in them. At the same time, their professional development and/or leadership within and outside the course are considered as they may have impacted their practices. The data analyses focused primarily on how the sayings, doings and relatings constitute these practices for these different practitioners who participate in different ways and from different perspectives and were shaped by (and shape) the practice architectures that hold them in place: that is, the cultural-discursive, material-economic, and social-political arrangements that pertain in the site where the practices were carried out.

Evidence about these practices was collected in several ways. Observations of practices was the initial mode of data collection that included teaching and learning practices in classrooms—both in-person classes and online classes, and during personal individual and group consultations. The observations were followed up by interviews with academic practitioners and focus group discussions with student practitioners. These observations and interviews were then supplemented with artefacts as well as chats with other participants in these classes (e.g., tutors), where possible.

HRC2101: Teacher Aidan. Course observed is a level 2000 HGL course in its fourth iteration. It was taught by Aidan, a male international faculty member from the ASEAN region with a local education training from Singapore is an

instructor with an engineering background. The course focuses on a growing problem within the local context in the country and addresses how together students find ways to solve the problem and talk about solutions that can help and impact societal change. This course is offered within a residential college setting. Class size of 31 students, further broken down into two smaller sections—section A (15 students) and section B (16 students)— with each section conducted as two separate classes. Students from different disciplines take the course. Observation was done for both sections. Classes for this course were taught as face-to-face (in-person) classes in an active learning classroom[1]. The university learning management system (LMS) was used as the platform for communication, dissemination of course materials and assignment submission. Additionally, a social media platform, the Telegram, was also used for interaction.

ERC1101: Teacher Bryan. Course observed is a level 1000 EGL course in its second iteration offered as a junior seminar to first-year students. Bryan, an international faculty member with an education from South Asia is a male instructor with a background in public policy and governance taught the course. It is designed to provide a foundation for senior seminar modules that use concepts/skills on systems thinking learnt in this module. This course is

[1] Active learning classroom refers to a classroom space that feature tables with moveable seating allowing students to interact, collaborate and work in small-groups. The classrooms are generally equipped with whiteboards/spaces for brainstorming, diagramming and problem-solving.

offered within the setting of a residential college. Students from different disciplines take the course. Class size of 17 students. Classes were taught in-person in an active learning classroom, and the university LMS was used for sharing course materials and for assignment submission.

HGE1101: Teacher Charles. Course observed is a level 1000 HGL course in its ninth iteration offered as a general education module to students usually in their first or second year. Charles, a local male faculty member is a physicist with an education training both from South Asia and Singapore taught the course. This course is designed to help students understand science and phenomenon behind the science. It is interdisciplinary in content with elements such as physics, maths, chemistry, biology, ecology, geography, earth science, engineering, political science. Students from diverse disciplines take the course. The class size is 193 students. Classes for this course are taught via synchronous online problem-solving classes that follows a flipped classroom approach[2]. A custom-designed course website was used for sharing course materials, pre-recorded video lectures, for students to ask questions, and recordings of live lectures. However, the weekly assignment submissions and final exams used the university LMS.

[2] Flipped classroom refers to a model where students gain first-exposure learning (e.g., pre-recorded video lectures, audio podcasts, readings, infographics) prior to class while the face-to-face (in-person or synchronous online) class time is spent on activities that allow students to process, apply principles/concepts and problem-solve in class with an expert on the side.

HGE1102: Teacher Ethan. Course observed is a level 1000 HGL course, a general education course offered as a foundational language course to students in their first or second year. The course has a large class size of 163 students from diverse disciplines. The mode of instruction for the weekly lectures was taught primarily through live zoom synchronous webinars and the weekly tutorials were held asynchronously via Microsoft Teams. The course was taught by Ethan, a local male faculty member, a linguist with an education training both from Singapore and America, where he also did a fellowship with a centre for teaching and learning that exposed him to instruction that promotes peer learning.

HGE2104: Teacher Grace. The course is a level 2000 HGL course offered as a general education course to students in their first or second year. This is a foundational course on methods and practices in geography and is designed to introduce the environmental issues and processes from a geographical perspective. It is taught by Grace, a female international faculty member with an education training from America who joined the institution less than a year ago. She is also an ecosystem restoration practitioner with an environmental studies background and was given the opportunity to redesign the course before teaching it for the first time. Students from diverse disciplines take the course. The class size is 81 students. The mode of instruction for the weekly lectures was an online synchronous teaching primarily through live zoom webinars. In addition to lectures, two tutorial classes were conducted online with about 18-20 students per tutorial class. The course materials and course announcements were shared via the university LMS.

HFM1101: Teacher Harvey. Course observed is a level 1000 HGL course offered as a general education course to students usually in their first or second year. The course is a foundational course on human geography, designed to introduce the geographical perspectives needed to understand contemporary socio-economic issues and processes. Students from diverse disciplines take the course. I also learnt that students from year three and year four were often attracted to this course. The class size is 60 students. The mode of instruction for the lectures every week was taught primarily through synchronous live zoom webinars except for one class that was pre-recorded. In addition, two online tutorial classes were conducted with about 18-22 students per tutorial class. Students were required to complete pre-readings before tutorials. All course materials, announcements and assignment submissions were shared using the university LMS. This course is taught by Harvey, a male local faculty member who is an urban and tourism geographer trained in Singapore and Canada. He has held leadership positions both at the department and faculty as deputy head and vice dean. He has also been the chair of the faculty's teaching excellence committee for seven years. Harvey has offered this course about 20 times in different formulations, under different titles.

ERC1101: Teacher Sophie. This is a level 1000 course in its fourth iteration, an EGL course offered as a junior seminar module within a residential college setting. Class size of 28 students, further broken down into two smaller sections—section A (11 students) and section B (17 students)— with each section conducted as two separate classes. More than 70% of students in

section A were studying law while in section B students from different disciplines took the course. Observation was done for both sections. Classes for this course were taught as face-to-face (in-person) classes. The university LMS was used to share course materials and for submission of assignments. Sophie, a local female faculty member with an education training from Singapore and America possessing a business and marketing background taught the course.

HFM1301: Teacher Nicole. Course observed is a level 1000 HGL course offered as a general education course to students usually in their first or second year. The course is a foundational course on biology but students from different disciplines take the course. The class size is 175 students, with online lecture classes every week through live zoom webinars except for one class that had a pre-recorded video. In addition to lectures, two laboratory class were conducted face-to-face with 25 students per laboratory session. Students were required to complete lab assignments after the session. Students were also asked to visit the Museum as part of an assignment. The university LMS was used to share course materials, announcements and for submission of assignments. Nicole, a local female faculty member is an evolutionary biologist with education training from Singapore, Europe, and America taught the course.

HID1000: Teacher William. Course observed is a level 1000 interdisciplinary course offered as an EGL course. The class size is 1200 students. This course is also mandatory course for all students joining the arts, humanities, or sciences programmes at the university. It was taught by William, an

international male faculty member who is a Chemist with education training from the United Kingdom. This course used a flipped classroom style where the lectures were pre-recorded, and groups of 25 students attended tutorials with tutors (not teacher William). The tutors in this course had complete autonomy in how they designed and facilitated the tutorials and were conducted face-to-face in active learning classrooms. William joined in some of the tutorials that were held almost every day of the week. In addition, this course had one laboratory session and three workshop exercises. The university LMS and a Microsoft Sway platform was used to share course materials and recorded videos, and for submission of assignments.

4.4 Research methods

The ethnographic fieldwork with its disparate sources of data collection adopted in this study follow several key principles highlighted by Zaharlick (1992). A *social relationship* with the participants was first established through *first-hand observation* and *long-term involvement* (in this case, by staying inside the classroom for at least five to six classroom sessions at each course-site). This also meant that I was directly involved in observing and talking to participants in a *naturalistic* uncontrolled environment and distilling and making sense of the data gathered considering relevant and irrelevant information to the study, becoming *a research instrument* myself. This approach provided greater insights into the complexity of people's beliefs, attitudes, and behaviours.

Table 4.2 gives a snapshot of the various data collection strategies used in the study showcasing the *eclectic* approach adopted for this study.

Data collection strategy	**Description**
Observations	Observation was done both in an in-person and virtual setting. Immersed within the site and examined individual ideologies, recurrent practices, discourses, and backstories of institutional culture within identified courses. In addition, insider data within natural settings was also collected.
Interviews	Dialogic interview framework was used to construct explicit accounts based on academic practitioners' experience and tacit knowledge using a meaning-making process.
Vignettes	Vignettes captured artistic representations by academic practitioners and revealed background of meaning and emotions, theories and discourses embedded within their recurrent practices.
Focus groups	Focus group discussion (FGDs) uncovered the different moments of practices as student practitioners discussed group actions and shared experiences.
Individual artefacts	Personal artefacts from academic practitioners were used to explain their teaching, learning, and assessment practices and their effectiveness. Student works were also taken as artefacts. Artefacts were identified during observations, interviews and FGDs to have deeper conversations.
Discourse	Listened in to discourse focusing on: (a) rhetorical strategies employed by academic and student practitioners in how they achieved their goals, (b) wider discourses by academics and students to make sense of themselves and of the context, and (c) the legitimacy of discourse provided by sociocultural, institutional, and national contexts of these practitioners observed.
Secondary data	Data sources to understand institutional and national context, educational culture and ideologies on grading and assessment.

Table 4.2 Data collection strategies employed

The usage of these multiple techniques of data collection over and above participant observations allowed for cross-checking the accuracy of data, getting a clear construct as well as to avoid bias. Each of the data collection strategy is elaborated in further detail in this section. Although the data collection methods are presented in the following sub-sections appear as a linear independent process, the approach taken was indeed an *interactive-reactive* one. The questions posed during interviews and focus groups were modified and refined in response to the local conditions and context of individual course-sites, and in particular to the factors previously not known, and to the relationships previously not considered.

4.4.1 Participant observations

Much of the data for research in this study came from observing participants in their natural setting, i.e., within the classroom. Participant observations provide first-hand in-situ data, yield more valid, rich, contextual, and authentic data that reveal mundane routines and activities (Cohen et al., 2017: 542). They facilitate a nuanced understanding of the physical, social, and cultural contexts in which the study participants are immersed in addition to uncovering the relationships amongst study participants, their ideas, contexts, norms, and events that may otherwise go unnoticed or taken-for-granted. Such data were gathered by focusing on facts (e.g., number of students, availability of tutors), events that occurred during the in-person and online classes as well as on the practitioners' behaviours (e.g., the extend of collaborative behaviour among students) (Cohen et al., 2017: 542). The observational data comprised the physical setting, the human setting, the

interactional setting (includes formal/informal, planned/unplanned, and verbal/non-verbal interactions), and the programme setting (includes pedagogic styles, curricula, resources, and their organisation) (Morrison, 1993: 80).

More specifically, observations for each case were done for at least six to seven classroom sessions, either in the form of lectures, seminars, or tutorials. Each of these observed sessions were usually two to three hours long. Some were conducted in-person and others virtually via zoom. Careful, objective notes about what was observed were made during each of these sessions and recorded as field notes on an online field notebook that was maintained on a personal laptop. The informal conversations and interactions with and amongst the academic practitioners, tutors, and students were also logged. Information and messages communicated by the academic practitioners to students via the university's LMS and emails were also documented as part of the observation. After each observation, the initial field notes were further expanded as soon as possible, usually within the two weeks from the initial observation. In addition, an ongoing interpretation of the observation data was maintained for each case. For classes that were conducted online via zoom, audio-visual recordings were also used as supplements to the in-situ observer field notes. These audio-visual data provided "a more unfiltered observational record" and maintained a real-time sequence of the event which further helped in careful scrutinization of the data and minimised dependence on prior interpretations (Cohen et al., 2017: 556) made during observations.

The observations were positioned and planned to analyse data from three angles: (1) participant observation of teaching practice, and the (2) participant observation of learning practice and (3) participant observation of assessment practice. Cousin (2009) advocates the use of follow-up conversations and interviews to establish a dynamic between observing participants and eliciting accounts from a small selection of participants from those observed. Thus, further follow-up interviews and focus-group discussions were conducted to ensure that the academic and student practitioners reflected on their teaching and learning practices in the course.

4.4.2 Dialogic interviews with academic practitioners

The interviews with academic practitioners were designed and structured to be dialogic (Knight & Saunders, 1999) to elicit a genuine two-way dialogue between the interviewee and the respondent around their teaching and assessment practices. The purpose of the interviews, as Seidman (1998) suggests, was not to evaluate but was rather to understand academic practitioners' experiences and how they make sense of their experience. Each of these one-on-one dialogic, semi-structured interviews lasted anywhere between 60 to 90 minutes each. These interviews were distinct from casual conversations due to their formal and professional nature. Academic practitioners were made aware of the research aims, and necessary preparations were made to obtain consent and to ensure effective recording of data. The respondents were given a freehand in verbalising their thoughts with minimal direction from the interviewer. The conditioning factors that may influence their practice, particularly those that were gained from engaging with

the literature were weaved into the conversation in a relatively naturalistic and spontaneous manner.

The interviews began by establishing academic practitioner's conceptions, values, beliefs, and ways of working. The interviews then progressed "relatively naturalistically, to a range of words, phrases or descriptors that the teachers used to develop the general meanings […] to elicit exemplars and concrete accounts" (Knights & Saunders, 1999: 149). The definitions and descriptors established in the early part of the interview were then used as prompts to get academic practitioners to go beyond their initial articulations and provide concrete examples within their specific teaching contexts. This approach was evident from feedback received from a study participant (an academic practitioner who is also an expert on qualitative methodologies), who had this to say of the interview:

> *For the interview per se, you did very well indeed. I like the fact that while you have a list of questions to get through, you also pivoted to ask questions that directly engaged what was raised in the responses (e.g., the questions that followed from 'The Big Classroom' and other matters). Many of my students will probably 'stick to the script' and not engage with what they have just heard from a response. You also shared your own insights and experiences (arising from what I had said), so there is great synergy and alignment between questions/answers. You also ended on-time (I have no problems speaking longer with you at all, but you are so respectful of peoples' time and so professional too).*

Respondents dominated the conversation, and the dialogues which occurred between interviewer and interviewee did not just uncover truths or meanings but rather *produced* them. This production of meaning was accomplished through a method "in which both interviewer and informant [academic practitioner] undertook a process of meaning construction" (Knight & Saunders, 1999: 147–8). Academic practitioners almost always engaged in spontaneous self-reflexivity about their responses during the interviews, sometimes rethinking their own espoused beliefs and opinions. The dialogic interviewing process also reaffirmed the importance of agency by taking into account the individual constructs borne from the "contexted and complex meanings that bear imprints of structural features" (p. 154). Consequently, through a process of reflexive thinking and meaning-making, explicit accounts to understand "complex and taken-for-granted situations, beliefs and behaviours" (p. 144) based on academic practitioners' experience and tacit knowledge were constructed. These dialogic interviews were also instrumental in examining patterns of situated practice-based knowledge and their associated pedagogic and assessment practices. The methodological perspectives discussed above were integral to the development of the semi-structured interview guide.

4.4.3 Vignettes

The use of vignettes in this ethnographic study strengthened and deepened insights gained from participants' own ideas about specific situations (Cousin, 2009: 121). It is used as a complementary method alongside observations and interviews to enhance the existing data collected (Barter & Renold, 1999).

Vignettes are hypothetical scenarios about “characters in specified circumstances, to whose situation the interviewee is invited to respond” (Finch, 1987: 105). Participants are more likely to express their beliefs, values, and meanings in concrete contexts rather than abstractly in a vacuum as the stimuli provided in the vignette represent tangible descriptions of social and situational context (Alexander & Becker, 1978: 94).

At the end of each interview, academic practitioners were provided with a vignette that depicted a hypothetical ideal scenario. They were given three to four weeks, and in some cases longer time to make an artistic representation of their idealistic imagination. Again, academic practitioners were given a freehand in visualizing their imagination in whatever form they choose and were comfortable with. The scenario incorporated unusual occurrences (Finch, 1987) and included sufficient context for respondents to have an understanding about the situation being depicted but was also vague enough for them to consider additional factors which may influence their decisions when forming their representations (Barter & Renold, 1999). They were also informed that their artistic representations could take any form (e.g., a picture, a poem, a song, a mime, or whatever) leaving space for participants to define the situation in their own terms. This mode of data collection has elicited interesting forms of representations such as a Lego model, causal flow diagram, a photograph, a word cloud. This process of illustrating their dreams has the effect of gathering thick descriptions (Geertz, 1973) of participants’ own ideas in rich detail presenting complex, multi-layered meanings. This further uncovered a background of meaning and emotions, theories and

discourses embedded within their recurrent practices and practices that they would embark if they were to work in an ideal environment.

4.4.4 Focus group discussions with student practitioners

Focus group discussions uncovered the different moments of practices as student practitioners from the different course-sites discussed their individual sections, group actions and shared experiences. Hennink's (2014) hourglass design approach (see Figure 4.1) was used to structure the focus group discussions. The focus group discussions began with set of broad questions to build rapport and to share their candid opinions comfortably in a group environment before moving on to discuss the more specific topics that are critical to meet the research objectives, and then move again to broader summary issues to end the discussion.

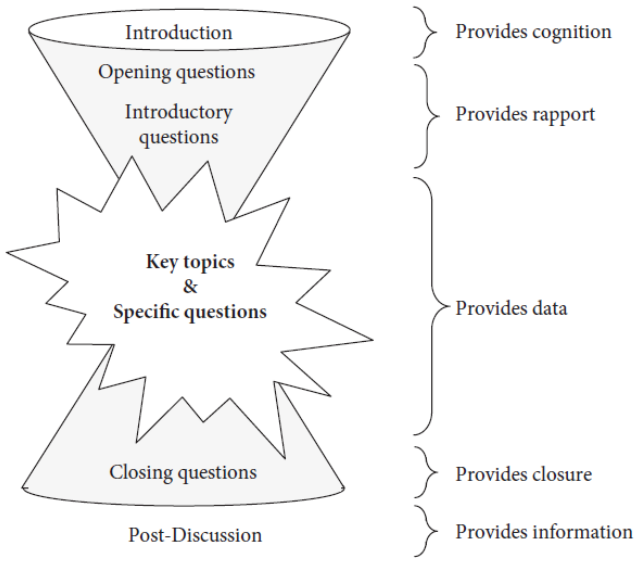


Figure 4.1 Hennick's (2014) hourglass design approach to focus group discussion

Each focus group (see Table 4.2) typically had anywhere between four to six participants to give everyone an opportunity to share insights and yet large enough to provide diversity of perceptions (Krueger & Casey, 2000: 10).

Course-site	Number of students (Gender Breakdown)	Disciplines	Breakdown by years
HRC2101	Four (3 Male, 1 Female)	Sociology, Psychology + Life Sciences, Engineering, Computing	Year 2 – (4)
	Four (3 Male, 1 Female)	Economics + Political Science, Economics + Analytics, Business, Computing	Year 2 – (4)
ERC1101	Three (2 Male, 1 Female)	Economics, Computing and Statistics	Year 1 – (3)
HGE1101	Four (2 Male, 2 Female)	Computing (2), Food Science, Engineering	Year 2 – (4)
HGE1102	Four (2 Male, 2 Female)	Geography (2), Global affairs, Business/Communication	Year 2 – (2) Year 3 – (2)
	Three (1 Male, 2 Female)	Computing, Engineering/Economics, Liberal Arts	Year 2 – (2) Year 4 – (1)
HGE2204	Nine (3 Male, 6 Female)	Global studies, Geography (6), Chemical engineering, Statistics	Year 2 – (7) Year 4 – (2)
HFM1101	Four (2 Male, 2 Female)	Geography (2), Engineering, Global studies + Geography	Year 2 – (4)
	Five (4 Male, 1 Female)	Geography (3), Geography + South East Asia, Statistics	Year 1 – (4) Year 4 – (1)
ERC1102	Three (2 Male, 1 Female)	Law, Engineering, Accounting	Year 1 – (3)
HFM1301	Three (1 Male, 2 Female)	Environmental Science, Psychology + Life Sciences, Geography	Year 1 – (3)
	Five (2 Male, 3 Female)	Environmental Science (2), Computing (2), Engineering	Year 1 – (4) Year 4 – (1)
HID1000		Learning journals written by students were taken	Year 1

Table 4.3 List of course-sites and focus group study participants

Hennick (2014: 38) argues that “homogeneity between participants and their level of acquaintance” are two key aspects that are important to develop a positive group environment. Each focus group in this study were composed of students taking the same course with a shared classroom experience brought “together people who have enough in common to allow the development of a

productive conversational dynamic" (Conradson, 2005: 133). Familiarity amongst these group participants meant a shorter time to build rapport during the discussion, though this was not always the case as some of the class sizes were inherently large, and specifically for those attending only virtual classes had very less opportunity to know one another. This familiarity gained either knowing one another or having had a similar shared experience increased the depth and accuracy of information gathered. Student groups were also explicitly told to actively interact with each other and build on others' view by adding their own experience or asking each other questions to foster an open productive discussion.

4.4.5 Personal artefacts and documents

Practice-based knowledge resides not only in humans but also in artefacts (Gherardi, 2012; Reckwitz, 2002) and have the capacity to represent live memories actualising associations between the past, the present and the future (Gherardi, 2012). However, determining the affordances that artefacts invoke within the teaching and learning processes and the extent to which they become meaningful in revealing the tacit practice-based knowledge is rather difficult at the outset and will need to be carefully investigated in connection with the nexus of practices performed alongside and with it (Alkemeyer & Buschmann, 2017). Personal artefacts and documents were collected and interpreted to arrive at an understanding of meaning and to complement findings analysed with established qualitative methods.

As Trowler (2013) argues artefacts can engage and interest audience and stimulate ideas in them in their own contexts. Thus, participant artefacts identified during observations were used as hooks during interviews and focus groups to initiate and stimulate deeper conversations and provide ways to access the tacit practice-based knowledge. The interviews and FGDs with academic and student practitioners also provided access to artefacts highly specific to certain situations, tacit and sometimes not easily articulated. The various artefacts collected include learning syllabus, module information sheets, problem sheets, student assignments, project reports, reflection logs, discussion posts, personal essays, video presentations.

4.5 Methodological considerations to conducting ethnographic study

The constructivist–interpretivist ontological and epistemological position (Schwartz-Shea & Yanow, 2012) is taken to report on the ethnography of social practice so as to illuminate the ways in which academic and student practitioners make sense of their world, create and use stories and shape their identities. Within this paradigm, the focus is on understanding rather than explanation (Guba & Lincoln, 1994) as social reality is being continually produced and reproduced by participants, as they interpret and make meaning of their experiences (Blaikie & Priest, 2018). This constitutes multiple social realities, as each individual practitioner constantly revises and changes their constructions in response to their experiences. Interpretivism, thus was seen as a natural fit for this research to direct the methodological decisions made within this research.

As the methods of ethnography are generally diverse and multiple, the choice of methods used in any specific instance necessitates considerable attention to ensure that validity is not compromised from the outset of the design process. However, in an ethnographic study, tensions exist between fieldwork and theory over the course of the research work (Sedlačko, 2017; Wilkinson, 2014). Dewey (1922) argues that for practice-oriented research, starting with fieldwork and letting the field speak for itself based on a predefined theoretical framework can lead to the researcher taking abstract concepts used by study participants at face value since they reflect the researcher's innate understanding of the situation.

A number of research methodology considerations arise, and they form the significant foci for this study. The first lies in the choice of method itself with consideration given to the site of investigation (the environment). The second is the dual-role and position of the researcher, both in being the source of primary data as well as the one interpreting and making sense of the data give due attention to the environment and the research protocols. As Nicolini (2012: 221) confirms though the role of the researcher is to "capture and convey the actual work that goes into any practice", the ethnographic value of "being there" as an insider-researcher is further justified by understanding and interpreting the difference between what people say and do (e.g., in interviews, focus groups, artistic representations and artefacts) and what they really do (e.g., observations) so as to avoid making abstract representations of action.

The sensibility for practice approach (Sedlačko, 2017: 54) (discussed in chapter 3 and briefly mentioned in the overview of this chapter) was adopted to address these methodological considerations and formed the loci of attention for fieldwork. Sedlačko's principles was further broken down into practical steps using Wilkinson's (2014) field-based research stages of legwork, fieldwork and deskwork was taken (see Figure 4.2).

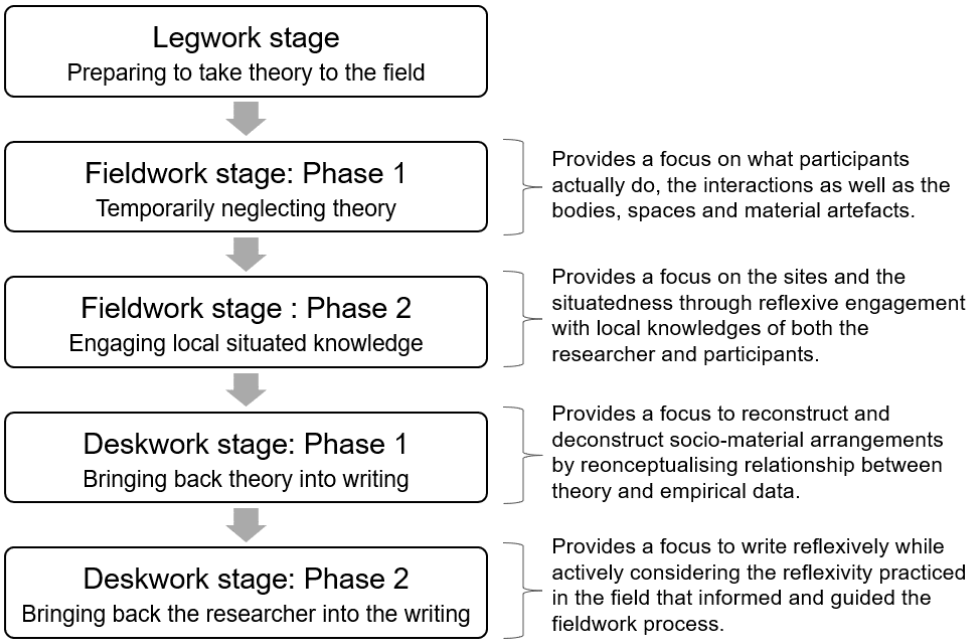


Figure 4.2 The structure of sensibility for practice approach

This interpretive approach to both the fieldwork and the reporting process offered a "way to reconceptualize the relationship between theory and empirical data" (Wilkinson, 2014: 404). During the fieldwork process, the emphasis was primarily on actual doings of academic and student practitioners, the interactions with one another both in the classrooms and the online platforms as well as the interaction with the physical/virtual spaces and other material artefacts. A process of reflexive engagement that took into consideration the local understandings and knowledge of both my own and

those of participants (i.e., the academic and student practitioners) comprising the situated, contextual, and experiential knowledge. This local knowledge gained from field work, interviews, focus group discussions, artefacts and representations of vignettes offered multiple perspectives and interpretations that led to building thick descriptions of the context in which patterns of teaching, learning, and assessment practices were occurring, and were then further interpreted and analysed.

4.6 Researcher positionality and reflexivity

An ethnographic study within one's own institution, such as this, exposes a whole range of issues and biases, usually referred to as insider-research (Mercer, 2007), and the problematic distinctions between insiderness and outsiderness (Merton, 1972). These tensions arise because of the nature in which we all draw upon multiple forms of identification, one can find themselves an insider at one moment and an outsider at another (Merton, 1972), and thus the nature of relationship fluctuates constantly along a continuum between insider and outsider (Mercer, 2007).

Whilst conducting this research, I was working as an academic developer in the university's academic development unit for over two decades. This role created associations with numerous academics who have participated in professional development courses and programmes bringing in credibility with research participants who felt more comfortable working with me. I also had opportunities to work with senior leadership and management for a number of years. Insider researchers also have considerable credibility, trust, and

rapport with the subjects (in this case, the academic practitioners) of their studies (Mercer, 2007), and this became evident in how I was able to gain easy access to the nine course-sites and an exposure to details revealing the complexity of the social world be. However, this was not the case with student-practitioners, and I was seen very much as an outsider, and this also created difficulty in getting students become interested to participate in the focus group discussions.

As Hammersley and Atkinson (2019) highlight ethnographers themselves become the key research instrument and their interpretations are influenced by their own positioning. As an interpretivist researcher I did not embark on this study as a disinterested outsider, but rather I recognised my position and role within the research process. My experiences within the university as an academic developer for over two decades also meant that academic practitioners had formed preconceptions about me and my research (Mercer, 2007). My expertise and interest in the area of teaching and learning, the graded and gradeless learning also meant that I brought my own understandings and potential subjectivity (Merriam, 1988) into the research. Hence, I acknowledged these as influencing factors in this research process.

My dual-role as being the source of primary data as well as the sense-maker of data requires going beyond a statement of positionality and develop both epistemological as well as personal reflexivity (Wilkinson, 2014). As Wilkinson (2014: 391) notes this enhanced reflexivity mitigates the tensions between multiple forms of knowledge and practices that accompany them. He further adds:

> *"To achieve this, researchers can draw upon their own critical sensibilities. The resultant combination of personal reflexivity with epistemological reflexivity offers a way to generate new empirical and theoretical insights into the subject of study […] by no longer automatically privileging "expert" forms of knowledge over local accounts. Such an enhanced reflexivity […] offers a way to manage the problems of combining forms of knowledge that have by convention been kept separate and to move beyond the automatic prioritization of expert forms of knowledge, such as theory".*

Therefore, the quality of this reflexivity is closely tied into the trustworthiness of the account (Hammersley & Atkinson, 2019), and the effects were evident in all phases of the research process from initial selection of research topic and questions to final reporting of findings.

4.7 Methods of qualitative data analysis

This section describes the qualitative data analysis methods applied to the qualitative data acquired through participant observations of teaching and learning practice, dialogic interviews with academic practitioners, focus group discussions with student practitioners, artistic representations, and other artefacts. The goal of data analysis is

> *"to make sense of data […] to change or develop our descriptive and explanatory ideas' through an iterative process 'to go beyond the data to develop ideas that will illuminate them […] to link our ideas with*

those of others; then we must bring those ideas back to test their fit with further data" (Hammersley & Atkinson, 2019: 168).

Kunda (2013) emphasises that conforming the entire ethnography to a pre-selected theoretical framework can almost always be a mistake, and so this study employs both deductive and inductive approaches to analyse the data (Braun and Clarke, 2006). Thematic analysis is a flexible data analysis technique which provides "a rich and detailed, yet complex account of data" (Braun & Clarke, 2006: 78) and identifies "themes and concepts" embedded throughout the data (p. 80). The flexibility that this method provides is likely to introduce inconsistency, and thus requires "an ongoing reflexive dialogue on the part of the researcher" throughout this thematic analysis process (p. 82).

The interviews and focus group discussions were all professionally transcribed. Interview transcripts were then read, and preliminary comments recorded, against the contemporaneous notes taken during each interview and/or discussion. After each batch of interviews and discussions, the raw recordings and transcripts were coded.

4.7.1 Preparation of data (Stage 1)

Stage 1 involves initial preparation and familiarisation with the data. The in-class field observation notes were rewritten into expanded field observation notes. The interviews and focus group discussions were all professionally transcribed. Interview transcripts were then read, and preliminary comments recorded, against the contemporaneous notes taken during each interview and/or discussion. The first round of reading and interpreting data manually,

using highlight text on the expanded filed notes and transcription copies to identify words, phrases, sentences, adding descriptive or interpretive codes as annotations alongside the text. At this stage. I was not comparing the data across cases, and each of the cases are coded separately.

4.7.2 Deductive approach to interpretation of data (Stage 2)

Stage 2 consisted of a deductive approach to code and interpret the data through the four educational ideologies (see chapter 3, table 3.1) and the related ideologies of assessment (see chapter 3, table 3.3). This process was coded manually first, and the codes were input as comments into Microsoft Word. A Macro script was written to translate the codes into an Excel spreadsheet that include the comments and related reference text. This stage also consisted of a deductive distillation of the data through the prisms of the eleven TLR moments within the academic practitioners. This analytical process involved the use of Excel for manual coding of data extracts (from observation field notes, transcriptions from interviews and text explanations from artistic representations) were matched with the eleven TLR moments for each academic practitioner. The analysis and coding focused on what the data was exhibiting in relation to the research questions and the TLR theoretical framework.

4.7.3 Inductive approach to coding of data (Stage 3)

This stage involved the use of Attride-Stirling's (2001) multi-level theming method to inductively identify what was missed out from the analysis using the ideologies construct and the TLR analytical construct. Using this multi-level

theming method: basic themes extract the lowest-order premises evident; organising themes group basic themes to summarise more abstract principles; and global (super-ordinate) themes encapsulate the main ideas of the organising themes. This method generates a thematic network that starts from the basic themes and working inwards toward a global theme. Here again, the Macro script was used to translate the codes for the basic themes added as comments in Microsoft Word into an Excel spreadsheet.

4.7.4 Interpretive analysis of data (Stage 4)

This final stage an interpretive analysis to produce descriptions that are empirically grounded accounts of the site ontology.

4.8 Methodological challenges

My approach to classroom observations, interviews and focus groups generated vast data in the form of observation field notes, interview transcriptions, artistic representations. During the initial stage of analysis, I could see myself analysing and interpreting the interview data rather than on the observational data. This was a huge challenge to shift the focus and be disciplined to pay specific attention to the observational data to analyse, interpret and make claims.

A second challenge was with the process of analysis itself. I started with using various analytical tools such as Nvivo and MaxQDA, but I saw myself spending more time on the tool features rather than engaging intimately with the data which became counterproductive. I resolved this by going back to

traditional coding that enables a more critical, empathetic, and highly engaged approach to coding and analysis, where I engaged more with the data, that helped me familiarize with the data more extensively.

Moreover, I was also faced with the challenge of distinguishing and separating individual TLR moments from one another within the course-sites. This task of separating and coding TLR moments was especially difficult as the moments are intertwined and infused.

4.9 Ethical considerations and process

The ethics procedure and framework for the whole study was approved in advance through the Lancaster University Ethics Committee procedures and process. Approval was also sought from the University's Institutional Review Board where the study takes place. As observational studies are likely to pose risk to institutional reputation, they were carefully considered and addressed during ethics approval application with the universities. The agreed research design and processes were strictly adhered to.

This research did not involve any vulnerable individual or conduct any physical/psychological experiments with its study participants. To the best of my knowledge, there was no risk to the subjects for participating in this research. The only possible ethical-related issue of confidentiality was guaranteed to study participants both in writing and at the beginning of classroom observations, interviews, and focus-group discussions. At the start of each interview and/or focus group discussion, participants were reminded of the protocols, confidentiality, and the options for recourse if they wished to

withdraw from the study at a later stage. The study participants were also provided the option of having the interview or focus group voice recorded (or not). Interviews or focus group discussions, if recorded, were safely stored during the study. All information that could possibly identify participants have been removed from the transcripts and are not included in the final thesis or research publications.

4.10 Summary

In this chapter, the theoretical framework has been developed into a consistent schema of practical research methods within appropriate ethical and personal considerations. The challenge of integrating the data taken from these multiple disparate sources to coherently present them as valid findings forms the focus of my next chapter.

Chapter 5: Data presentation, analysis, and discussion

In this chapter, study data is presented, analysed, and discussed with reference to my initial research questions. This chapter zooms in on the enactment of site-based social practices identified during classroom observations. As I have confirmed in the earlier chapters, SPT is first used to view and describe individualistic doings as connected strings of actions and subsequently to examine those doings from a collective perspective that include opportunities for individualistic actions as well as the socialised structures within the course-sites.

Furthermore, I use SPT to investigate how these practices are constituted and conditioned by the proto-practice reservoirs and how they relate to the nexus of situated human practices and material arrangements in the course-sites. Finally, I highlight the conditioning factors and structures that reinforce, develop, or inhibit changes to each of the changing social practices and their interactions with its constituent elements. These include concepts on

> *"the physicality of human doing, the routine aspects of behaviour, the relevance of tacit knowledge, the significance of material artefacts for behaviour and the effects of explicit and implicit rules."* (Jonas, Littig & Wroblewski, 2017: xv)

Even as these individual social practices are isolated for analysis, the sociality constituted by the overlapping of different social practices is studied to make connections and links between individual behaviours and the institutionalisation of structural elements.

The data gathered from a wide variety of data collection methods in each course-site is equally rich, but also slightly varied across the different conditions of the course-sites. This richness of data enabled me to be adaptive and be context-aware in how I present and react to the different nature of the course-sites in the next sections of this chapter. The data and evidence from classroom observations of the course-sites, interviews, artistic representations, focus groups and artefacts are weaved in meticulously to describe:

(1) site-based social practices detailing what the workgroup (academic and student practitioners) does in these course-sites, their interactions, the spaces, and the material artefacts;
(2) the ways in which the workgroup's educational ideologies, assessment ideologies and their beliefs about theories of teaching and learning inform and translate into practice;
(3) the conditioning factors and structures that influence, develop and/or reinforce these social practices and the academic subjectivities of the workgroup; and
(4) the effects of these site-based practices on grades and gradelessness as well as on students' learning and development in the hybrid graded/gradeless environment.

The ecologies of practices and constellation of different TLR moments within the course-sites are presented to showcase the connections between practices and how the significant TLR moments and their interactions impact those practices. Pseudonyms are used for the course names and participants

to preserve anonymity. As detailed in chapter 4, the nine course-sites and the teacher participants include HRC2101 (Aidan), ERC1101 (Bryan), HGE1101 (Charles), HGE1102 (Ethan), HGE2204 (Grace), HFM1101 (Harvey), ERC1102 (Sophie), HFM1301 (Nicole), and HID1000 (William).

Identification and discussion of specific site-based practices follows the ecologies of practices analysis. Finally, the identified practices are comparatively analysed across the different course-sites. This investigative and interpretive analysis into site-based practices also reveal the factors and structures that condition and constitute the practices. More importantly, specific attention on how the HGLE system plays out differently between the courses and are filtered through different TLR moments is given.

Chapter 6 takes this analysis further, both at a theoretical level of what the data means and, consequently, the practical lessons from this study that are applicable to the academic and student practitioners as well as the university as a whole.

5.1 Beliefs and attitudes towards HGLE policy

Before zooming into site-based social practices, I preface this chapter by reporting briefly on the workgroup's underlying beliefs and attitudes towards HGLE system and policy. This is important as it impacts and conditions the practices at the course-sites. The data from observations, interviews and focus group discussions confirmed the workgroup's strong belief that HGLE system at the study site supports students by reducing stress; providing a fail-safe option; helping them adapt to the higher academic expectations and new

social pressures of university; and transitioning smoothly into university. Students strongly believed and one that was evident from my observations at the nine course-sites was that HGLE system was a key factor that enabled students to immerse in the learning as it offered the opportunity for discovery, exploration, experimentation, while taking academic risks as they explored courses out of their comfort zone. Students confirmed that their intention to learn foundational concepts was important with or without grades. They argued that gradeless for them did not equate to a lacklustre attitude to learning but instead to work hard to succeed in all courses they take, be it difficult or unknown subjects. As one student explained,

> *Allows me to focus on the content and the experience of learning and helps me move away from 'learning for grades.' I go into the modules wanting to give my best. I also think that if I decide now [opting to go gradeless early in the semester], it changes the group dynamics within my group when I am working on group projects. The consequence is that my decision affects others' learning as well as their grade. I would not want to be an inconvenience to my group members.*

Students described the HGLE system structure practised at the university as being conducive to their learning and better than other systems practised elsewhere in Singapore and worldwide. They attributed this to the policy's flexible structure, summarised succinctly by one student as, "*the freedom and control to use when I need it*". Through such "heedful interactions", it was observed that student actions converge in how they collaborate, support, and

supplement one another gives rise to what Schatzki (2005: 480–481) refers to as an “emergent pattern” and “manifests collective mind”. It also highlights how within the HGLE site, both the nexus of human practices and materiality in the form of the HGLE policy shapes the actions. Students also reported that they found themselves allotting more time/effort required for selected courses (e.g., core courses, difficult courses, courses not in their comfort zone), and participating and engaging more in classes without the need to be competitive. Students and teachers alike also reported on some negative impacts: some students may exploit the system to maximise GPA, shifting of stress to senior years, and probably misplaced interpretations by employers.

5.2 The ecologies of practices and related TLR moments in course-sites

Teaching and learning practices are inherently social. These practices typically occur as academic and student practitioners engage in the teaching and learning activities within the confines of the classroom. This section examines the sayings, doings, and relatings that shape teaching and learning practices within the classrooms in interconnected and distinctive ways. This section uses summary diagrams that map practices—what teachers say (intended practices), what students say (experienced practices), what is observed (enacted practices)—and significant TLR moments to present, analyse, and discuss of the ecologies of practices within the classrooms at the nine course-sites. The diagrams illuminate the interconnections and interdependence between practices in the course-sites. As such, it succinctly illustrates the site ontologies, i.e., the intended practices and how the practices of teaching in each of the course-sites and the material

arrangements facilitate and/or hinder experienced and enacted practices of learning within that course site. It draws data from participant observations, dialogic interviews, artistic representations, artefacts, and focus group discussions, in conjunction with SPT framework for analysis. This utilisation exemplifies common thematic responses in the data to address the research questions.

The development of the summary diagrams adapts Kemmis and Mutton's (2012) ecologies of practice theory to illustrate the workgroup's sayings, doings and relatings in the nine course-sites. They illustrate the epistemological stance of academic practitioners and their PBK. They also feature the workgroup's academic subjectivities, their ideologies about teaching, learning and assessment in the HGLE environment. Finally, they draw out significant moments of TLRs that exist in the course-sites, including the congruences and tensions between the different moments. Table 5.1 reproduces a summary of the TLR moments discussed in chapter 3 for ease of reference.

Code	TLR moments
TLRM-PWR	Power relations
TLRM-TTL	Implicit theories of teaching and learning
TLRM-CAP	Conventions of appropriateness
TLRM-RPT	Recurrent practices
TLRM-TAS	Tacit assumptions
TLRM-CDS	Codes of signification
TLRM-DSR	Discursive repertoires
TLRM-SUI	Subjectivities in interaction
TLRM-MTI	Materiality in interaction
TLRM-BSP	Backstories in process
TLRM-RGI	Regimes in interaction

Table 5.1 Moments of TLRs

5.2.1 Mapping the ecologies of practices at HRC2101

The PBK in HRC2101 was observed to be participative, active, reflective, collaborative, and experiential. Students in HRC2101 confirmed that grades were not a motivating factor for their learning, but learning was a process of self-discovery and transformation as they interact with others in the class. The teacher's decision on what and how to teach initiated the way students engaged in their learning process. The reflective and participative PBK was initiated with the first course announcement, the first week's task and the sharing of expectations via the learning-focused course outline comprising weekly readings, tasks, and discussion prompts/questions (see Figure 5.1). This material artefact clearly communicated expectations—what to prepare before class, what to do during class, and what is required of students after class. It exemplifies teacher's conceptualisation of PBK, clarifies the activities of saying, doing, and relating, and activates the practices of active participation and reflection.

Figure 5.1 Sample outline illustrating students' learning journey in HRC2101

HRC2101 lessons were conducted in an active learning classroom located within a residential college (physical space). The teacher made deliberate arrangements and assigned diverse groups of students to be seated at the tables before every lesson. Students shared personal stories, their individual experiences during classroom discussions and after-class interactions (e.g., I listened in a student conversation of how a student and the family were coping with their grandfather's dementia). From these engaging discussions in and out of class time, it was evident that the sense of community, belonging and identities formed through meaningful relationships established within the residential college played a major role in how students engaged with peers before, after and during lessons both in class and on the course's social media platform (social space).

Both the physical and social space were factors that enabled the doings and relatings characteristics of different practices. These socio-material artefacts significantly influenced and set the stage for the performance of teaching and learning practices. The TLR moments of implicit theories of teaching and learning, materiality in interaction, the subjectivities of interaction and the backstories underpin the recurrent practices of class participation, active discourse, and reflection. Figure 5.2 provides a summary of practices and significant TLR moments within HRC2101 course-site. The teacher role-modelled in class, guided students in active discourse and asked probing questions (doings).

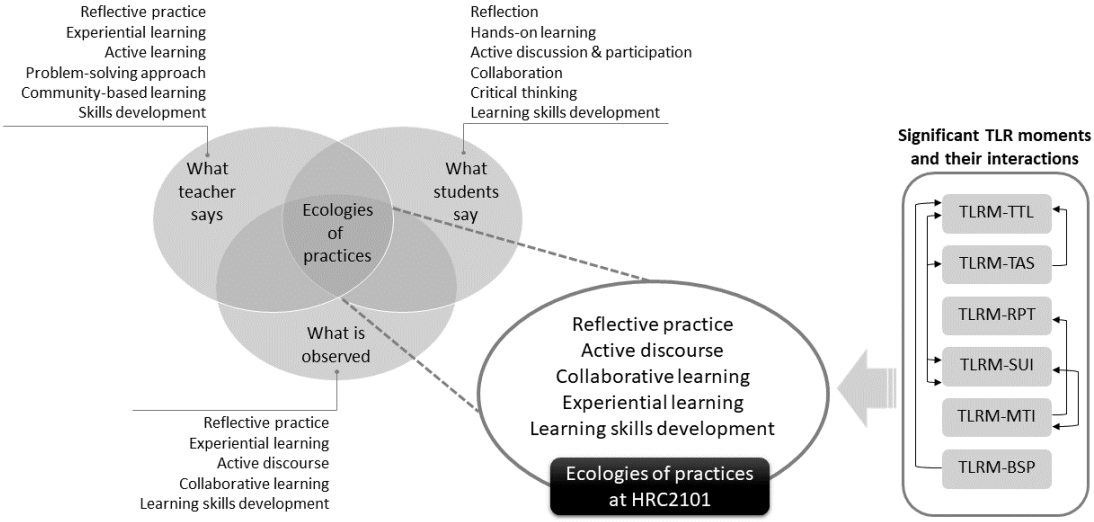


Figure 5.2 Mapping HRC2101's ecologies of practices and TLR moments

LEGO activity (see Figure 5.3) introduced during the first lesson and repeated multiple times during other lessons was a manifestation of reflective practice. The level of challenge increased with every iteration and necessitated a more personalised reflection. As I watched students perform this activity, I could see that it enabled students to construct a narrative of their personal experience using models (experiential) to tell their personal story (reflective) to the class (collective learning).

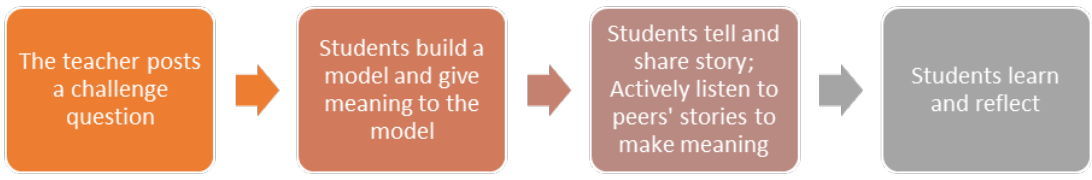


Figure 5.3 Initiating reflective practice through LEGO activity in HRC2101

The conceptualisation of this activity was a combination of: students' tacit knowing and knowledge gained over the weeks, applying accrued conceptual knowledge in context while also making meaning and connections with their experiences and their models, and forming relationships while working in

groups. The activity started with students building individual models, then coming together to build a shared vision taking core ideas from their individual models. It emphasised the practices of reflection, peer discussions, collaborative learning, and enabled students to value each other's voices while envisioning the future of the community they live in. More importantly, it prompted students to consciously think about social responsibility, the concept of relationship, and their personal actions. These made HRC2101 a site for social transformation and aligned with Aidan's educational and assessment ideology as gleaned from the interview.

In another hands-on exercise where students role-played as elderly by donning ageing body suits (designed & developed by the teacher), I observed that the exercise not only fostered reflection but also instilled care and empathy in students. The classroom was purposefully reorganised to simulate an aged living space. The simulation included students role-playing as elderly, caregivers, and grim reapers both within (simulating indoor daily living) and outside the classroom (simulating outdoor activities). At convenient junctures during the activity, I talked to students, and invariably every one of them confirmed how the activity was making a lasting impact on their learning:

> *"The memorable experience was when we tried out the ageing bodysuit because it's pretty hard to teach empathy. I've always felt like you can make people sympathise with someone, but to teach people empathy, like getting into someone else's shoes, I think that's a pretty abstract and hard*

skill to teach! I think our Prof did that very well!"

(HRC2101, Alan)

"Dedicating a three-hour class to wearing something physical, going through the whole process, getting us to roleplay as different people was interesting and supported my learning."

(HRC2101, Feng)

From these comments, it is evident that students explicitly recognise the significance of artefacts and how it influences the interaction between people, practices, and the physical world. They illustrate the enactment of PBK through practice-based education—situated in a "practice-relevant context" that involves "reflexivity", "participation", "dialogue", "engagement" and "socialisation" into the real-world, their identities and future careers (Higgs, 2012: 4). This activity reflects the significance and the ways in which TLR moments of teaching and learning, materiality and subjectivities interweave in actuality.

HRC2101's assessment design included reflective assignments with feedback and project work that aligned with nature of a HGL course. The individualised, personalised, and localised nature of assignments challenged students to reflect on their own learning process, relate to others in the course-site and the society around them, broaden their perspectives from peers' experiences and chart the ways in which their thoughts change on a particular topic. The conceptualisation of assessments and activities in HRC2101 showcased the development and enactment of reflective and collaborative practice. After every encounter with new information/concepts gained from sharing

experiences, doing (e.g., Lego activities, project work) or observing (e.g., body-suit exercise), students were always provided the time and space to reflect and make meaning from the learning activities (e.g., reflective assignments). It is evident that not only are the moments of recurrent practices and theories of learning and teaching interwoven, but they are infused with students' reflective learning practice and as such conditioned them to a certain level of consistency and regularity.

Reflective practice was also emphasised with the teacher's relationship with the topic using an artefact. The teacher's modelling of reflective practice initiated and stirred students clearly into the practice. Student stories were very personal and highly reflective in nature:

> *"When I think about ageing, the one word to describe is non-confrontation […] The object I want to talk about is the red packets that I receive from my grandpa every Chinese New Year. The first red packet is an old, simple design, not fancy at all, probably came out in 2002. Every year without fail, my grandpa always has given this very same old type of red packet, and without fail always writes his name on the red packet. But this year, for the very first time, I received a differently designed red packet, because my grandpa could not wrap it himself; and so, I got a different one, [tears welled up as this student related the story; the rest of the class went very quiet] as my dad had wrapped it for him. My conclusion:*

the relationship is about time and ageing, and I look forward to exploring and learning from this course."

"I volunteer for boys' brigade. We send out NTUC [gift] vouchers to the residents staying in single room rental flats. This is a picture that I took recently during volunteering. For me, the relationship with ageing is very mixed. When I look at these single room rental flats, even when I know social services are providing all the support needed. I ask myself: Are they taken care of enough? Can we have a better outlook? Are there some who are left behind? This thought itself feels pretty grim to me. So, through this course, I want to learn more about how to provide better support for elderly in Singapore."

Teacher's careful choice of language in written communication and during class (sayings), planned learning activities, assignments, group project and classroom discussions (doings) were enabling conditions (semantic space) for the conduct of practices. The deliberate seating arrangements and carefully simulated classrooms (physical space-time) encouraged active participation and discourse in students (sayings). For example, the discussion prompts' language initiated and supported the practices:

Gawande describes three modes of patient interaction by doctors […] What kind of relationship do you think your parents/grandparents are most comfortable with? Which are you most comfortable with? Why? How does this help or

hinder discussions of your own end-of-life-care planning? Have you had the hard conversation with your loved ones, or have you experienced being alongside someone who was dying? What would be your advice for others who may be in the same position now or in the future?

They enabled students in reflecting how these sayings, doings and relatings come together to establish and initiate learning practices. Finally, even as repeated practices were valued in HRC2101, efforts to deliberately vary the routine through purposeful design of varied classroom learning activities enabled active engagement and deeper reflection into their own practice of learning was evident. Recurrent diverse opportunities drew students into the desirable learning practice:

> *"…incorporated different pedagogies, applied varied learning activities. For example, book chapters as weekly readings, Lego activities, eldercare facility proposal, post-it activity, role-play activities, etc., have helped us grasp complex issues."* (HRC2101, Roy)

For example, the seating arrangements were deliberately changed enabling each class to be a new class and allowed students to gain different perspectives from different students. It created an environment in which students could speak the language, experience the topic through interactions and peers' backstories, and deepen the practice of participation and reflection. I witnessed how learning occurred both at the individual level and at

the collective level through interactions with one another, challenging each other's opinions, and empathising with each other's emotions. Learning was co-created through interactions and through the metaphorical stories built around the artefacts/models created in the classroom.

What I found that clearly did not align with teacher's ideological position nor with gradelessness policy was that class participation was graded in HRC2101. From my observations and conversations with students, students confirmed that they would be highly participative even if this practice was ungraded. This is also evident in how months after the course ended, students are still actively engaged in the social media space—sharing articles and debating on issues and concepts—breaking down the academic and social boundaries. Making it graded, however, students argue have prompted some students to participate for the sake of participating, rather than making useful contributions to their learning.

5.2.2 Mapping the ecologies of practices at ERC1101

In ERC1101, the teacher's beliefs about connecting teaching and research were revealed during the first lesson as Bryan explained his choice of case studies and problems for the course. As students shared their motivation for taking the course, their discipline, and interests/hobbies in the introductory lesson, he made deliberate connections to link the foundational concepts to students interests and/or their disciplines. From the lessons I observed, new learning practices were formed through students' experience of being in

Bryan's classroom as a reciprocal response to his repertoire of ways of teaching (see Figure 5.4).

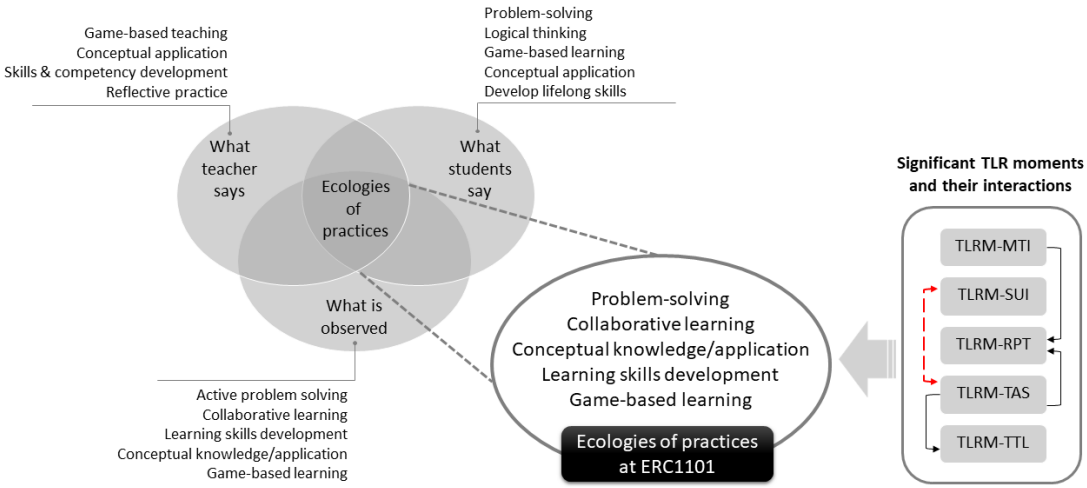


Figure 5.4 Mapping ERC2101's ecologies of practices and TLR moments

Though the initial few lessons were primarily didactic transmission with little or no interaction between the teacher and his students, I observed that the focus was on transferring conceptual knowledge and demonstrating the foundational skills required of the discipline. Students were initiated into forming self-organised multidisciplinary project groups. This autonomy enabled students to choose groupmates with whom they had already established close relationships either because of having lived in the same college, having spent time collaborating on academic tasks, or having participated in college activities to collaborate on classroom/project tasks. The individual identities, subjectivities of the teacher and his students are conditioned by the community of practice in which they operate, in this case the residential college and the classroom.

For the next eight weeks of my classroom observation, Bryan orchestrated a routine practice of solving problems, developing models, and collaborating in groups. To initiate and develop these practices, each lesson had five distinctive stages. In stage 1, homework problems were reviewed to highlight the common mistakes and misconceptions; in stage 2, new essential concepts/terminologies were introduced and modelled through example cases; in stage 3, the problem (usually 2-3 problems every lesson) was presented; in stage 4, students worked in groups to discuss and solve problems; in stage 5, students draw their models on whiteboards, as the teacher rotated within groups to provide feedback on student solutions and/or ask questions; and in stage 6, student groups presented their models, usually with a narrative to explain their model while other groups listened in. My conversations with students after class, my classroom observations and the student interviews confirmed the students' beliefs that the entirely gradeless nature of ERC1101 was a conditioning factor that put students' focus on their learning process and learning experience. This was further supported by the material artefacts—the classroom environment and its layout—as it encouraged students to work together in groups (TLRM-MTI) on their problems and models (see Figure 5.5).

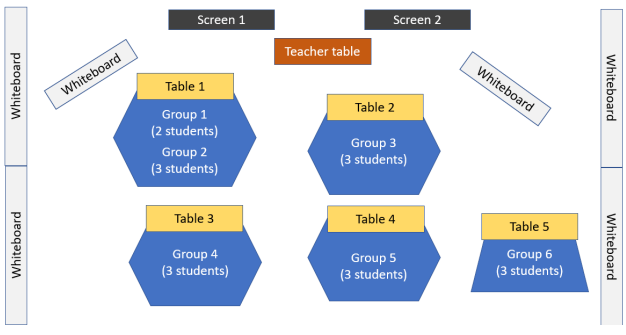


Figure 5.5 Classroom layout and the project groups in ERC1101

The excerpt below from stage 4 highlight the practices of scaffolding the development of conceptual knowledge, problem-solving, peer discussion, and peer learning.

S1:	*Ah, this is where we missed a step!*
S2 & S3:	*Wah lau!* [slang for "oh my gosh! I can't believe it!"]
S2:	*What will be the loop here?*
S1:	*So, what do you see here? We can't tell right… I am trying to see the pattern, but I still don't see the pattern. Do you see?* [S2 called on Bryan to ask a question]
S2:	*How do you know if this Causal Loop Diagram is correct for the entire story? Is there a way to confirm?*
Bryan:	*The imagination and your diagram is not just out of thin air, right? If there is a reinforcing loop, it will give us a confirmation. Here, this storyline tells me that there is a radical extremist attack, and that results in a backlash attack on minority. This reinforces, and thus the reinforcing loop!*
S2:	*I have another question on the polarity.* [discussion continued…]
S1:	*Now, it makes sense, right… we can just put it separately. Ultimately it is the dynamics, the graph will mean the same thing!*

In stage 4, it was common to see students work independently to generate individual models before working in groups to explain their approach and/or solutions to other group members, their own viewpoints, and in the process, they learn from one another. Figure 5.6 showcases how teacher's modelling the problem-solving is manifested in students' problem-solving practice—in how they approach the problem; how they identify key concepts/parameters (illustrated by different colours).

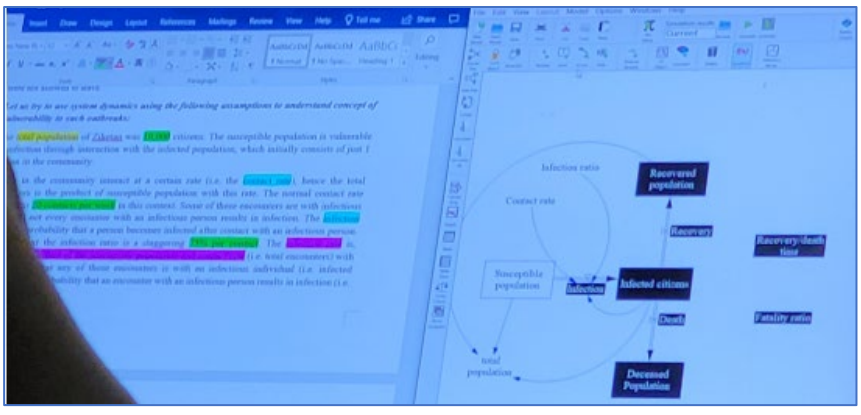


Figure 5.6 Students' problem-solving practice in ERC1101

Once students gained sufficient practice, Bryan introduced an additional scaffold through a game-based approach in stage 4 to further strengthen students' model building. Bryan's explanation of the approach illustrates the significance of material artefacts that interact between people and practices.

> *"I am using the game as a source of data for students. Students first play the game. After playing the game, you will see that they have used things like compliance, trust, willingness to participate, number of times they came to the meetings. These human dimensions come only after playing the game, and what you see is that there is a richness in the variable types. […] overall, the system or the problem identification has become richer. […] now that they have got the richness in number and type, how are they going to transform this into a simulation model."*

Students also explicitly mentioned the significance of this artefact, and how this TLR moment of materiality was significant in modifying their learning practices.

> *"More interesting aspect of this course was the Forest-at-risk [the game], because it really does put what we learned into perspective. And it was quite interesting trying to model the behaviour of such a dynamic group with so many factors into a Vensim diagram […] And I think that is very reflective of what human behaviour is really like, because we don't make*

our decision based on just one thing, we make it based on a lot of different information". (ERC1101, Hans)

In stage 5, student groups move over to the whiteboard to draw their models having gained a shared understanding of the problem and the model. Bryan spent time with each group providing feedback on ways to improve their models and explanations. From my observation, it was evident that the teacher gained a good understanding of what was happening in the groups, how the student groups approached problems, as he listened in to small group conversations for interesting questions, common misconceptions, and provided just-in-time support to groups that needed help. I could also see how Bryan unconsciously acquired implicit tacit expertise and knew the rules tacitly. He explained to students in class how it requires repeated practice to gain that level of understanding. He shared with me after a lesson as to how it was challenging at times for him to articulate that explicit understanding to his students, as he himself was gaining experience in the field.

In the final stage, Bryan provided feedback to every group's model, while other groups listened in (peer learning). In these lessons, students needed to move away from the comfort of their tables to whiteboards producing active engagement with the activity of problem solving, and peer learning, compared to classes where a whiteboard was placed next to the tables, and in such cases only one student would write on the board, exhibiting the impact of the materiality in interaction moment.

Bryan's tacit assumptions that students spend less time on an EGL course influenced his teaching practice. He provided repeated opportunities for students to substantiate the learning practice of problem-solving and meaning-making in class. This was confirmed during my observations—students were actively engaged during stages of problem-solving and sharing (stages 3, 4, 5 & 6), but were less engaged during didactic lectures, sometimes even exhibiting signs of boredom and tiredness (stages 1 & 2). His assumption was also evident in how groups addressed homework problems, not all groups submitted the optional homework. This assumption conditioned his teaching practice of providing multiple scaffolds—process, thinking, and instructional scaffolds (e.g., teacher breaks down the question, asks probing questions, provides further explanations) during the different stages. This illustrates how the teaching practices and learning practices are initiated, developed, and reinforced. First, the students were being initiated into practices of engaging in informed ways into the disciplinary world of systems thinking. Second, they are initiated into engaging and collaborating with peers in problem-solving. Third, students are initiated into the practice of drawing and describing models, a step towards becoming a practitioner of the discipline. As the weeks progressed, these practices overlapped, and learning occurred through repetition of the intended learning practices.

5.2.3 Mapping the ecologies of practices at HGE1101

In HGE1101, a flipped classroom style of teaching practice was observed. Charles pre-recorded his lessons as video lectures and required students to watch them before the synchronous online problem-solving classes. It was

observed that the pre-recorded lectures explained new, unfamiliar, complex concepts/terms using clear illustrations, analogies, and demonstrations while consciously avoiding technical jargons (see Figure 5.7 for examples). The video lectures also made deliberate linkages between the different topics of the course, and employed thought-provoking questions, and at times, contradictory statements to emphasise key concepts. This leads to the question of what specific practices were developed in students, given that this is a HGL course.

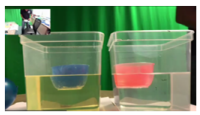
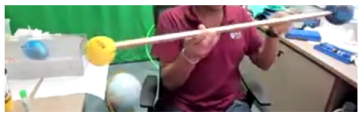
Use of analogies	• The coloured rings that separate out: the separation happens because of different densities of your milk and your tea. (to explain: density stratification) • "*You can make a happy person sad; a sad person happy depending on the projection. So, there are distortions, and there are many, many different projections*" (to explain: distortion of features and projection types) • *"Mt Everest is about 8000 meters high, and so you can take Mt Everest and turn it and put it inside the ocean, it's that deep!"* (to explain: depth of the ocean) • *"When you look up to see the [air]plane flying, you know it is tiny in size. [Air]planes normally fly at about, say 30,000 feet, that is about 10 - 11 kms, that is how much water there will be so if you're at the bottom of the challenger Deep. And you look up there'll be water from where you are to all the way where the plane is, that's how deep it is."* (to explain: depth of the ocean)
Intriguing topics/questions	• *If there is so much water, why is there a 'water crises'?* • *How will you convince a 'FlatEarther' that the Earth is spherical and not flat like 'Discworld'?* • *Sunshine on my shoulders* • *The sinking feeling*
Use of demonstrations	  

Figure 5.7 Strategies for teaching complex concepts in HGE1101

HGE1101 students were initiated into problem-solving both during tutorials and when collaborating in group projects to produce an artefact. As a way of initiation into the problem-solving practice, the students are taught how to approach the problem, apply concepts to solve problems during lessons. In each lesson, Charles stirred students increasingly into problem-solving activities, and ways of relating to the scientific world that are relevant to the practice of problem-solving. This was done through classroom demonstrations

and analogies (see Figure 5.8). More time was expended on complex questions/problems while prompting students to take the lead to solve simpler questions (e.g., recall type).

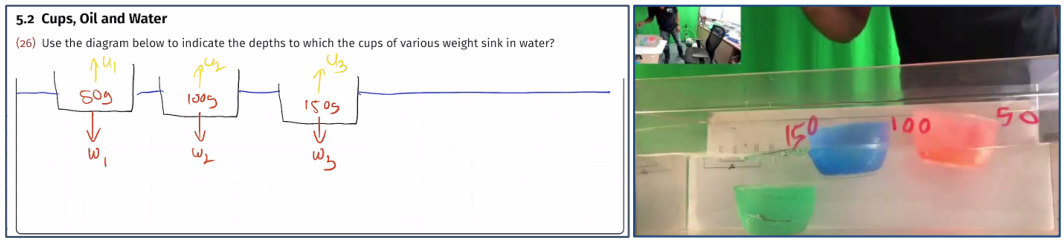


Figure 5.8 Problem-solving practice + class demonstration in HGE1101

Students were observed to have multiple practice opportunities to apply concepts, work out solutions, ask questions, review answers with peers, engage in discussions with peers, clarify/respond to peers' questions during in-class exercises (see Figure 5.9) and solve weekly quizzes. Student participants confirmed how they benefitted from peer learning and discussions during class. The video assessment task and assessment artefacts initiated and developed collaborative learning practice with peers in groups. The video assessment also instilled the practice of peer learning through peer-to-peer feedback when they assessed other group's work.

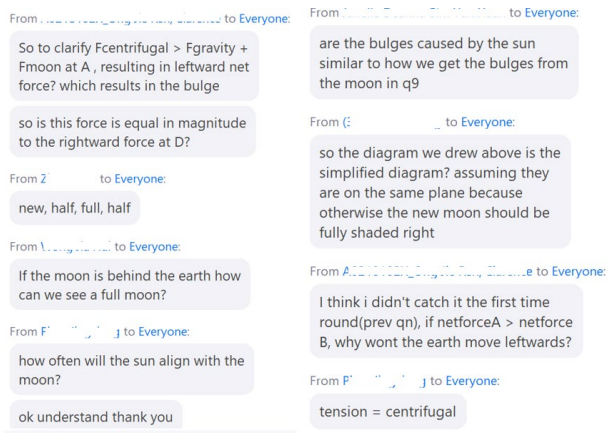


Figure 5.9 Excerpts from student Q & A in HGE1101

Charles inducted students into the practice of asking questions before every lesson as they reviewed video lectures and worked on practice problems/quizzes (see Figure 5.10). Simple questions were answered via the ‘Ask-a-question’ platform, but complex problems were reviewed and tackled live during class, and at times demonstrations and explanations were used to initiate students into problem-solving and meaning-making. However, it was noteworthy that this questioning skill was not explicitly reported either by the teacher or the students as a learning practice developed in HGE1101.

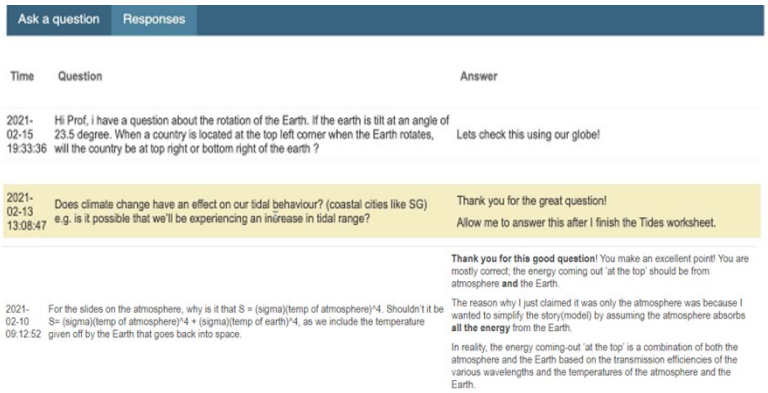


Figure 5.10 Student questions on HGE1101’s ‘Ask-a-question’ platform

Assessment questions (e.g., quiz, worksheet, test, and exam questions) were designed for applicability in the real-world, drew inspirations from news items that students may encounter in their daily lives, thus enabling meaningful conversations with peers.

The implicit teaching and learning theories of problem-solving, skills development and mastery learning in HGE1101 (see Figure 5.11) are shaped by the TLR moments influenced by materiality and individual identities, subjectivities that are specific to this course. The material arrangements

applied to teaching and learning include the use of analogies, demonstrations, videos, and intriguing questions. The academic subjectivities of the teacher influences and conditions the pedagogical approaches and theories of teaching and learning.

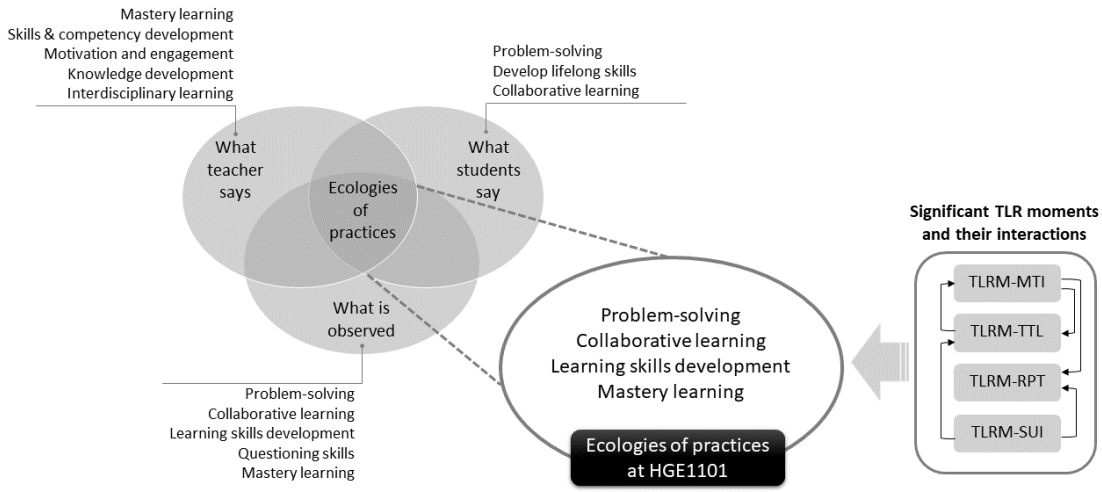


Figure 5.11 Mapping HGE1101's ecologies of practices and TLR moments

In employing a flipped format of teaching, Charles essentially moved away from the discipline's recurrent practice of getting students to work on problems at home towards a new practice of employing in-class problem-solving approach so that appropriate scaffolds can be provided when students encounter difficulty. In-class problem-solving was repeated in every class to establish and develop students' problem-solving and mastery learning as they worked alongside the teacher. This practice emphasised the availability of having an expert (the teacher) on the side when doing complex problems and being able to clarify students' doubts during class. True to the gradelessness nature, assessments were open-book reflecting the real-world practice of

problem-solving that often requires consulting with peers and readily available conceptual knowledge.

5.2.4 Mapping the ecologies of practices at HGE1102

A structured format of teaching practice was seen to be employed for every lesson in HGE1102. The persistent structure illustrates Ethan's conceptualisation of PBK for a foundational course. Here, PBK is enacted as students' performing the logical thinking technique. Lessons are structured to offer students repeated experimenting with the practice. PBK was therefore conceptualised as a combination of learning logical thinking rules, establishing contextualised working process, acknowledging tacit knowing, and applying the concept in relevant contexts to make connections. This was actualised with conceptual testing, conceptual explanation, modelling, and in the identification and clarification of misconceptions.

It was observed that a series of carefully designed conceptual questions were posed to students and required them to apply conceptual knowledge gained from the week's readings. Students were initiated into reflective practice by responding to questions individually, based on their own understanding before listening to expert's (the teacher's) explanations. For each conceptual question, concept tests were conducted via in-class polls. This forced even the most reticent student to become actively engaged in the practice of logical thinking during class as the in-class polls required individual voting. Moreover, answering in-class polls were rewarded with token grades and hence almost

always had full participation from students. It was observed that grades influenced the practice of class participation in this HGL course.

Another practice developed in HGE1102 was that students engaged with the readings before, during and after class. This was also confirmed by student study participants. They explained that in-class polls provided them with the motivation to read course materials and gain a basic familiarity with the content and/or concepts so that they are ready to engage in thoughtful application of that conceptual knowledge in class.

The HGL nature of the course prompted Ethan to make these concept tests formative. The utilisation of these in-class concept tests as low-stake formative assessments helped in gauging students' understanding of foundational concepts, not only for the teacher but also for students themselves. Students were seen to be more open to asking questions and thinking out of the box during lessons which deepened their logical thinking process. Before getting into the conceptual explanation and modelling phase, Ethan always shared the popular answer(s) that students arrived at.

> *"Your answers centre around d, e, f, and g. What that means is that there are a lot of disagreements amongst you, let me explain this further."*

This prompted students to reflect not only on their own thinking, but also be actively engaged with their peers' thinking process. I observed that students used the zoom chat, a backchannel (see Figure 5.12) as the social space for class-wide discussions, engagement and reflection.

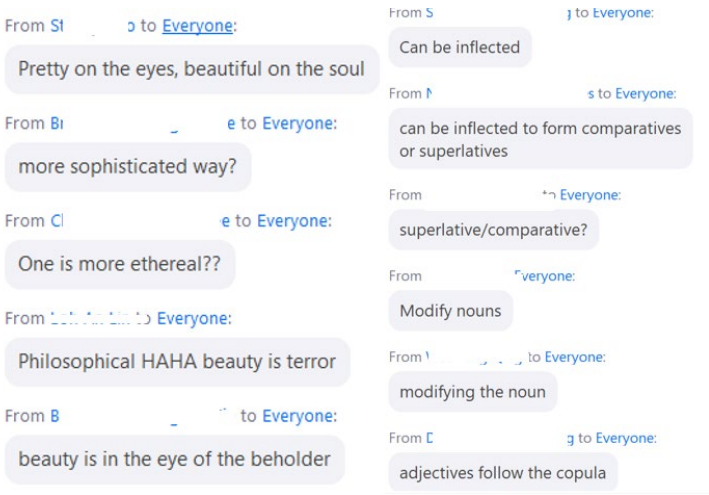


Figure 5.12 Students' engagement in HG1102's backchannel space

For disagreements in student answers during in-class polls, the teacher provided explanations illuminating common student misconceptions (see Figure 5.13). It emphasised the importance of active discourse and forced students to think through their own arguments and reflect on their own thinking process.

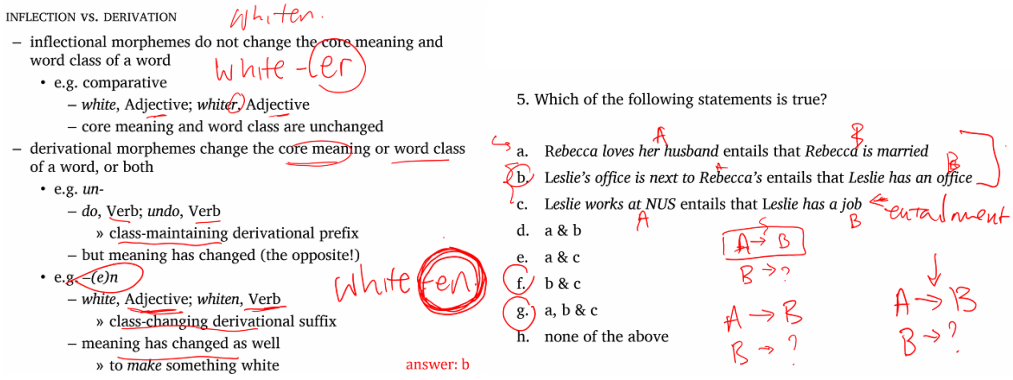


Figure 5.13 Samples of conceptual explanation and modelling in HGE1101

He often modelled several examples bringing in his own identity (see Figure 5.14) to illustrate application of difficult complex concepts and to reinforce the logical thinking and problem-solving practice.

Figure 5.14 Modelling, conceptual explanation/application using personal examples/experiences in HGE1102

PBK was further emphasised in HGE1102 tutorial lessons, but it was conceptualised and enacted differently to achieve the same practices. Its enactment involved a combination of student-led problem solving, peer learning, and modelling of the questioning technique. The use of tutorials highlighted very different conventions of appropriateness concerning the role of students and teaching assistants (TAs). In this practice, there was an emphasis on student ownership, which increasingly, Ethan argued, is the purpose of university education (TLRM-CAP). Therefore, he required his students to initiate a dialogue with teachers/TAs when they required clarification/support while solving weekly problem-sets. His response and approach to these requests were never one that provided direct solutions, instead stirred students into the practice through scaffolds in how to approach the question, in how to break down their thinking process akin to how an expert would do by asking more probing questions. Moreover, this practice also encouraged students to engage in peer discussions and learning as they collaborate together in their own groups to solve problems, before asking the expert for help. These practice enactments model real-world skills required in

their future workplace—unpacking and interrogating the problem, questioning, working with others and making decisions. In these tutorials, the TA's role of giving feedback to students' solution rather than managing classroom discussions was also an important way of initiating TAs into the practice of giving feedback, a very important skill for their future as educators.

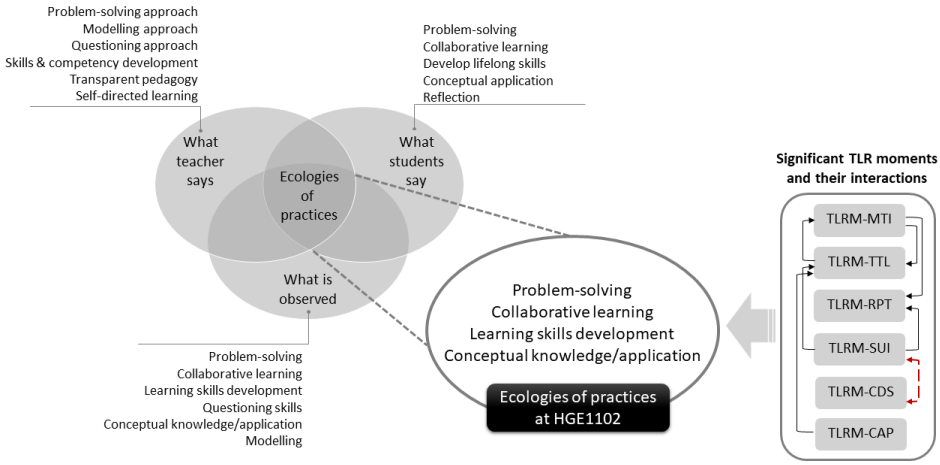


Figure 5.15 Mapping HGE1102's ecologies of practices and TLR moments

Ethan's broader beliefs about the need for repeated practice opportunities both inside and outside the classroom to support students' mastery of the logical thinking process informed his own practice. The teaching and learning practices in HGE1102 (see Figure 5.15) are further shaped by other TLR moments such as the materiality in interaction and subjectivities in interaction, that are very specific to this course. They are represented by the structure of facilitating in-class concept tests, student participation in the classroom, student-led tutorials, and the TA's and student's PBK. Conflicts amongst the different moments are noticed, especially between student and teacher subjectivities. From my observations of the tutorials, students wanted a direct (correct) answer to the problem when they approached the teacher with their

questions, but they were instead faced with more questions (usually broken-down further) from the teacher that gave students opportunities to practice logical thinking, questioning, and unpacking problems with the expert on the side. This practice, he said "*drives some of them crazy! Especially, if they ask their question and I ask them a question back*". This concerns how the codes of signification are evoked in relation to the interpretations of Ethan and the emotions evoked in his students because of his views and practice.

5.2.5 Mapping the ecologies of practices at HGE2204

The larger purpose of HGE2204 was observed as initiating students into becoming scientists. This was conceptualised by modelling an "exploration and discovery" process to learning, which was emphasised in how the teacher described her teaching pedagogy and practice. It was evident from my observations that the course's underlying goals were focused on students' gaining fieldwork experience to discover the discipline. This was achieved by getting students to pick a personal field study site—a practice that mirrors what a subject expert in the discipline would do. Students were introduced to different field methods and field skills as well as weekly question prompts to enable and scaffold the process of discovery learning.

PBK in this course was conceptualised and enacted through the "Singapore tree study" project, that students embarked as part of the course assessment. The project made links to concepts, methods and skills taught in the course. It started with the selection and observation of two different species of trees. Students made repeated observations of the trees over the weeks, formulated

their hypothesis, collected data (in this case, measured leaf sizes from two different tree species), analysed data, investigated why the two species were different from each other, and learnt to ask questions. In a nutshell, scientific method was practiced in a simple way: developing a good question, understanding the aims of their study, using methods appropriate to answer their question, followed by data analysis, visualisation, and reporting. This assessment practice clearly mirrored real-world practice.

Specifically, a practice-based education (Higgs, 2012) is used to enact PBK. The pedagogical approach is filtered through the rules grounded in fieldwork pedagogy and allowed for self-directed exploration and discovery learning in students. It was observed from students' field notebook assignments that the fieldwork practice was manifested, and they demonstrated independent learning. The teacher confirmed that her students "*become better scientists quicker and better observers by doing this personal field notebook assignment*". And that her students used field notebooks to "*do observations, interviews, interpret landscape and archival research*".

This conceptualisation also stemmed from her tacit assumptions that many of her students are unlikely to complete readings and tasks during the second half of the course (the period she was assigned to teach) as they become tired and exhausted; and require constant encouragement and motivation. The use of a field notebook emphasised fieldwork experience, encouraged students to discover their own learning while keeping them on task. This independent and self-directed approach to using field notebook instilled fieldwork practice necessary for the discipline.

Materiality in the form of large class sizes, imposed restrictions on collaborative work during the pandemic, inability for the teacher to lead field work instantiated implicit theories of teaching and learning, in this case, the independent fieldwork pedagogy. The lack of TAs to support group work also further conditioned this practice and led to introduction of easily accessible spatial tools for the many non-Geography majors in the course to visualise and experience the world as a geographer (e.g., Google Earth). Again, the practice to teach transferrable skills was conditioned by material artefacts such as the readily available tutorials without the need to reinvent the wheel. It was evident from my classroom observations that the teacher made informed professional decisions based on appropriateness: considering what would benefit her students and what would meet the expectations of their future workplaces.

Moreover, Grace regards her industry level contemporary expertise and her experience teaching at liberal arts colleges more favourably than that of the experiences of her colleagues and the educational discourse that they beholden. Her teaching practice of fieldwork pedagogy was thus theorised based on her own expertise gained in the field and working in an interdisciplinary liberal arts environment. The PBK enactment reflected her personal identity and the need to cater to the diverse identities, backgrounds, and knowledge of students in a general education large enrolment course.

These socio-material arrangements developed within the course conditioned what would be an appropriate PBK to help students develop a sense of identity to the profession. Not only do these TLR moments underpin the

practices recurrently performed but they are also significant as the practices transitioned with increasing class sizes and the pandemic constrained group work. Certainly, the significance of socio-material arrangements had become more exposed in this course during the pandemic. Figure 5.16 illustrates these TLR moments and the conditioning of practices.

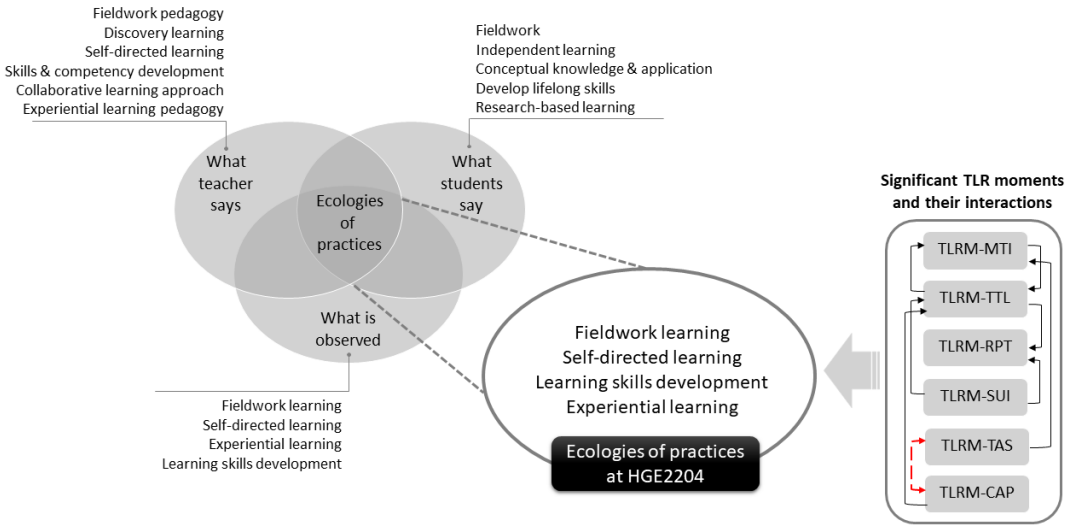


Figure 5.16 Mapping HGE2204's ecologies of practices and TLR moments

In summary, PBK in this course focused on developing skills and methods in the field that students could practice and use in their future workplace. These also illustrate the way in which practices are conditioned by the conventions of appropriateness of what is feasible in a large enrolment class during the pandemic without the availability of TAs to facilitate group work and field work. As can be seen, the lack of TAs in the department was again conditioned by the fact that the COVID restrictions inhibit field work which in turn only attracted a very small number of graduate students to the department.

5.2.6 Mapping the ecologies of practice at HFM1101

Harvey distinguishes between knowledge and practice in HFM1101 but views the two as being recursively interdependent. For him, knowledge exists as a foundation to establish basic understanding and working methods of the discipline upon which students' learning practices can take place. This echoes Schatzki's (2006) analytical distinction between practice as a coordinated entity and practice as the performance of actual actions and practices.

Essential components of Harvey's PBK are dialogical, conceptual explanation and modelling, storytelling, and development of disciplinary skills. He embraces a persisting organisation to his teaching practice and the associated material arrangements to support the practice. Every lesson's structure involved distinct segments. First segment began with a summary of the previous lesson. Second, students were not only given an outline of what to expect but were asked to ponder over intriguing questions for which they would discover answers during the lesson. Third, key foundational theories and concepts were introduced and discussed and were linked to real-world applications through authentic examples. These examples were easily relatable and offered relevance to local (e.g., Singapore, university), regional (e.g., Asian), and global (world) context. The third segment's structure reflects how the moments of materiality and subjectivities in interaction interweave seamlessly and reinforce each other. The pre-assigned texts and readings primarily included his own co-authored articles with past students (stemming out of their course work) and were interspersed at appropriate junctures during the lesson. Harvey modelled breaking down of texts/readings to help

students understand and become familiar with knowledge organisations and specific skills of the discipline. For example, he introduced a reading technique (ACMF technique: Arguments-Concepts-Methods-Findings) that showcased how he, as an expert, would read and process readings/text demonstrating to students an expert's way of reading journal articles. From the many examples and exercises in HFM1101, it was obvious that the teacher was helping students form an identity—both professional and disciplinary— emphasised through a situated and contextualised approach to university education.

The lessons were interconnected, i.e., there were deliberate linkages between lectures, tutorials, and pre-assigned readings. We could also glean how the occurrence of each of these events support students' learning practices. Every segment employed meaningful interactive activities and engagement strategies (e.g., probing questions, connecting student answers to peers' ideas, elaborating on student answers) to initiate an active discourse. Class participation in HFM1101 was ungraded, and were purely for students to think, to express their thoughts, to listen to peers, and to learn from peers. These emphasise the fact that socio-material and discursive arrangements are part and parcel of the performances of actions and are not separate entities. I will take one lesson from HFM1101 to showcase how the different moments interact with one another.

Segment 1 began with a recap of the previous lecture's content. Figure 5.17 demonstrates how it is purpose-driven to frame the development of student identities.

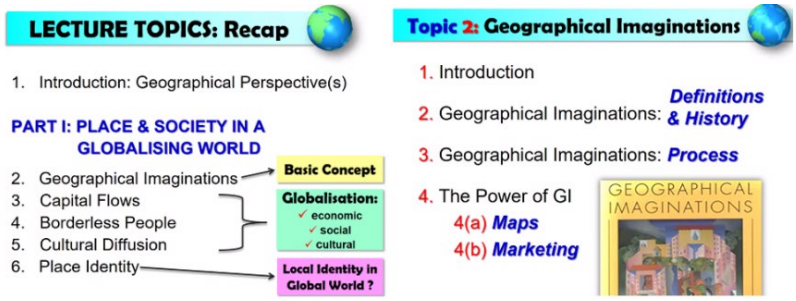


Figure 5.17 HFM1101's sample lecture slides on "Recap" and "Outline"

The recap slides illustrate emphasis on the course's key objectives and skills (Figure 5.18). Here again, material artefacts are used to equip students form a professional identity—the skill of capturing geographical or spatial imagination, which Harvey referred to as "acquiring a pair of magic eyes".

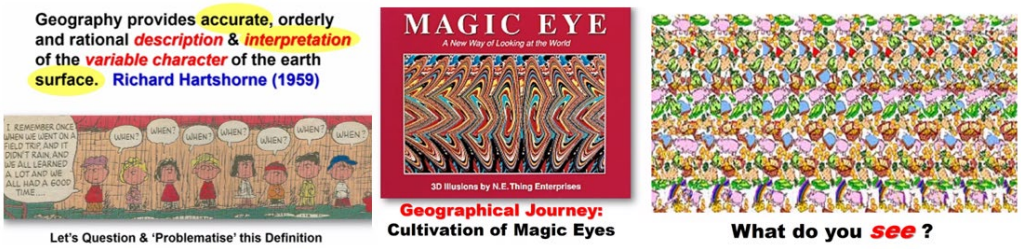


Figure 5.18 Recap of fundamental disciplinary concepts in HFM1101

The description of lesson outline was never a listing, but usually detailed the lesson's aims and objectives (see Figure 5.19):

When you look at the outline, I am also talking about the aims, the objectives; you may not see the word study objectives or lecture objectives, but this is basically the objective. I want to introduce to you this topic called GI, but I also want to introduce to you three readings. So, introduction will be just a brief overview of that topic and then introduction to the readings.

Next, I'm going to go into the definition and history, who came up with GI. Actually, that didn't come from a geographer, but geographers thought "hey, this is a wonderful idea let's call this term". So, I give you a bit of a history, some definitions of GI, then we will go very briefly into a process, what is this process? Now, whenever you see the "ion" word—urbanization, modernization, globalization or in this case, geographical imagination? "ion" is taking place; it's an ongoing process. So, I want to unpack this process. Point number three, there are no readings on it, so I found is a bit like whoa it's a bit difficult for students to understand just definitely history and then immediately go into examples right.

So, #3 has no reading, it is my own thinking about, "hey there is a process here, let's look at this step by step". I think there are five steps in this process, and we will be looking at the five steps, quickly and briefly. But I would always want to end all my lectures with examples. In other words, the theory, the concept—it's not airy, there is some real-life application, and we will see the real-life powerful application of GI in the form of maps. And for marketing of places, I will be very brief, because we don't want to steal the wonder from tutorial 1.

Figure 5.19 Harvey's description on the structure of his lesson

Segment 3 primarily illustrated the main concept by making connections, asking questions, and describing how concept of GI to be very subjective, social, i.e., external agents (e.g., the media, family) can influence GIs of individuals, and are contested, i.e., they are not singular and are highly subjective (see Figure 5.20).

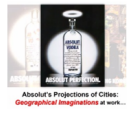
Harvey:	*What comes to your mind when we hear the word, North Korea, or Pyongyang?*
S1:	*Communism*
S2:	*Very secluded place*
S3 (on chat):	*Isolation*
S4:	*Kim Jong Un*
Harvey:	*Where are you getting this information from? Have you visited? Pyongyang? Well, if you visited you probably are not back in Singapore right now! See, I'm already adding some geographical stereotypes. How I bet none of us have been to North Korea? So, where are you getting all this information from secluded Communism Kim Jong UN.*
S4:	*From the media*
Teacher:	*From the media, you are reading*
S5:	*TV channels, mostly Western media like CNN*
S6:	*YouTube*
Harvey:	*Okay, so remember these three things: natural and spontaneous before you even read anything, before you hear your parents say something, but then they come in, it becomes your social views are probably affected by social external factors and agents, but ultimately nothing is singular.*

Figure 5.20 Explanation of concepts through class discussions in HFM1101

Harvey referred to prominent experts of the discipline, their theories/process helping students gain inroads into the discipline from the eyes of an expert. He purposefully and repeatedly connected new concepts to the course's big idea and that of the discipline. Examples aligned with course objectives and centered on developing students' skills (e.g., acquiring magic eyes, becoming spatially and geographically conscious), while taking student's context into account (see Figure 5.21).

Harvey: *If you have not read Chang and Lim, you can participate in this. If you have read it, because they're so hard working, then you know the answer keep quiet.*

Harvey: *Okay, I never drank "Absolut" vodka, but I love "Absolut" forecast advertisements. Nothing else you don't see like something else, like you know Singapore airlines or IBM will have all kinds of people. But "Absolut" always keeps to just showing a Silhouette of a bottle but is my favourite series of advertisements! It's this campaign, but to me it is GI at work.*



Harvey: *What is your GI for this "Absolut Chicago", "Absolut Hong Kong"? Harvey: And this is called a city series.*

Harvey: *What is happening with Chicago? Here anybody? I'm sure you all know Chicago's cold, right? Anybody?*

S1: *So windy city.*

Harvey: *Correct! Why is it called the windy city?*

S1: *Because of the climate there.*

Harvey: *Yes, it is beside one of the Great Lakes. Yeah. So, it's very windy! Nice! What about Hong Kong?*

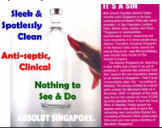
[...]

Harvey: *I love this series of advertisements but was just waiting for it to come to Singapore! And it came to Singapore. I was so disappointed when it was revealed. What do you think it will be? Anybody? There's no right, no wrong answer, which you draw your GI of Singapore to be. But you must have this bottle okay, in mind.*

S2: *Merlion*

Harvey: *Merlion, OK. Shape the bottle as a Merlion standing up right? yeah after drinking too much [...] Thank you very much anybody else.*

S2: *Orchids*



Harvey: *Make sense right. Orchids, good idea! But not the orchids. But you are even more creative than "Absolut".*

Harvey: *What excuse me, all these other cities are so many things you draw. Look at all this so much thought into put into your city and then Singapore nothing. This is the emperor's new clothes okay! Naked, excuse me there's nothing at all! But, in a way, then the GI represented of Singapore—so sleek, sophisticated, spotlessly clean, and therefore this nothingness we give you because Singapore is spotless.*

Figure 5.21 Explanation of concepts using examples in HFM1101

Examples during each lesson often included photographs, advertisements, speeches, songs, and videos—all of which easily relatable to students—asking students to put on their critical magic eyes when they listen and/or see.

Let me take one final example of concept explanation (see Figure 5.22) to showcase how it brings in authenticity and relevance. Concept explanation featured students' own work to help them see their own interpretations, peer interpretations and expert (teacher) interpretations (i.e., see how teacher models and uses his magic eyes to illustrate how he interprets students' work through individualised captions for each piece of student work). These repeated discourses remind students of the need to listen to different points of view, but they further nudged students to engage more with teacher and their peers. This also illustrates how the cultural-discursive factors can condition appropriate discourses of the discipline and help students form their own professional identity.

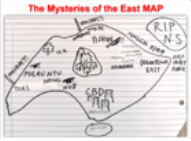
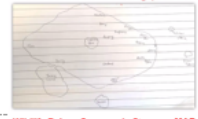
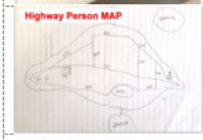
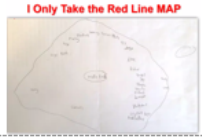
Nothing to See & Do in Singapore MAP 	*T: In three minutes somebody drew this, so I think this person probably should go out more often lah, okay. (laughs)*
The Mysteries of the East MAP 	*I bet you, this person stays in Serangoon area. How come that Serangoon...Kovan...so many detail. Then suddenly, I don't know what this is! My guess is this person stays in that part of the world [...] the East is mysteries I have no idea what happens! [...] even blanco out something, that's a perfectionist! so, I think you live there, whoever you are!*
The Unknown North-West Singapore MAP 	*Okay, this person will be like me I don't know what's happening in the in this part of Singapore actually right, I know that lots of farms, but I never go and visit so that most of us will be unknown Northwest. I think that person probably lives in North East Singapore, my guess!*
Wildlife Reigns Supreme in Singapore MAP 	*And yeah this one, this one is a BS student, bachelor of environmental studies student! No map of Singapore, simply animals!* *That's your impression Singapore, who says it is wrong, your impression of singapore, it's just as right as mine! but subjective right, we cannot contest, we can contest one another's GI but you know this is a very different GI.*
Highway Person MAP 	*This person I guess is a man who drew this. This guy I don't need GPS,* *Oh, my goodness guys are walking walking GPS* *machine okay. My guess is a male, I know is this being sexist or gender specific. Guys somehow like to draw transport things, but particularly a driver I bet you this is a driver, without a doubt! Ask you to draw Singapore in three minutes, draw highway right.*
I Only Take the Red Line MAP 	*Oh, my goodness, this person's girlfriend or boyfriend is on the West on a red line, so I know because I don't know where NUS is, I have no idea never been to Clementi yet.* *Stay home, stay home, everybody stay home, so I don't know I just know and, yes, implemented, but I don't know what the stops around Clementi, but this person goes up and down red line.*
Marina Bay is @ Centre of Singapore MAP 	*The other thing I realized is many of us put in the middle of our map the icons in Singapore, but is it really the middle Singapore?[...] you all know, flyer, MBS, esplanade that's all in the south, but in your mind CBD central business district, icons of singapore, let's put in the middle.* *So, sometimes, what you like you put in the middle.*
I Love Zouk MAP 	*I think you all know what is this person's favorite place to go to every weekend*
Political-Minded Person MAP 	*Shape of Singapore is wrong, nevermind! But I know my constituency Okay, we just had election last July, I remember my constituency, but nevermind dont care the shape of Singapore so maybe this person is very into elections are you just finish it.*
... or "General Elections Just Over" MAP The Island-Lover MAP 	*None of you have have islands, that's why I love this map! Look at how many islands Singapore got 50 something .* *So let me show you how many islands Singapore has, So this is just one is inundated with islands.* *Very good sshow Malaysia, Indonesia, all these islands are ours okay so.* *Maybe this person lovess islands, maybe this person has visited islands right*
It's Only 711 sq. km. MAP  It's Only 711 sq. km. MAP 	*okay let's end with this map!* *Why you're drawing big pieces of paper Singapore so nice look at this person, send me such a small thing, but to give me a sense of scale, sometimes I see your pen I see your phone, this is a pencil.* *And paper clip to tell me since I saw some of these people drawing on big A4 sheet of paper, I will give youwith props to show you how small Singapore is.* *But is this person wrong? I don't think this is wrong! this person's GIs so small, why.* *Why bother to bring all the details, it is a little red dot on a piece of paper only three lines worth a paper that's the size of Singapore*

Figure 5.22 Concept explanation using students' work in HFM1101

The teaching and learning practices in HFM1101 (see Figure 5.23) are influenced primarily by: the material artefacts, the developing professional identities of students, and the established professional identity of the teacher, that are specific to this course. They represent local instantiations applied to teaching and learning, such as the use of visuals (pictures, videos, audios, speeches, examples), student artefacts, the identities of students and teachers in interpreting the concept.

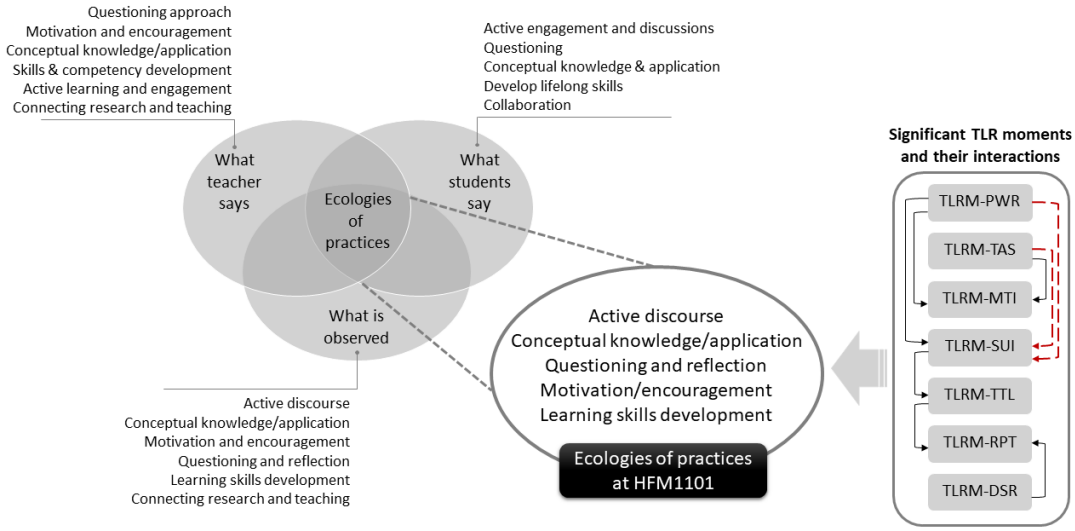


Figure 5.23 Mapping HFM1101's ecologies of practices and TLR moments

Tensions within the different moments are also seen as they accommodate the dynamism of the class, such as in how power relations and tacit assumptions impact the subjectivities in interaction moments and influences the way in which material artefacts are employed. Harvey had the power to achieve his aspirations—the practices of class participation and active discourse—because of his expertise in the profession. Students also recognised this, evident from the course attendance (above 95%), even though attendance was not mandated, and all lessons were recorded for

future viewing. Student participants also confirmed that they were being initiated into the broader substantive learning practices of engaging in active discourse, reading skills, and acquiring discipline-specific skills.

Similarly, the power that the teacher had on course curriculum design led to changes in lesson structure, classroom environment, quality of course materials and set the stage for the performance of teaching and learning practices and conditioned the different TLR moments in significant ways. Moreover, assumptions he made on the quality of being a good educator is in engaging students and developing their skills; and that students in foundational courses have very little university learning experience instantiated implicit theories of teaching and learning. Harvey was also very aware of his students' diversity in terms of knowledge, skills, background, discipline, and levels. The lessons reflected the appropriateness of the implicit theories of teaching and learning—in the strategies employed to engage students, in asking questions, in teaching lifelong learning skills, in designing assessment tasks. This was also evident in his teaching philosophy outlined during the interview:

> "*The classroom is a 'classroom of life' and is not confined to the four walls of a tutorial room, or inside that particular third floor of the school block*".

Figure 5.23 illuminates how the different moments shaped by the proto-practice reservoirs (implicit theories of teaching and learning; tacit assumptions; discursive repertoires) in HFM1101 connected with the

moments characterised by context and individual identities of the workgroup (power relations; materiality in interaction; and subjectivities in interaction) to set the recurrent practices in motion.

5.2.7 Mapping the ecologies of practices at ERC1102

PBK in ERC1102 highlight the prominence of active discourse and participation. This course-site is dominated by student-led seminars and focused on the practices of discussion, and reflection true to the EGL nature of the course. PBK is enacted by engaging students into leading seminar discussions based on topics from the teacher's research to show students how such research can be applied in their own lives. Practitioners and experts in the topic were also invited as guest speakers to provide different perspectives to students.

Sophie filters her pedagogical approach through rules which are grounded in self-directed learning and reflective practice. The practice of embracing students as partners in leading seminars led to independent mastery learning. Starting from the presentation, materials and the way in which students engaged the rest of the class, it was evident that students were mastering their own seminar topics:

> *"For me, I'm sure for the rest of the discussion leaders, they remember the content that they taught, the most […] because they will have had to understand and internalise the information before they were able to teach it to the rest of the class. I think these are mandatory checkpoints*

and a very good opportunity for us to get a gauge and self-internalise the stuff that we are learning in this gradeless environment".

The environment in this EGL course affected discourses, participation, and subjectivities in very important ways. The expectations shifted dynamically, but the factors underpinning this dynamism were very different. The tacit assumptions that both the teacher and students held about residential living-learning and its purpose in higher education, and the priorities that first-year students in a gradeless environment have underpinned the choice of practice. Sophie highlighted this point in her interview as she talked about linkages between student motivation and student attitudes towards learning in university. The motivation and interest level in the two sections of ERC1102 that I observed were very different—the first section had highly motivated, very engaged, and exceptionally participative students while the other section had a small group of less interested students who caused a negative knock-on effect on others in the classroom.

However, even with this disparity in motivation, the students leading the discussions in both sections were very well-prepared and managed to engage their peers (even the less-interested ones) quite effectively. The students who led the discussions generally mastered the content, self-internalised the concepts, summarised the topic succinctly, and delivered good presentations. My conversations with some seminar discussion leaders illustrated how they were stirred into the practice by involving themselves and participating in the practice and explained how the practice has taken shape and conditioned their learning in a positive way.

> *"A part of the presentation is a discussion that involves input from the rest of the class. And that kind of forces us to or at least on the surface, consider all the different points of view and perspectives […] allows us the opportunity to share our thoughts on issues that maybe more pertinent to the topic."* (ERC1102, Harry)

The classroom atmosphere was generally friendly and welcoming as students knew each other very well and were empowered to challenge and critique each other's thoughts and ideas. The meaningful relationships formed within the college and college culture conditioned this discussive practice. As one student told me:

> *"I will tell you something that is actually really beneficial; that I really benefited from this gradeless environment is that: when I want to ask questions, or raise questions in class, there isn't that certain sense of judgment that you really do need to ask a question that is like really mind-blowing, or very good. You don't think so much, but really ask questions, all for the sake of learning."* (ERC1102, Andy)

The assessment practices also exemplify the pedagogical approach through use of photo essays, reflective essays that instil individual writing and reflection. The group assignments, on the other hand, support collaboration and reflection. The discussion leadership and class participation are also used as assessment components.

The implicit theory of teaching and learning here is a social constructivist one, within which the PBK is enacted with students as partners in the knowledge co-construction and teaching process. Figure 5.24 illustrates these significant TLR moments and practices in ERC1102.

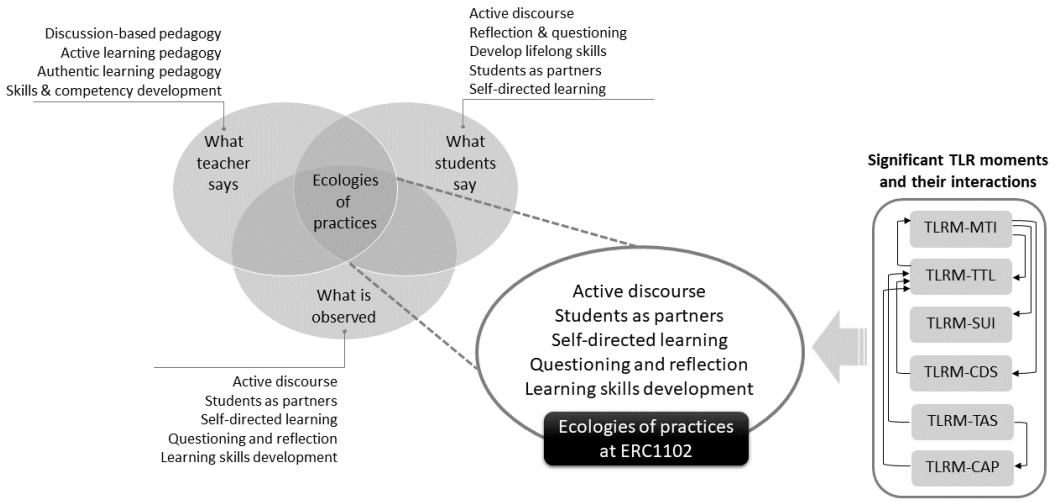


Figure 5.24 Mapping ERC1102's ecologies of practices and TLR moments

The classroom, in itself, remained a physical manifestation of residential living-learning: the small class size; meaningful relationships formed with peers within the college; the interdisciplinary curriculum; the diverse group of students; students' openness and willingness to collaborate and contribute. These material arrangements set the stage for the performance of practices and conditioned the different TLR moments in very significant ways. The practices were conditioned by materiality, and in a way that was beneficial to the students studying and living in the residential college. The emotional responses associated with the meaning of gradeless learning influenced the codes of signification. While that is true, the workgroup was being implicitly held against a set of assumptions and appropriateness about the nature of

education in a first-year EGL course conditioned the theories about how teaching, learning and assessment happens within this course. My conversations with Sophie confirmed that she had less expectations for her students to actively engage. On the contrary, students in the class demonstrated less inhibitions to participate and lead, and frequently favoured increased engagement with the teacher and their peers. Thus, they not only conditioned the subjectivities of the teacher and students; but they also appropriated the codes of signification; and shaped assumptions about what it is to study and learn in a gradeless course within a living-learning environment.

5.2.8 Mapping the ecologies of practices at HFM1301

Drawing connections between theory and practical was used to conceptualise PBK in HFM1301, a foundational science course. It was enacted using a mixed mode of instruction, a hybrid learning model. Here, digital content is combined with traditional in-class lectures, laboratory classes, and student-teacher interactions. Appropriate theoretical concepts were not only weaved into pre-lecture videos, in-class conceptual explanations and supplementary course materials (theory) but were also adeptly connected with in-lecture activities, face-to-face laboratory practicals, and self-conducted museum visit (practical). Though the lectures at times did become a vehicle primarily for disseminating information; but were still communicated in a very clear and methodical manner. The teacher practiced transparency by outlining her expectations in the course roadmap to support students in navigating/planning their course journey.

My participant observation notes of Nicole's teaching practices confirmed an emphasis on practicality. It was evident through the linkages made to the theoretical topics of her own areas of expertise, to the works of Asian scientists and authors, and to how science impacts her students and their environments through case studies about Singapore. During the interview, she explained why it was important to disrupt students' assumption that everything about science is found in textbooks. This example shows not only did Nicole challenge her students taken-for-granted assumptions, conventions of appropriateness and their entrenched recurrent practices, both of which are ingrained and invisible within the workgroup; but also attempted to change their practices by employing a transparent and contextual approach to teaching and learning. This reveals that the teacher's understanding of the backstories is vital to conditioning, constructing, and enacting a practice and exemplifies how both agency and structure could create a difference. Figure 5.25 is an illustration of practices and significant TLR moments in HFM1301.

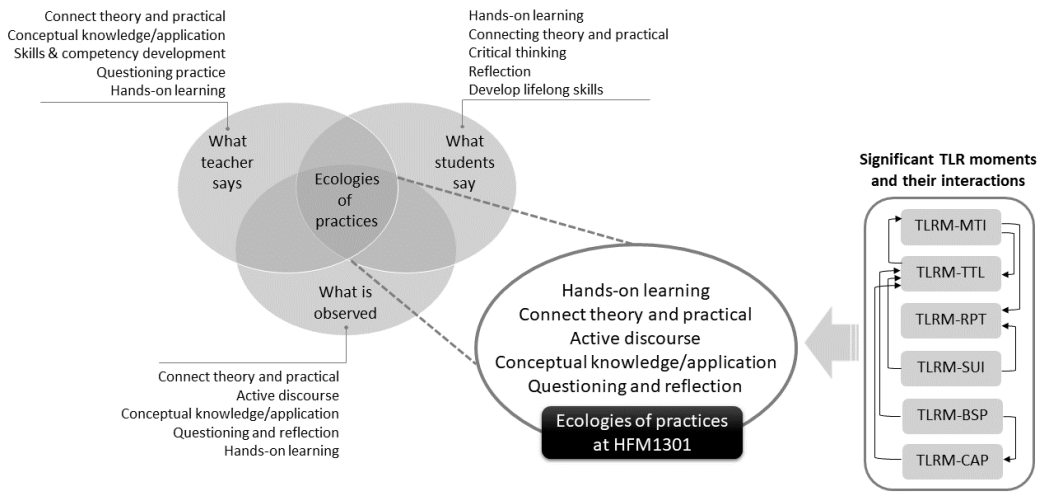


Figure 5.25 Mapping HFM1301's ecologies of practices and TLR moments

Nicole also regards PBK as helping students gain a strong foundation of the subject matter, particularly the threshold concepts and methods. This was attained through understanding of students' pre-existing knowledge (gathered using a survey questionnaire) using questions based on the course learning outcomes. The teacher then built on that background knowledge through a combination of appropriate in-lecture activities, easy-to-understand video clips in addition to the pre-lecture videos, and simplified flow diagrams to emphasise concepts. This was conceptualised and enacted with the use of examples that students are familiar and can easily associate with. For instance, see the example below that was used to explain the term, development:

> *"With respect to development, there are differences, right? Some of us grow faster, and some of us grow slower, right? That can be due to an interaction between our genetic information as well as the environment: How much milk we drank when we were young; how much exercise we did as we are growing. And that's why there are different interactions to how the final phenotype looks like within a population."*

To initiate the practice of active discourse, two to three intentionally spaced-out question and answer (Q&A) segments were interspersed during class. These were then followed up with out-of-class student-initiated forum discussions to further build the practice if active discourse. The expectations were reiterated in every lesson to increase engagement and discussions during and after class. Let me take the Q&A segment to illustrate this practice

further of how an active discourse is created through teacher's adept adaptation of a lesson to build on students' foundational knowledge and questioning practice. When a student asked: "*Are viruses living?*"; it generated some conversation amongst students in the classroom chat (see Figure 5.26). Capitalising on the teaching moment, Nicole polled the whole class on that question enabling self-reflection. The class consensus was divided (see Figure 5.26). The results were expected (the teacher confirmed this to me after class) based on teacher's implicit tacit expertise and backstories. Thus, she tacitly applied her rules to further the practices of questioning, reflection and mastery learning in students through further probing: "*Why don't we take a look at this video first to see if you can answer the question*", and then followed up with further explanations on the topic.

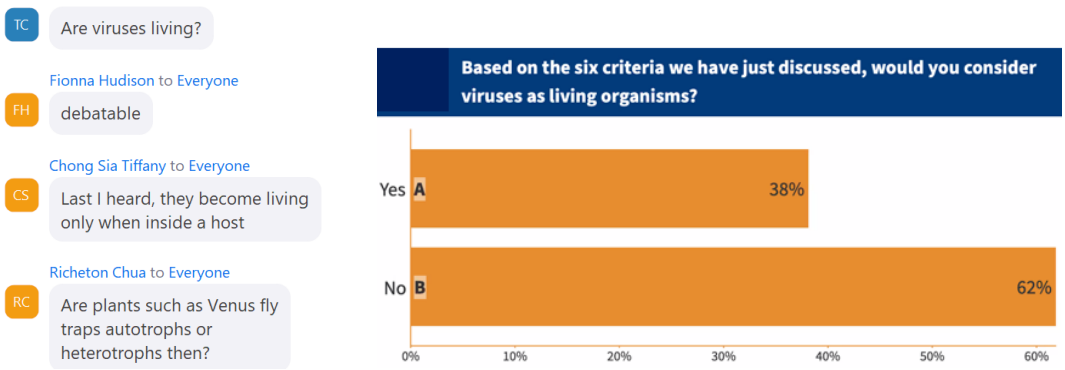


Figure 5.26 A sample Q&A process in HFM1301

Finally, students were asked to read up further and post their thoughts on the class discussion forum to the question: "*How do viruses evolve?*" deepening the practice of questioning and reflection. See Figure 5.27 for sample for discussion posts.

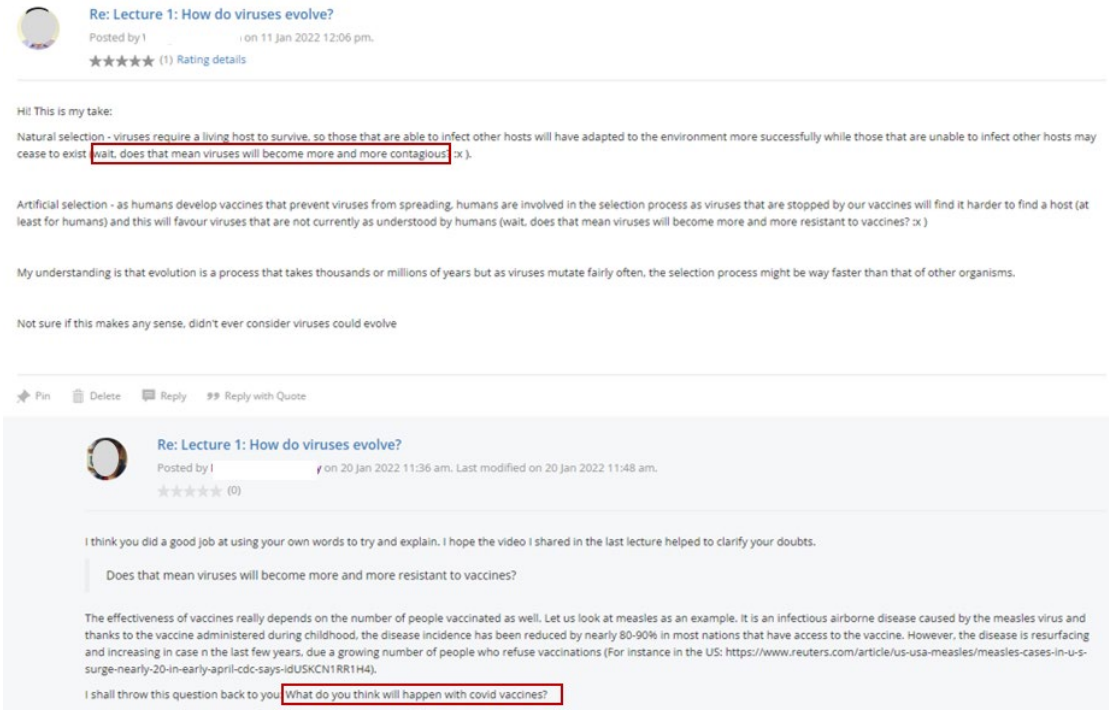


Figure 5.27 A sample forum interaction in HFM1301

When class responses were divided amongst students during another Q&A session, the teacher explained the reasons for students' misconception and explained the rationale for reaching the correct answer. The Q&A segments included both polls but were primarily dominated by open-ended questions attracting 20–30 questions in every lesson (see Figure 5.28). As weeks progressed, students were initiated well into the practice of actively asking questions verbally rather than passively posting them. More time was spent answering higher-order questions that required an expert's viewpoint. The discourses and participation were ungraded components in HFM1301 keeping to the true nature of a HGL course.

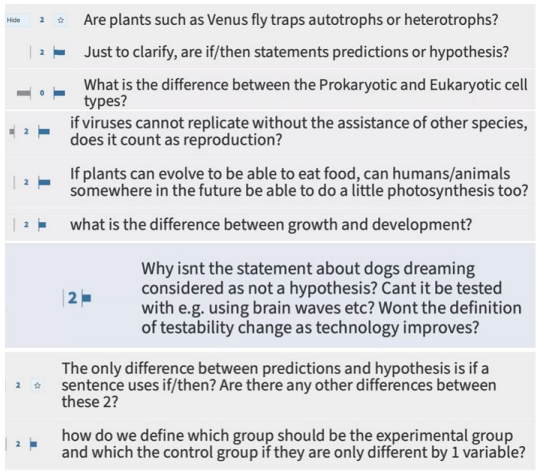


Figure 5.28 A sample HFM1301's open-ended Q&A segment

Still conforming to the course's HGL nature, open book exams were employed to build on students' pre-existing knowledge. This format forced students to recap on the salient points conveyed during lessons and required them to summarise and paraphrase ideas. These examples vividly illustrate the significance of context that go beyond the boundaries of this regime: the background knowledge and practices from other regimes, the use of familiar examples, the out-of-classroom interactions which help strengthen and shape the current practice and knowledge. Put together, they illustrate the significant ways in which the different TLR moments are interweaved in this course-site.

5.2.9 Mapping the ecologies of practices at HID1000

As I draw out the PBK in HID1000, I should mention at the outset that I have co-taught with William on several courses over many years, and hence my observations are further coloured from my observation of his teaching practice in these other courses as well. His educational ideology with an emphasis on "what a student does is more important in determining what is learnt than what I do as the teacher" is evident in his self-directed and flipped classroom

approach to learning. PBK in HID1000 is enacted by providing students with the necessary scaffolds not merely to master the disciplinary knowledge but more as a way of thinking. The pedagogical approach is filtered through William's rules which are grounded in the belief that imparting students with the critical skill of learning about the process of learning itself is of utmost importance:

> *"I do have ambitions around how students are able to self-direct their own learning. You know, this is one of the first modules that they take in the university. So, if we can help students better learn how to learn that would be a great deal of benefit for their career at the university as an undergraduate."*

This is identified through the critical thinking and problem-solving nature of PBK within HID1000. These filter through both in the pre-recorded video lectures and from my observations of the tutorial and lab classes. The approach was explained during the interview:

> *"I think that the most important element of the course is the way that it can support students being able to identify and differentiate science from pseudoscience in their own lives. It gives them a toolkit to do. We do go into detail, for instance, about what science looks like, how science informs public policy, the relationship between science and society. But given the amount of misinformation, there is in the world, being able to identify this misinformation is really powerful!*

This approach of being able to do that is an exercise in critical thinking."

Both practices of self-directed learning and flipped classroom learning were conditioned by materiality: the massive class size, HID1000 being a foundational, interdisciplinary course with a diverse group of science, arts, and humanities students. Not only did this TLR moment underpin the practices recurrently performed but it also illustrated the design of practices in the tutorial and laboratory classes and assessments were influenced and conditioned. Figure 5.29 depicts the significant TLR moments and practices in HID1000. Unique to this course-site was the evidence that there was a greater alignment between the practices on what teachers say (intended), what students experience (experienced) and what is observed (enacted).

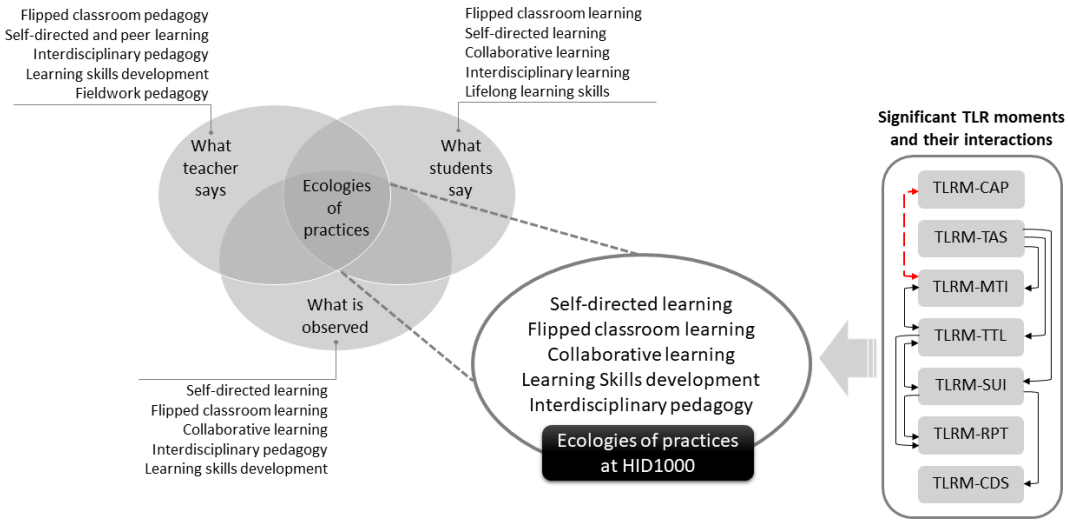


Figure 5.29 Mapping HID1000's ecologies of practices and TLR moments

As I noticed, these practices of self-directed learning and flipped classroom learning were facilitated in a small-class active learning environment and provided students significant opportunities to problem-solve and learn from

others. They highlighted the social interaction and peer learning aspects of the teaching and learning processes, and is clearly evident from this student comment:

> *"The groupwork during tutorial and lab sessions allowed me to see the various perspectives brought about by students of different disciplines during the discussions. This cultivates collaborative behaviours across different disciplines and would make working with other agencies in the future more familiar and easier."*

What was obvious in these small group activities was that students experienced learning science in a new way as they listened to peers' viewpoints based on peers' varied backgrounds and different levels of familiarity with the subject. Bringing together such groups purposefully into the tutorials cultivated new friendships and relationships as they grappled with difficult concepts and complex problems. Speaking to students after one such tutorial confirmed that these in-person tutorials were productive and engaging as witnessed through a high level of participation, and intense discourse. As one student commented:

> *"Sometimes having others question an idea you have thought to be true for a long time is also a good way to check your understanding, or perhaps prove that idea to be false after all! This was a very enjoyable way of looking at science for me. It felt fun and interactive, and it was less focused on chasing for the right answers but focused more on making science an*

approachable and enjoyable subject for everybody, given its immense importance in our world."

Given William's perspective on the problem-solving and critical thinking nature of his PBK, explains why he had mechanisms in place to ensure student preparedness in acquiring the necessary foundational knowledge before he got them together to collaborate in small group activities. The weekly auto-marked online quizzes gauged students' understanding of concepts and ideas (both for students and teacher) introduced in the online videos. Students had repeated practice opportunities in tackling these quizzes as immediate explanations and feedback provided after every quiz attempt allowed them to reflect and refine their understanding after every practice. This asserts the close connection that knowing and learning has in practice. Video-lectures were re-purposed or newly created to address student misconceptions identified from the discriminatory quiz questions. Further motivation and encouragement to partake in these quizzes were evident as these counted towards class participation.

PBK in HID1000 is also enacted by engaging students in workshop activities. One example that students impressed upon in their learning journal entries was the team activity. In this activity students tackled a real social problem by working in teams and taking on different roles (e.g., scientist, economists, environmentalists, and politicians) while critically analysing the problems from different angles, identifying their own biases and pre-existing disciplinary notions, and finally solving the assigned problem to arrive at a better solution.

This example clearly filters through the pedagogical approach of interdisciplinary teaching and peer learning.

Furthermore, HID1000 pursued an equal teacher-tutor relationship which was evident in the way the tutorials were facilitated, and the roles/responsibilities assigned to the tutor. The tutors had the freedom and flexibility to design lessons taking their own background into context, bringing with them not only their current practices embodying the different moments, but also their histories (both their own learning and teaching stories) and disciplinary cultures. From my tutorial observations, it was clear that ownership illustrated tutors' different ways of thinking about science, their use of different methods of science modelling of what scientific inquiry looks in their own contexts, their ability to provide more colour to what they are doing in their classes, and how they are engaging their students. This helped tutors develop their own conventions of appropriateness, their own distinct pedagogical approaches and their own PBK. This illustrates how socio-cultural characteristics are both constructed and enacted and often involves both agency and structure.

It is through such repeated performance and doing while being engaged in various components of the course, that the interdependencies between the different components that constitute the practice are sustained over time. This also exposes various resources that were being mobilised to achieve the desired practices. These included: (a) opportunities for students to gain adequate knowledge to participate as a valuable team member in group activities; (b) motivation provided for participation; (c) guidance provided by tutors; (d) the design of re-purposed lectures; (e) educational activities such

as the Exploratorium, workshops, self-guided fieldwork, learning journeys, and (f) the physical infrastructure such as the active learning classrooms, laboratories, and the museum. They conditioned the subjectivities of teachers, tutors, and students; they shaped their assumptions; they portrayed theories about how teaching and learning happens, and they structured appropriate practices to scaffold the learning process. To summarise, the following student comment on how HID1000 has conditioned their thinking confirms how PBK is embodied into student learning:

> *"When we [my friends] get together and talk about news, games and all the things in life, it is our natural reaction to think and talk in a scientific way to define a specific condition so that all the guess and debate can be judged easily and scientifically."*

5.3 Comparative analysis into practices across course-sites

In this section, specific site-based practices that enhance and inhibit gradeless learning across the nine observed course-sites are identified and analysed. The workgroup's beliefs and ideologies are further examined to highlight the conditioning factors that constitute and hinder these identified practices. Trowler (2014:27) argues a practice-focused ethnography in universities is a valuable method to appropriately unpick the intrinsic complexities of material objects and of site-based human practices through individual and comparative analysis. This section lays out the interconnections between the identified practices on how they condition and shape other

practices. Concurrently, investigation into how the HGLE policy conditioned these practices towards grades and gradelessness is reported.

5.3.1 Site-based practices of assessment

In this first section, I examine site-based assessment practices within the nine course-sites and their relationship with grades and gradelessness, as both these were observed to be intertwined. Academic practitioners in this study endorsed more than one assessment ideology at any one time. Student participants also had differing beliefs about assessments and grades. It was evident from both observational and interview data that the workgroups' assessment ideologies and practices within the course-sites were highly contextualised and primarily arose out of their course needs and context. They were influenced by the institutional and departmental contexts as well as their own individual experiences in schooling and education (backstories).

The role and purpose of assessment, and the justifications for use of different assessment formats varied based on how practitioners conceptualised their practice. Their specific course contexts, the situational factors and institutional policy on grades and gradelessness influenced their assessment practice. The multitude of assessment formats that I witnessed being used in the nine course-sites highlight vastly different conventions of appropriateness concerning grades and gradelessness and the varied ways in which they initiate learning practices and improve student learning.

For example, the conceptualisation of reflective assignments within the course-sites were focused on enabling reflective practice in students wherein

they expressed their thoughts freely without a focus on grades or evaluation. The reflective assignments in HRC2101 were centred around the teacher's belief that assessments are intended to motivate and improve student learning when meaningful feedback (both from peers and teachers) and reflection occurs during the process. This TLR moment of appropriateness towards gradeless learning underpins the practice of reflection. It is recurrently performed not only while writing individual reflective essays but also while reading and reviewing peers' essays. This illustrates how they become a significant part of students' learning practice in the course. Reflective essays were also employed in HFM1101 (as an individual concluding summary for the project report) and ERC1102 (as a photo essay and a reflective essay on the course topic). However, the conceptualisation of reflective practice in these two course-sites was vastly different from that in HRC2101 and was used purely as evidence to gauge and measure student learning. In both these courses, the reflections were thus meant only for the eyes of the teacher who evaluated student learning and progress.

Considering the use of group projects and group assignments in five of the course-sites (HRC2101, ERC1101, ERC1102, HGE1102 and HFM1101), it was evident that they instilled in students two key learning practices: collaborative learning practice and conceptual application—the application and transfer of concepts and skills from classroom into project work. The social conditions of group learning, students' personal dispositions, college culture (in the case of the three residential college courses), and community learning shaped their practice. The group work assignments as a social

practice enabled the diverse project teams to work together, trust, respect and care for one another, and collaboratively apply concepts/skills learnt to arrive at a shared understanding. This illustrates rather succinctly the associated connotations and codes on how academic practitioners conceived group work, both in the cognitive as well as the affective sense to shape the learning practices. The appropriateness TLR moment also played a part in ERC1101's assessment design as it was specifically aimed at addressing the specific need of its college curriculum, i.e., the necessity to transfer skills learnt to the college's higher-level courses. Digging further into group project assignment in HRC2101, it was noted that assessment conceptions of sustainability, social justice, and transformation were also incorporated. This was evident in how HRC2101 students made connections to real-world issues, and designed solutions that included elements of care and empathy that made an impact on the community they lived in. Student work also generated conversations amongst peers, the college community, and the wider community due to the outward-facing nature of assessments.

The conception, design, and interpretation of a formative assessment practice in HGE1101 —the weekly quizzes, open-book tests, and group project for video creation on a topic of their choice—evoked the TLR moment of codes of signification. Bounded by the gradelessness concept, the assessment formats were centered around the notion that assessment helps students master their learning and help them gauge their own performance and learning needs.

Assessment practice in HGE2204 reflected the pedagogy of fieldwork learning. Here, both the conventions of appropriateness and the significance

of artefacts played a significant role in shaping assignment design and practice. The assignments repeatedly engaged students in independent fieldwork activities and allowed them to hone their fieldwork skill of generating their own data.

True to the nature of their disciplines, both courses from the sciences, HFM1301 and HID1000, utilised hands-on laboratory assignments and field worksheets—both of which are common practices of assessment in the Sciences discipline. However, the foundational nature of their courses prompted both these academic practitioners to ensure a balance between summative (weekly online quizzes) and formative assessments (open-book exams). The assignments were completely ungraded in HFM1301 while token points but was almost equivalent to being ungraded were provided in HID1000. Assessment for both these practitioners was primarily aimed at not only improving their student learning, but also in helping them improve and modify their own teaching practice.

From the above examples, it is evident that academic practitioners' ideologies reflect the codes of signification which inform their views on assessment, and in turn, shape their assessment practice. Their ideologies straddled between 'assessments are for improving student learning and their learning needs' to 'assessments are for providing evidence of student learning'.

5.3.2 The practice of class participation

The nine course-sites employed different approaches and technological tools to create specific conditions for the practice of class participation:

- an organic approach to participation with no technological intervention was taken in HRC2101, ERC1101 and HFM1101
- specific technological tools were employed in the others to initiate the practice of participation—in-class polls, Q&As in HGE1102, HGE2204, HFM1301 and out-of-class quizzes and surveys in HGE1101, ERC1102, HID1000

They also employed different grading policies for class participation practice: entirely gradeless in ERC1101, HGE2204, HFM1101 and HFM1301, while grades were awarded in all other courses. Zooming into HRC2101 and HFM1101 for closer examination, the cultural-discursive and the socio-political arrangements are clearly articulated and orchestrated through instructions in how students' participative practice is enabled and encouraged. Both teachers bring into the course a specific language—through in-class instruction and out-of-class communication—to shape the discursive flow of what happens in their lessons. Their language noticeably influenced what students say; how students answered and asked questions, and how students related to them as teachers, how students built on each other's viewpoints and how students connected to the artefacts presented in the class.

Though both course-sites achieved a high level of class participation, HFM1101 students were intrinsically motivated through the empathy and care that teacher showed for students, while HRC2101 students were motivated extrinsically through grades. It was observed that the teacher sent positive notes of encouragement to students immediately after class and praised

those who participated in class discussions. The following are snippets of individualised email nudges and praises to students:

> *"Hey, Vaish, you did so well in tutorial one, I really liked your idea on [X] and [Y], and I really think other students will have learned something precious. I am sure we all look forward to hearing more from you in the next tutorial too";*
>
> *"Hey, well done! For both tutorials, you really participated".*

It is clear from these examples that the teacher wanted his students to realise that he was paying attention to their contributions, was encouraging them to participate, and was anticipating more active engagement from them even though participation was ungraded. The fact that his students responded and acknowledged, and that they were indeed appreciative of the positive encouragement shaped his students' practice and his own practice. Students in both these course-sites also identified how grades condition participation, either hinder or motivate:

> *"Frankly speaking, people [students] just participate for the sake of participating, and that just takes away the whole learning experience because you're trying to compete with other people"* [HRC2101 student on how grades hinder]
>
> *"I am giving all my attention to learning when I participate in discussions and when answering questions without participating just for sake of participating and getting marks"*

[HFM1101 student on how ungraded participation shapes learning]

“He genuinely cares about what we think; what we are learning, and actively gives us opportunities to share”

[HFM1101 student on factors that motivate participation]

Participation in ERC1101 was ungraded but was limited to small group discussions. From my observations, the relationship formed within groups was what conditioned and strengthened these small group interactions. However, the practice of whole class interaction and learning was not prevalent possibly due to the minimal nudging and encouragement from the teacher.

Examining and contrasting the conventional approach to class participation practice in HGE2204 and HFM1301 and the flipped approach to participation in HGE1102 demonstrates how practices are also shaped by structure and individual agency. In the former, students had a first exposure to concepts and theories in class followed by engagement via polls and open Q&A segments that prompted higher-order questions from students. The teachers’ beliefs that foundational courses are vehicles to initiate university students into this practice conditioned how continued opportunities for Q&A participation and encouragement were offered in these courses to further the practice of asking questions, discussing with each other and the teacher. In contrast, formatively graded one-minute polls were administered in the latter, before every conceptual explanation or application. This demonstrates how entrenched recurrent practices are challenged and the associated conventions of appropriateness of the discipline are altered. Both individual

agency and structure shaped the enactment of practice in this later course-site. For instance, HGE1102 students initially spent time thinking and reflecting on the questions before committing to an answer. But as weeks progressed, they were seen to be answering mindlessly as their practice did not impact their grades. This discovery was also reflected in a student comment: "*I think initially it was quite good, because I didn't really have to worry about whether I was giving the correct answer. I just tried to think about what was right in the problem-set, and how to answer it. But later, I sort of just…not thinking so much that I just diss out an answer, because it's just participation*".

The weekly online quizzes in both HGE1101 and HID1000 courses, though counted towards a small grade, were primarily used by both teachers to enable mastery learning of concepts and to understand what students know and don't know. ERC1102, on the other hand, employed a weekly class participation survey that got students to reflect on key learning points, their contribution towards enhancing peer learning experience (e.g., a comment on an issue, a question asked, an example/story shared) and asked students to rate their own level of contribution to others' learning. This also conditioned and impacted the self-reflective practice, which I will examine further in a later section.

Finally, what was interesting in all these courses was that students actively participated in backchannel discussions: they asked questions and answered peers' questions. But it was in HFM1101 tutorial classes where almost all students spoke up to engage with the teacher, tutors and/or their peers. This

was influenced primarily by the impact of teacher's private and public nudges and encouragement. This emphasised how teacher's show of empathy and care can stir students into the practice as they gained the motivation and confidence to speak up during class even without having to award grades.

5.3.3 The practice of questioning

As I investigate the practice of questioning, I examine two distinct practices: (1) how teachers orchestrated learning through questioning and (2) how teachers developed students' questioning skills.

5.3.3.1 Orchestrating learning through questioning

Teachers in this study choreographed different questioning practices based on their contrasting educational ideologies, their values, and their priorities; and underpins and explain their practices. The ideology of progressivism was prominent with teachers in this study, and this manifested in how they focused on the development of students' critical and analytical skills and minds. Thus, the practice of questioning was directed at conditioning and developing multiple other learning practices, that included:

a) Initiating the practice of active discourse

   My classroom observations revealed that the teachers wanted to initiate open discussions through use of open-ended, provocative questions to get their students to speak up and ask questions in class (e.g., HRC2101, HFM1101, ERC1102, HFM1301).

b) Prompting students' thinking and reflective practice

The classroom discussions in HRC2101—whole class discussions and small-group discussions—primarily started with pondering and clarifying questions. The former was used to trigger student reflection when students encountered conflicting dilemmas and/or issues while the latter was employed to resolve students' differences in interpretation and perspectives. HGE1102's in-class quizzes were more than grading tools but were largely to prompt thinking, understanding and to initiate preparation. The question design revealed the teaching objective. The ontological questioning approach in HFM1101 was systematic and conditioned students into three levels of thinking and reflection: (i) the content level (recall), (ii) the conceptual understanding level, and (iii) the conceptual application level. In HGE2204 and HFM1301, in-class questioning mainly employed memory and conceptual understanding level questions. The flipped classroom approach to teaching in HGE1101 and HID1000 classes inhibited the use of in-class questioning and therefore prompted a different questioning approach. In both these courses, it was observed that weekly quizzes comprised higher-order thinking questions but allowed students to repeatedly look at the questions until they gained satisfactory understanding. HFM1301 also employed a similar approach to HID1000 by providing optional out-of-class thinking questions for students. The questioning techniques employed in all these course-sites reveal the support for gradeless learning where

students learn from mistakes, and as Ethan explained it is about "*giving students the chance to think about questions even if they get it wrong*".

c) Unpacking and interrogating concepts/problems (logical thinking practice)

The worksheets in HGE1101 are structured such that they allow students to unpack concepts systematically by stacking questions that begin with conceptual understanding and gradually builds towards conceptual application. Questioning technique in HGE1102 tutorials not only models how the questioning structure can help unpack and interrogate problems but also instil this important lifelong skill in students. As Ethan explained during the interview, "*though it drives some of them [his students] crazy! Especially, if they ask their question and I ask them a question back*". He persists on this approach, and it also strongly reflects his educational ideology.

d) Promoting peer (collaborative) learning practice

Though all teachers in this study alluded to the importance of peer learning in their interviews, it was evident from the HRC2101 and HFM1101 course-sites that the questioning approach can indeed promote peer learning. In both courses, it was common to see students building on each other's answers to the questions posed. This was because the language the teachers' used, prompted such practice. As Harvey shared:

“The best way is always to ask questions on the spot; when I ask questions in class, it is purely for students, the very fact that you are actually thinking of an answer—whether you express it orally, or you don't express it—the very fact that, “Oh, my goodness, there is a question, so let me think about it”. To me, it is just to jolt them, for them to learn, for them to find an answer for themselves, and ultimately, for them to listen to another student and say, “Oh, yeah, that's a good answer”, or, “Oh, that's a wrong answer”. Actually, it's not good to always hear the lecturer’s voice. So, another student will come up with something, but it'll be exactly what I'm going to say! Hearing their voice, you're hearing their voice and their choice of words, it makes the class so much livelier, and you remember, because the voice is not the same voice!”

These multiple ways discussed confirm how the practice of questioning are conditioned, and the use of grades or otherwise rarely changes student learning. This also confirms how the different practices are bundled together, are interdependent with other practices, form specific local, site-based linkages between other practices, and are enmeshed with one another.

5.3.3.2 Developing students’ questioning skills

Through various approaches to teachers’ modelling the practice of asking questions in the classrooms, students innately developed questioning skills. This was evident from the type and level of questions that students asked in

the classroom discussions (e.g., HFM1101, HRC2101) backchannel conversations (e.g., HGE1102, HGE2204, HFM1101, HFM1301) the Q&A platforms (e.g., HGE1101, HFM1301), during small-group activities (e.g., HGE1102, HFM1101), workshops (e.g., HID1000), field or fieldtrip activity (e.g., HGE2204, HFM1101) and the labs (e.g., HFM1301).

5.3.4 The practice of active discourse

The three practices of ‘participation’, ‘questioning’ and ‘active discourse’ are inter-related and intertwined in the course-sites. These practices condition one another by the ways in which they are structured. Irrespective of whether the course is graded or gradeless, active discourse was prevalent. The practice of active discourse was influenced primarily by the identities, subjectivities of the workgroup in these courses and other external factors such as the class size, the class level (foundational or higher-level course), and the class type (lecture, seminar, labs, flipped classroom), the design of classroom activities (e.g., in-class questioning, role-play exercise, LEGO exercises, group problem-solving). In addition, it was also shaped by the practice landscape of the environments (e.g., residential colleges), and the practice traditions of the discipline. Moreover, the varied nature of teachers’ active discourse practice in each of these course-sites conditioned students' motivation, active participation, cognitive engagement, and reflection.

First, I will analyse the enabling and constraining factors of active discourse practice using the three residential college course-sites—HRC2101, ERC1101 and ERC1102. In the first course HRC2101, practice traditions

were formed as the teacher embraced the college teaching culture of discussion-based pedagogy. The college culture strengthened significant relationships formed amongst students, between teacher and students as they lived and learned together in the same residential college, and in turn strengthened active discourse practice. The evidence from this course confirmed that the interdisciplinary and diverse background of students and the diverse learning activities generated greater interaction amongst peers and further solidified the practice. These were also reported as key ingredients for success of the practice. The opportunities enabled the workgroup to form a collective definition of what the practice means to them and gradually solidifying the recurrent practice of active discourse. In the second course, ERC1101, the practice was only at its nascent stage even though it was also in the residential college environment. This could be attributed to the fact that these students were in their first-year primarily from the STEM disciplines in a course that adopted a problem-solving pedagogy. This highlights how disciplinary cultures condition the practice within the classroom. In the third course, ERC1102, a student-partnership approach was used to enact active discourse practice. This approach created high level of engagement as students lead and facilitated class discussions. Thus, the teacher's social constructivist approach created student agency and ownership generating a student-led interactive discussion activity and further enhancing the practice. Moreover, the diverse group of students and the college culture further crystallised the practice.

Second, I examine the practice of active discourse within the small-sized (n=25) tutorial classes of HGE1102, HFM1101, and HID1000. The practice itself was vastly different in each of these three course-sites. In HGE1102, the practice was contained within even smaller sub-groups (n=3 or 4) primarily as peer dialogues. The discourse evolved into students-teacher dialogue only when students requested for teacher support. However, in HFM1101, the practice was initiated during large lecture classes through opportunities deliberately created by teacher's constant motivation and encouragement for active discourse. These nudges empowered students to actively participate, constantly self-reflect and be cognitively engaged. As students moved from lectures into small-sized tutorials, the practice was further developed into an ongoing, iterative practice that only got strengthened further and further. As the practice was already established during lectures, students showed no inhibitions during online tutorials, all students readily turned on their cameras, and participated actively. The exchange below illustrates the deepening of the practice in tutorial classes:

Teacher:	*What do you understand by method? Why is it important to write about method?*
S5:	*Without methods, one cannot identify if there is bias. Other researchers will be able to replicate.*
Teacher:	*You must declare your research methods. if you don't say your methods, then your project can be suspicious; you will also need to talk about challenges and limitations.*
S1:	*For peer review and to allow others to critique the work*
S6:	*Others can get a nuanced understanding of what is being done.*

S7: *Provides more credibility; in the future others can overcome the limitations*

S2: *By including the method, you explain why your data is reliable. The questions used in the method are appropriate or not appropriate.*

S3: *Are there some methods better than other methods? For example, is primary data source better than using secondary data.*

S4: *I think some secondary data may be useful.*

S4: *With methods, I know what I am working with, and provides credibility reliability and validity*

Teacher: *If you declare, you exhibit a degree of humility, credibility*

In general, the STEM courses had very little of the active discourse practice in the lectures; but it was prevalent in other class activities. In HFM1301, active discourse was observed during the labs. The practice occurred at multiple instances: between the tutor and students; between teacher and students; between lab technicians and students; and amongst students. A wide variety of techniques were observed which initiated and strengthened the discourse: giving cues, asking probing questions, providing explanations, getting students to probe further, asking ‘why?’ questions, using illustrations to explain and question. What was also interesting was that immediately after the lab sessions, there was a debrief session, which in itself showcased a highly engaged and active discourse involving the teacher, tutors and lab technicians. In HID1000, active discourse happened during small group tutorials, and they were mainly facilitated by the tutor. In this course-site, the tutor adeptly facilitated the discourse using simple personal examples and experiences to initiate the discourse.

5.3.5 Collaborative learning practice

Out of the nine course-sites I observed, only two, HFM1301 and HID1000, did not employ a formal group assignment. This could be attributed to massive class size of these two courses. However, all other courses had some form of collaborative work component—group projects, in-class group discussions, pair work, peer-to-peer activities, tutorial group activities, and laboratory work.

Within the three residential college courses (HRC2101, ERC1101, ERC1102), their college norm and culture mandated that they employ group work in their classrooms and assign group projects as assignments. This archetypal practice, with its strongly inscribed codes of signification persist because there is an affinity with the current practice and its academic and social value. Three other courses (HGE1101, HGE2204, HFM1101) had a group project component that allowed students to choose their own team members. Not all students could form their own teams, given the fact that these were first year courses, and the pandemic restricted meeting their classmates in person. In such cases, teachers assigned them into groups taking into consideration students' major and gender so that students will gain different perspectives as they meet new people from different disciplines, gender, and cultures.

Teachers highlighted the benefits of such collaborative group activities during the interviews. For example, Aidan talked about the value of this practice, i.e., when more people come together to solve one problem, they are likely to generate more ideas, bounce ideas off each other, negotiate with one another and make decisions. This was evident in all HRC2101 lessons as all in-class

activities required students to work together. Charles, on the other hand, highlighted the value of peer-to-peer feedback. The opportunity to see somebody else's work immediately triggers self-assessment and self-reflection of their own work without the need for teacher intervention. Ethan explained that the tutorial lessons and problem-sets are purposefully structured to strengthen peer learning experience and collaborative decision-making. William emphasised the importance of providing feedback to others during group activities as a critical element of their own future life, and that they need to be provided with such opportunities in the university to strengthen this practice.

Also evident from my observations of course-sites that employed formative weekly online quizzes (HGE1101, HFM1301, and HID1000) typically promoted informal peer learning. Students described how they usually worked together on the quizzes collectively in small groups, and sometimes in pairs. They added that such informal small group discussions usually helped them learn from one another as they explained, argued, disagreed, and considered others' viewpoints before making decisions. An important aspect of collaborative group work that was prevalent in the course-sites was that students motivated and supported one other and enhanced their collective learning experience. A key benefit that stems from the collaborative learning practice is the nurturing of collaborative learning communities where meaningful relationships are formed amongst students within the classrooms and projects. These are likely to be sustained throughout their university life, and possibly beyond the university doors as well.

5.3.6 The practice of skills development

The practice of skills development is primarily driven by the TLR moment of conventions of appropriateness, based on what the academic practitioners in this study consider as appropriate for their course, for their discipline and for their students. Individual backstories and educational ideologies of academic practitioners also conditioned the answers to questions such as: 'Which is more important: skills or disciplinary knowledge content?' 'What skills are appropriate—hard, pure skills or soft, applied skills?' 'How should the skills be developed?' 'What teaching methods, artefacts and assessment instruments should be employed?' 'What skills do students bring into the classroom?'

For example, Harvey shared with me a story of how a student's question influenced his decision to teach a set of skills, which otherwise he wouldn't have considered:

> *I remember some years ago now, very bright boy, he was already in year three, […] I remember him saying, and I really took it to heart because he is a very serious minded, very intelligent boy. I remember him saying when we come into [the university], "the very fact that people can come to [this university] students already have a particular mindset, we can remember things, we can pick up things". And then he challenged me, he was quite bold and, he said: "But why do lecturers assume we know how to read academic papers? Why should anybody assume?" So, this challenge, this student being so bold. Why do you all think, that we know how to read? How do you think that we can pick*

up skills on our own? It is an immediate challenge: this boy up to year three, very smart, can understand concept, can remember things, just as he is totally lost about skills. He can't understand why nobody even taught skills. […] After hearing that, I just feel I must have to at least teach students some basic skills because this intelligent boy was just saying he was floundering!

Therefore, Harvey spent a considerable amount of time in teaching three key foundational skills that included hard-pure skills as well as the soft-applied skills. There were several opportunities for students to practice these skills during lessons. The first skill was helping students gain a geographical eye, a geographical imagination. The second was enabling students to generate their own data, use their data, apply their data, and analyse their data. Finally, the third was the reading skill. The teacher explained as to why teaching reading skills was important:

"We all know how to read A-Z, and we all know how to read our novels, but reading an academic text is a very different creature. So obviously, we need some kind of skill, some kind of help in getting through academic acts. So, I want to leave is that to provide students and a skill therefore for them to acquire: is realising we can break things down into component parts when reading texts, i.e., a way in which authors write their papers would be argument (A), concept (C), methodology (M) and findings (F). If that is the case, if that is how they write, why can't we use that as a way to read articles, read academic articles, and also make notes on academic articles."

For Grace, fieldwork pedagogy, and fieldwork skills were important to be taught to her students. This decision was influenced and informed by her own professors who taught in the field. Students in HGE2204 classes acquired fieldwork skills even when the pandemic posed several restrictions in getting them into the field. The teacher explained that the activities and assignments were tweaked to support independent learning during the pandemic. The field notebooks that students produced confirmed the teacher's pedagogy.

For Aidan, his own experiences and how he learned as a student was the conditioning factor that decided on the key skills—critical thinking; reflection and team work skills— he imparted to his students, and the opportunities (e.g., reflections and group project) he would give for his students to practice. In Ethan's case, his experience working with students on how they approach the problems and the need for his students to possess logical thinking skills was the deciding factor on how he taught and allowed students to practice the skills. He explained:

> *"it is not that students can't think logically, just that they don't break down the thinking process. So, this gives them a chance to see the way how that it could be done, and then they can do it on their own […] I think that [unpack the problem and interrogate the problem] is something that they can see that they are doing in the course and hopefully take away with it, and not like you know i have done it here, and then I forget! I want this skill to stay with them!"*

As discussed in an earlier section William's focus is to impart students the skill of learning how to learn and be able to self-direct their own learning. For Sophie and William, the determining factor was the fact that their courses were foundational courses. Thus, for them, learning how to learn in the university is a necessary skill not only to smoothen their transition into the university but also a skill that transcends into their future courses and careers.

From these stories, it is evident that the TLRs generated, the practices established, and the skills developed are highly dependent on several factors in a very dynamic and context-specific way.

5.4 Summary

In this chapter, the different TLRs and the ecologies of practices are illustrated through the process of examining the nature and enactment of teaching, learning and assessment practices within the nine course-sites. The interpretations from classroom observations, and interviews with academic and student practitioners have been integrated to highlight the interactions and interconnections between these practices. The factors that condition and shape as well as those that inhibit and hinder the practices within the gradeless learning environment have been illuminated.

In summary, the conclusions to the three research questions drawn from the study have established that:

(1) the contrasting educational beliefs and ideologies of academic and student practitioners were far more influential in how they prioritised

their goals and values; in how they established the sayings, doings and relatings; in how they reacted to other workgroup members; and in how they conceptualised, developed, and enacted the teaching, learning and assessment practices within the different contexts of the course-sites. The doings and sayings were not performed in a contextual vacuum but were always re-interpreted based on their existing general and practical understandings in addition to their individual ideological positionings.

(2) the development and reinforcement of academic subjectivities responded to varying degrees of identity hybridisation. They were distinctively conditioned by practitioner's individual ideological positionings; the agentic and structural constituents; the workgroup communities and interactions; the policy contexts; the disciplinary/departmental/college teaching culture; the institutional culture; and the teaching and learning contexts as captured by the different et significant moments of TLR at the course-sites. These, in turn, impacted how practices were enacted within the different course-sites.

(3) utilising SPT has provided an analytical lens into visualising the social reality of the course-sites within the HGLE site ontology; into unpacking and mapping the ecologies of practices while also identifying the various conditioning factors—materiality, relationality, agency, and structure. No definitive, validated approach to effectiveness for practices towards grades and gradelessness was established, nor were the practices consistent across and within the course-sites.

> But they were determined by significant moments of TLR within the specific context needs, circumstances and opportunities of the practices themselves. Thus, the factors that enabled and constrained practice conceptualisation and enactment include ideological, policy-related, materiality, and intersubjective spaces.

The next and final chapter expands further and provides deeper insights into these three concluding points in sections 6.1, 6.2 and 6.3 respectively. Chapter 6 also summarises the practical lessons and briefly revisits the key themes and ideas of the study that condition academics and students' practices towards grades and gradelessness. It signals the key point that site-based educational practices and the development of these practices has the potential to be a powerful vehicle to de-emphasizing grades and re-vitalizing gradeless education.

Chapter 6: Conclusions and implications

This study sought to understand the ways in which educational beliefs and ideologies influence conceptualisation and enactment of teaching, learning and assessment practices, and the factors and structures conditioning academic subjectivities in a hybrid graded/gradeless education (HGLE) context. This concluding chapter takes a processual, relational and the interactive construction of social order using social practice theory to illuminate enactment of practices and conditioning towards grades and gradelessness in the nine course-sites (locales) within a HGLE context.

It begins by signalling two significant findings that stem from critical analysis and examining of data from the nine diverse course-sites and interacting with academic and student practitioners within the HGLE environment. These are, in summary, first, the significance of contextual conditioning which reveals the simplistic (and the problematic) nature of the gradeless/grading binary and the variable nature of their value and outcomes in education. Second, and relatedly, is the entangled and mutually-influencing nature of assessment and teaching and learning practices.

The first significant finding is that there is no simple binary between graded and gradeless and neither is superior in all circumstances. Rather, the data and analysis reveal a complex and nuanced picture in which many factors have an impact on learners' and teachers' understandings and practices in learning, teaching, and assessment. Be it graded or gradeless, students in the course-sites demonstrated the pursuit of learning as an intellectual pursuit—participating determinedly in learning practices, and consistently giving their

best to succeed in a course. They participated in the learning and assessment practices with a sense of self and purpose so as to become self-directed and competent. This occurred not merely because of a graded, a gradelessness or a hybrid gradeless environment but was due to multitude other arrangements within the course-site—the academic subjectivities, the ideological positionings, the meaningful relationships, emotional connections to people, the spaces they live and learn in, the resources available both within and outside the classroom, and the institutional and residential college environments.

Let me take the example of class participation practice as a graded or a gradeless component in different types of course-sites to illustrate the significance of how the conditioning factors, contexts, and structures matter. Focusing particularly on student comments from a range of courses give a clear illustration of this key finding that there is more to teaching, learning and assessment practice than to simply making the environment gradeless:

> *"Oh! this is like one of the most active tutorials we've been that doesn't have a class participation aspect in the marking system […], it is really about creating a learning environment, asking questions that someone may or may not want to ask […] I am giving all my attention to learning when I participate in discussions, answering questions and engaging with the ideas more freely without participating just for sake of participating and getting marks."* (From a hybrid graded/gradeless course-site where participation is ungraded)

"I really like class participation […] the things that people share is really, really dynamic, really multi-disciplinary […] I'm learning from everyone in terms of how they're thinking or how they're approaching this module, and then seeing how that applies to my group work [...], gives me a lot of a wider perspective." (From a hybrid graded/gradeless course-site where participation is graded)

"What I really enjoy about this class is the environment which is optimised for participation and active discourse [...] Over here, prof will not only encourage us to take a stand, but also encourage us to freely share our opinions and build upon other people's points or directly disagree with them in a way that is safe. And so, it really facilitated and encouraged us to actively think and internalise the issues. (From an entirely gradeless course-site)

In each of the above cases, the cultural, discursive, social, material, and contextual factors played a significant role in enabling and encouraging participation, questioning, and active discourse. The articulation and orchestration of the class participation practice mediated through the sayings and doings of the teacher (e.g., in-class instruction, out-of-class communication, in-class modelling, deliberate nudges, and positive encouragements) shaped the discursive and participative exchange inside and outside the classroom. Thus, the sayings and doings of a learning practice, are made possible by a specific language used by teachers in the course-sites— graded, gradeless or otherwise. The specific language, each unique to its own context, noticeably influenced what students say; how they

participated in asking and answering questions; how they reacted to the teachers' prompts; how they related to the teachers; how they considered the different points of view; how they built on each other's viewpoints and how they connected to the artefacts presented in the class. Over time, it was established that this language then becomes embedded and integrated as part of the larger set of cultural-discursive arrangements that make it possible for the workgroup to be stirred, re-stirred, and gradually familiarised into the practice.

Likewise, the social-political arrangements in terms of a web of meaningful relationships were evidently a necessary condition to effective class participation practice. They were either initiated between the student-student, the student-teacher, the student-tutors or further strengthened the existing relationships (e.g., friendships formed during classroom discussions, from collaborating on academic tasks, through residential-living, or participating in college activities). Thus, the academic subjectivity formations and interactions depend on the wider social structures and the forces of relationships and interdependence with the workgroup as well as with other situational, cultural, historical, and contextual factors. Moreover, the cultural-discursive and the social-political arrangements were consciously nurtured and conditioned by the material artefacts, the physical environment, and the physical layouts (material-economic arrangements). For example, fostering a high level of class participation could be achieved by motivating students intrinsically through empathy, care and encouragement from the teacher and peers or extrinsically through grades.

Further to the three arrangements that hold educational practices in place within the course-sites, the practitioners' ideological positionings alongside the significant TLR moments of theories of teaching and learning, the tacit assumption moments centered around the nature and discipline of courses, the teachers' very different conventions of appropriateness and the students' motivations to succeed in a course and their imagined futures conditioned the teaching, learning and assessment practices within a course-site to initiate the truly educative aspects of the specific course and the emotional connection to deeper learning. Though I have taken just one practice, the practice of class participation, as an example to illustrate; it is true for any of the practices—skills development, active discourse, questioning, collaborative learning—that I have discussed in my earlier chapter.

The second significant finding that the data and analysis demonstrate is that practices of assessment (e.g., gradeless, graded, hybrid gradeless) always occur in complex relationships with different practices of learning and teaching in different teaching-learning regimes (TLRs), so that gradeless, graded, and hybrid gradeless assessment produce different outcomes for learning and teaching, and learners and teachers, when they are embedded in different TLRs. Some authors writing on the topic of assessment today seem to come to some version of this conclusion, but rarely has it been demonstrated so clearly as in this thesis that assessment practice is intimately and deeply embedded within the teaching and learning practices of a course-site.

Assessment practices do not operate in silos separated from the teaching and learning practices, they work best when integrated with the teaching and

learning practices but are inevitably entangled and entwined. I have demonstrated across the nine different stories in the course-sites that an integrated approach to planning assessment and teaching created a flow-on effect that significantly impacted students' sayings, doings and relatings. That is, to bring about the desired changes in learning practice, a change in the inter-dependent, inter-related practices of assessment and teaching is necessary. The study results have also confirmed that assessment practice is indeed truly a "practice-changing practice" (Kemmis et al, 2014: 207). I have shown that learning and teaching practices respond to assessment practices. They have the capacity to modify students' learning practices to fit to the performative expectations of assessments. It also has the ability to initiate teachers into adjusting their teaching practices to stir students into repeating the desired learning practices through the multiple opportunities provided both inside and outside the classroom to further the practice. For example, to initiate and stir students into the learning practice of reflection, teachers conceptualised and enacted their assessment practice using weekly reflective assignments, reflective essays, peer review of essays and projects. They modified their teaching practice to support the assessment practice through careful choice of specific language in their written communication, in their classroom instructions and lessons (sayings), planned learning activities, and classroom discussions (doings) were enabling conditions for the conduct of assessment practice. The conceptualisation of assessments was different in the different course-sites—true to the nature of their courses, their discipline, the teachers' ideological positioning—but were almost always aligned with the

significant learning goals as established in the curricular and epistemological intentions of the courses.

The study's utilisation of a SPT analytical lens has further established six other overarching findings within a HGLE context related to the research questions: 1) the partial approach to gradelessness did not demand a significant change in the choice of practices but necessitated a change in conceptualisation and enactment of practices compared to that in a traditional graded context; 2) workgroup communities, structures and interactions impact the conceptualisation and enactment of practices but this impact is moderated by an individual's agentic and ideological positionings; 3) individual agency and their articulation of ideological positionings play a key role in the way in which practices are enacted; 4) practices are enmeshed with each course-site's practice architectures, and thus 'sayings, doings, and relatings' of a practice draw on the cultural, discursive, material, and social arrangements that exist within or brought into the course-site to make a practice possible; 5) practices are interconnected and inter-related, and so learning in and across practices occurs; 6) no definitive validated approach to effective practice exist and are generally determined by significant moments of TLR that operate within specific contexts.

6.1 Conceptualisation and enactment of practice-based-knowing in the HGLE site ontology

Within the localised and relational institutional conditions of the HGLE site ontology, the conceptualisation of practice-based-knowing is a combination of:

bringing practices into the EGL and HGL classrooms; applying implicit theories in relevant contexts to make connections with academic subjectivities, social practices, and material arrangements; learning and applying rules, techniques, and tacit knowing both inside and outside the classrooms; challenging taken-for-granted conventions and ingrained recurrent practices; evoking appropriate codes of signification both cognitively and emotionally; and integrating pedagogical expertise with historical and contemporary perspectives.

Within the HGLE site ontology, the academic practitioners' PBK conceptualisations are characterised analytically in the realm of 'practice-as-entity' or what Trowler (2014: 22) labels as the "reservoir of understood practices" and what Schatzki (2012: 14) describes as "an open-ended, spatially-temporally dispersed nexus of doings and sayings". Academic practitioners did not perform their 'doings and sayings' that merely imitated or replicated practices in a contextual vacuum. They re-interpreted their existing practical and general understandings within the EGL and HGL contexts. Practical understandings encompassed "the visceral, ingrained ways of 'knowing' of how to do things on the spot … [the] routine, non-reflexive, and habituated behaviours" (Weenink & Spaargaren, 2016: 70). They also almost always drew from their background knowledge, or the "general understandings" to critically reflect and revise the "presuppositions inherent in their practices" (Carr, 2007: 280). In addition, academics also acquired new practical understandings as they de-privatised their practice to learn from institutional, departmental, college or disciplinary cultures and from others.

These others comprised colleagues from their own small significant networks: experienced colleagues, department leaders, mentors, academic developers, critical friends, co-teachers, and students.

Actions in the course-sites were attributed to the academic practitioners' capability to identify implicit theories of teaching and learning to frame their practice and how each workgroup member responded in carrying out the practice. For example, some of the course-sites employed a routinised sequence of actions during the lessons while others varied the routine and offered different perspectives. Very often, academic practitioners' underlying beliefs, their ideological positionings, and their implicit notions on the purposes of teaching were at the root of their decision that identified theories of teaching and pedagogical strategies employed at the nine course-sites. Closely related to the implicit theories of teaching and learning were also the differences in conventions of appropriate actions. The development of different conventions in the workgroup's approach to teaching and learning were developed over time and impacted by both agency and structure. The commonalities and dissimilarities in sequences and orchestrations are contained in the teleo-affective structure of teaching and learning practices within these course-sites.

At the same time within the HGLE context, students also brought their own preconceived notions and views on education, assessment, and learning into the course-sites. The formation of such views was related to the teaching, learning, and assessment practices that students encountered in other university courses or pre-university courses. They were impacted by the

disciplinary, departmental, and college practices that they partook in the past. In a sense, like academics, students also draw from their own “practice reservoirs” and had “specific ways of accomplishing different types of practice that are particular to the individuals involved” (Trowler, 2014: 21-22). Academic practitioners were seen to make efforts to understand these pre-conceived notions and views and the ways in which their students accomplished practices—through provocative questioning, get-to-know surveys, frequent dialogues, and active observation. However, it was noticed that these identified students’ preconceived notions were rarely used to make decisions on teaching, assessment and/or grading practices, but were primarily used by academic practitioners to establish with students how and why they do what they do in their teaching and assessment so as to gain student buy-in to orchestrate and enact the practices as conceptualised. Students then acted as ‘carriers’ of their current and past practices through enactments of practices within the different locales.

Academic practitioners also had to infer and deliberate on rules—the explicit guidelines and instructions for the practice. These can be regulations that govern “syllabuses … departmental affairs” or rules of thumb “about teaching introductory courses” or following pedagogical action and scripts required of a pedagogical practice (Schatzki, 2005: 472). The conceptualisation of practices was impacted by the institutional rules related to the hybrid and partial approach to gradelessness at the university and in turn, influenced the pedagogical sayings and doings. In most practices, it was impossible to always enforce adherence to all the rules by the workgroups. The novice

practitioners in the study were seen to adhere to the rules of the institution, the department and college, while the experienced practitioners were seen to be able to contextualise the practice while still following standardised guidelines. Similarly, students also negotiated with classroom rules, institutional rules, and policy; and at times simply engaging in their own familiar routines to succeed in the courses. This also confirms that not only are workgroups stirred into practices, but they also become agents of practices in how they were initiated into, created, adapted, varied, and extended their practices in relation to the many others in their locales.

Taking the example of class participation practice and gradelessness illuminates how class participation has its own institutional-typical rules, ideas, and distinct backstory. When class participation practice was regulated to be used as an assessment component, students were seen to have gradually adjusted their sayings and doings to fit those subjectivities. They also performed to fit the style of a model participation practice as established within the course-site—either by the teacher, by their peers or their disciplines. Adjusting and conforming to the increasingly well-established expectations and rules related to the respective ‘class-identity’ turned out to be an easy way for students to be recognised as a ‘co-player’ not only by their classmates but also by teachers–with unanticipated consequences on the official evaluation of their participation performance. This also means that enablement not only is the attribution of a general ability to act but also implies a mutual commitment on the part of workgroup members to specific positions, identities, and relational possibilities. That is to say, when a practice

is carried out, students needed to perform specific actions, and follow certain rules for the sake of achieving specific outcomes.

Their actions also differed on the strength of emotions— the affective component of teleo-affective structures—of those carrying out the practice. Again, taking the class participation practice as an example, the intrinsic motivation enabled through empathy, care and positive encouragement evoked affective tones that were vastly different from when the practice was extrinsically motivated through grades. It becomes apparent that the “affective dimension of signifying–what matters to people” also impacted on how the practice was carried out (Weenink and Spaargaren, 2016: 66). Crucially, the partial approach to gradelessness within the HGLE context did not demand a significant change in what the practices were, but in how the practices and practice architectures were modified to evolve into variant forms of that practice.

Teachers in this study choreographed differing practices based on their contrasting educational ideologies, their values, and their priorities. The educational ideologies were far more influential in determining the development of teaching, learning and assessment practices, in prioritising the goals and values and in establishing the sayings, doings and relatings within the course-site. The activities that compose practices were inevitably enabled and constrained by the material entities, that were essentially reacted to or manipulated by the members of the workgroup. A robust relationship existed between the practices and the socio-material arrangements. Thus, the factors that enabled and constrained practice conceptualisation and

development include ideological, materiality, policies, and intersubjective spaces.

Crucially, the conceptualisations and enactments of PBK are interdependent, mutually productive, and emergent processes that stemmed out of the social-constructivist pedagogical practices undertaken between the academic practitioners and their students. These co-constitutive interactions are intentionally aimed at activating student learning and their ways of being in relation to their disciplines. First, I have established that teaching and assessment practices were developed in response to the specific needs, circumstances, affordances, and opportunities at the course-sites. I have also shown that students were stirred into learning practices, and how the varied teaching practices and activities enabled them to practise their learning. Skilled and knowledgeable participation in practices is influenced by the motivating characteristics, the situational configurations of material artefacts and human bodies. The implication of context is very significant and unique to each course-site, and what de Certeau (1984) calls as the everyday murmurings. Learning occurred only when the students, the established process of their practice-based-knowing and the community within which their learning is situated are inextricably entwined and interconnected.

Akin to the recommendations proposed in past studies on HGLE conducted at the university (McMorran et al., 2017; McMorran and Ragupathi, 2020) effective enactment of practices required a change in conceptualisation of practices on the part of academic practitioners. However, it is also important to be clear that and as confirmed by the study participants, the choice of

practices still remain unchanged within the HGLE site ontology, but how they are conceptualised and enacted the practices is what made the difference. This can be attributed to the partial approach to gradelessness practiced in both the EGL and HGL contexts, where many a time, grades were actually incorporated in these courses. The practices were indeed chosen from a set of well-established and understood practices familiar to both academic and student practitioners. They were informed by the implicit theories of teaching and learning and derived from the academic practitioner's own personal pedagogical and epistemological stance. For example, the academic practitioners' tacit assumptions that students tend to spend less time and effort on EGL and HGL courses (similar to what was reported in previous studies, e.g., Michaelides and Kirshner 2005; McMorran and Ragupathi, 2020) necessitated that their conceptualisation of practices included more in-class opportunities, time, space and motivation that enabled enactment of practices. Their implicit theories of teaching and learning initiate the truly educative aspects of a course, while the materiality and subjectivity necessitate consideration into students' characteristics and needs. For example, academic practitioners in the course-sites recognised the need to inspire and encourage students in new ways to become highly motivated to learn.

Practices are interconnected and inter-related. There is considerable amount of learning in and across practices and what Alkemeyer and Buschmann (2017: 8) refer to as "enablement as subjectivation". What happens in one practice becomes part of other practices. The sayings, doings, and relatings

within the classrooms are interconnected but distinct to the classrooms and shape teaching and learning practices in specific ways. The summary diagrams illuminated the ecologies of practices, the interconnections and interdependence between practices, the epistemological stance of academic practitioners and their PBK within the classrooms at the nine course-sites. It was established that the practices of teaching in each of the course-sites facilitate and/or hinder practices of learning within that course-site.

As academic practitioners' step into the world of practice performances, they also step into the tacit assumptions and history, and practices often become enmeshed with the dynamic state of the site. Thus, to enact practices effectively, academic practitioners act towards initiating students into practices and further find ways to develop those practices in students intended to realise the good of each individual student, the entire class, as well as the community beyond the class.

6.2 Conditioning factors and structures that develop and/or reinforce academic subjectivities

Within the HGLE site ontology, academic and student practitioners demonstrated varying degrees of identity hybridisation and fluidity which influenced the development and reinforcement of their academic subjectivities. Subjectivity formations do not ignore the wider social structures but considers multiple ways in which individuals are subjected to forces of interdependence, interaction, and relationship with other situational and contextual factors. Subjectivity formations in the HGLE site ontology are seen

to have been established in three distinct ways through articulation of individual ideological positionings; agentic and structural constituents; and aspects of social context. These elements played a key role in how practices are enacted within the different locales.

A significant factor that influenced the subjectivities of academic practitioners was their values and beliefs—their educational and assessment ideologies. Within the HGLE site, two dominant ideological positions to the educational ideologies were identified at the micro level of practices. The ‘progressive’ perspective focused on personal development of the student, freedom of choice, and strong student voice; and the ‘enterprise’ perspective based on the development of transferable and vocationally relevant skills in students. In both these perspectives, the focus is on the individual student's educational experience and personal development—meta-cognitive, social, and professional development.

While the ‘social change’ perspective was not prominent, the ecologies of practices revealed some evidence of practices that empowered students to consider personal and social implications and contribute to the social good of the society. Here, the focus was on the social intrinsic value of learning. The study findings also determined that academic practitioners endorse more than one assessment ideologies at any one time, which were generally not mutually exclusive. They were influenced by the institutional/departmental culture and context, and their own individual and personal experiences in schooling and education. Their ideologies are also highly contextualised and

primarily arise out of needs of course and context that further reinforced their choice of assessment practices.

The ecologies of practices mapping also established that disciplinary epistemology as an important factor in accounts of pedagogical practice; this dimension was however shown to be significantly influenced by participants' own ideological positions as inherent in their curriculum and manifested in the epistemological structure of the subject, and the related ways of learning. The practices that focused on developing students into disciplinary experts and specialists helped students adapt new facets of identity and belonging. This, in fact, was seen to enable students to develop a sense of identity and negotiate subjectivity and agency within their field of practice.

There were several factors and structures that impacted students' academic subjectivities. First, it was their motivations to succeed in a course and their imagined futures—be it on the impact they can make on the society or the relevance to their future careers/needs. The independence and ownership offered by the HGLE context further strengthened their deep learning and their emotional connection to learning. At the same time, gradelessness also instilled learning as an intellectual pursuit, i.e., learning for its own sake. The meaningful relationships, emotional connections (and sometimes disconnections) to people, the spaces they live and learn in, the resources available both within and outside the classroom, and the institutional and residential college environments impacted their sense of identity, community and belonging to the course-site (and to the institution).

Participation in learning and assessments practices enabled students to become agents to the possibilities that those practices afforded. They become carriers of specific skills and abilities as a result of how they reacted and responded to the possibilities. This “enablement as subjectivation” introduced through participation in practices further developed and reinforced the academic subjectivities of individual students (Alkemeyer & Buschmann, 2017: 18). We can see that subjectivity formation of academics and students is seen to have established through a core self-identity, a socially constructed relational-identity, and a reflexive-dialogic-identity (Trede & McEwen, 2012: 31). Within these, new “learning, relearning and unlearning” of practices occurred (Trede & McEwen, 2012: 34). The identities of academic practitioners and those of student practitioners are interconnected and are intertwined with respect to the relations between their individual identities, their experiences within course-sites (and within the university, as a whole) and their past backstories on teaching and learning. Specifically, it was also seen that meaningful relationships with their department leadership, experienced peers, mentors, and their own small significant networks fostered a sense of shared responsibility among teachers and students towards the development of practices.

Turning now to the second element in subjectivity formation, the research established that development of unique repertoires and their enactment in the specific, but also in the repeated performances of practices in different locales is agentic and structural. Agency was also seen to be formed as academics and students took part in one or more practices, understood the routines, and

acted intentionally upon them. It is also noted that in order to repeat each local enactment of practice, they drew on proto-practice reservoirs. The ecologies of practices diagram and TLR moments from each of the different locales illuminated how students and academics incorporated their general and practical understandings, motivations and affect while engaging in the practices.

The research outcomes from the inductive thematic data coding revealed five different aspects of social context that shaped academic subjectivities. They include: the policy contexts, the disciplinary teaching culture, departmental or college teaching culture, the institutional culture, and the teaching and learning contexts as captured by the different moments of TLR at the course sites. Valued knowledge of the disciplines, their ways of thinking and practicing in the discipline, their past experiences, and their relevant disciplinary skills determined the teaching-learning processes. While the disciplinary cultures definitely had an impact on the teaching and learning practices, it was evident that the disciplinary practices were seen to be expressed and practiced differently in different settings. For example, the emphasis on the enactment of disciplinary practices in a large class setting was different from that of small-group tutorial classes and residential college classes. Likewise, the disciplinary knowledge practices involved in the teaching of introductory courses and general education courses were positioned differently and were unique to the different locales.

Individual departments and colleges, and in fact, universities, focused on different kinds of practices and had different histories which impacted

departmental and college cultures. They altered the ways in which the teaching and learning practices are approached and enacted, and in the process altered the identities of practitioners. For example, the residential college culture fostered stronger relationships between students-students and students-teachers which in turn strengthened active discourse practice. Similarly, peer learning culture coupled with active learning spaces in residential colleges influenced the use of collaborative learning practice and assessments through group work. In both these examples, the way in which practitioners respond and relate to one another contributed to wider processes of change in language and their doings and in the formation of a collective identity. This collective identity was seen to have a causal relationship to interpretation and enactment of practices through fostered shared understandings and convergent beliefs.

Moving on to the notion of teaching and learning contexts, Trowler (2020: 7) advocates the use of eleven TLR moments to capture and operationalise the development of local workgroup cultures, specifically dynamics within the groups—their agentic and structural interactions. Even as the moments are interconnected and interrelated, identifying a TLR in its entirety for a workgroup is problematic but instead considering the relative importance of each moment might be valuable within a given practice context (Fanghanel, 2009: 206). Given these key-points and considering the study's research questions, the individually coded TLR moments carried out in the course-sites is used to illustrate how aspects of disciplinary, institutional cultures, and policies, are refracted through ways in which the workgroups work together to

realise the practices. However, the evidence from this research setting also highlighted that even though some TLR moments were more prominent than others, many a time, it was not easy to distinguish one from the other, and as Trowler (2020: 71) emphasises, the different TLR moments in the course sites were observed to be ‘inseparably entangled and mutually infused”.

The deductive and thematic coding of the research data with reference to the eleven TLR moments illuminated the most significant elements of each local HGLE culture rather than to provide a picture of what constituted an entire TLR in that context. To this effect, the research established that mutually reinforcing or co-constitutive subjectivities in interaction between academics and their students, materiality in interaction, a social constructivist implicit theory of teaching and learning, and recurrent practices were the most significant TLR moments in the HGLE social practice context. The TLR moments of tacit assumptions, transgressive conventions of appropriateness and codes of signification were often seen to be in tension or used in conjunction with other moments to support the significant TLR moments. The remaining TLR moments of backstories in process, discursive repertoires, power relations, and regimes in interaction were not entirely absent in the data, but they were much less prominent and or realised in other ways within the different locales.

The previous section has detailed the many examples of subjectivities in interaction moments. Teacher’s identity filtered through the varied nature of teachers’ active discourse practice, class participation practice, questioning practice, collaborative learning practice or the skills development practice in

each of these courses conditioned students' motivation, active participation, cognitive engagement, collaboration, and reflection. Such preparation for practice by academic practitioners, like what Trede and McEwen (2012: 28) articulated, was considered a necessary step towards framing the development of professional identities of students.

Likewise, the significance of material artefacts in the interaction between the workgroup, the practices, and the physical spaces and their influence on academic subjectivities was evident from the study findings. Materiality in the form of classroom spaces, the layout of classrooms, material artefacts, the quality of materials (e.g., problem worksheets, analogies, demonstrations, videos, and intriguing questions) instantiated implicit theories of teaching and learning. As argued elsewhere, educational ideologies and disciplinary cultures frequently reflected the appropriateness in the choice of implicit theories of teaching and learning. The student-focused nature of progressivism and the prioritisation of transferrable capabilities and skills within enterprise ideology were at the root of the differences in choice of pedagogical theories of teaching and learning. Within the HGLE context, academic practitioners were very aware of the significance of their choices as aligned with their educational ideologies. Take for example the practice of fieldwork pedagogies in the course sites, and how the teachers theorised their practice based on their own expertise gained in field teaching, from field experiences in the industry, and also from restrictions posed in their own contexts (e.g., large interdisciplinary courses)—all of which were still aligned with and reflected their personal identity and ideology. Moreover, the TLR

moments of recurrent practices and theories of learning and teaching were interwoven to condition a level of regularity, consistency, and preparedness in students' learning practices.

Tacit assumption moments centered around the nature of the courses—the EGL or HGL courses—such as "residential college courses", "first-year courses like the junior seminars", "foundational courses", and "general education courses" and students being less motivated in these courses. These in turn conditioned the teaching and assessment practices based on the academic practitioners' conventions of appropriateness moments in these different locales. For example, the nature of courses influenced academics in considering the transitioning students, the different expectations of their students, and the pacing needed. Tacit assumption moments also centered around the effect of assessment formats and their assessment ideologies: "Open book exams opens up the potential for plagiarism" "Group work has the potential for freeloading".

The recurrent practices moment is consistent with Schatzki's (2012: 17) material arrangement relationship of "prefiguration" where existing states of affairs such as lack of flexibility in massive, large-sized classes, lack of in-person classes, constraints on group work, lack of teaching assistants, lack of grades, qualified the academic practitioners' "intentionality" to organise their teaching practices to better reflect the learning practices in a HGLE environment. For example, moments of recurrent practices and theories of learning and teaching were interwoven to condition a level of regularity, consistency, and preparedness in students' learning practices. There were

also instances when academics in this study did away with ingrained disciplinary recurrent practices to employ a more contextual approach to teaching and learning (e.g., shifting from homework problems to in-class problem-solving with expert on the side; shifting from reflections for the eyes of the teacher to being visible to peers) such that they become a significant part of students' learning practice in the course.

Therefore, the interactions of TLR moments illuminated in this study explicates how identities of student practitioners, and for that matter academic practitioners, not only oriented to consistency and steadiness but were also contingent to the conditions of the interactional and social context. It was evident how different sets of bundled practices interacted and influenced each other within each course-site but were also manipulated by the structural factors such as the institutional policies on HGLE, the residential college culture and ethos. This confirmed how identities were indeed intersubjective and that the formulation of identity does not occur in isolation but occurs through the meaningful relationships with others.

In summary and in conjunction with the educational ideologies, academic practitioners' views on what they value and their inner purpose of education were revealed as five teaching and learning principles from the thematic coding of interview data: (1) Be reflective, to continuously improve teaching and learning over time, (2) Be passionate and excited about teaching, (3) Be empathetic towards students and treating them as human beings, (4) Be motivating, provide public and private encouragement, and (5) Be transparent, and (6) Facilitate hands-on learning, to enable exploration and discovery, to

build resilience, to promote problem-solving, creative learning, critical thinking and independence. These six principles alongside their ideologies indeed were reference points that guided academic practitioners in making judgments, which were uniquely positioned, contextualised to enable success in policy and practice. In the following section, I highlight the processes, purposes, affordances, and resources that underpin the enactment of practice-based knowing in a HGLE environment.

6.3 Illuminating enactment of practices and conditioning towards grades and gradelessness within a HGLE environment

The enactments of practice-based-knowing established in this study included participative, dialogical, active discourse, collaborative, reflective, disciplinary skills development, problem-solving, and modelling practices. The workgroups' dynamic, inter-related and collaborative enactments are theorised as 'practice-as-performance' which Trowler (2014: 22) describes as a "situated instantiation" of the practice carried out in different locales and arguably involved "a unique configuration of know-how, resources, affordances and purposes" within the specific contexts of the locales being studied.

Previous HE studies using SPT and the analytical framework of TLR moments have been situated at the meso level of higher education institutions (Boag, 2010; Fanghanel, 2009; Mathieson, 2012; Trowler, 2005; Trowler, 2008; Trowler and Cooper, 2002; Trowler 2014). By way of contrast, this current research focused on the micro level within a specialised HGLE environment of

the university and employed a practice-focused ethnography to access the nexus of sayings, doings, relatings, feelings, and valuing. Thus, in this section, the enactment of practices is illuminated using SPT to understand the relations between interactions, routines, and material arrangements situated within the course-sites.

Figure 6.1 is an abstract illustration based on a teacher's artistic representation. It succinctly illuminates the complexities involved in the enactment of practice-based-knowing within a HGLE context. The symbols illustrate the complexity, non-linearity, diversity, and interconnections that exist when unfolding a practice. Each symbol represents a member of the workgroup who bring their own identities into the practice to conduct their 'doings and sayings'. The connecting lines signify the interconnections and 'relatings' that are self-organised as they orchestrate and engage to carry out the practice. This results in continually adjusting and adapting the internal processes to suit the environment as the practitioners enact the teaching, learning and assessment practices. This figure also illustrates the relational and complex nature of practice that entails patterned forms of social interaction and includes the voices and doings of academic and student practitioners, as co-constitutors of practice and knowledge (Kemmis, 2009). In a sense, this can be a useful way to illustrate the interconnected relationships between participants in practices and the intermeshed relationships between practices themselves.

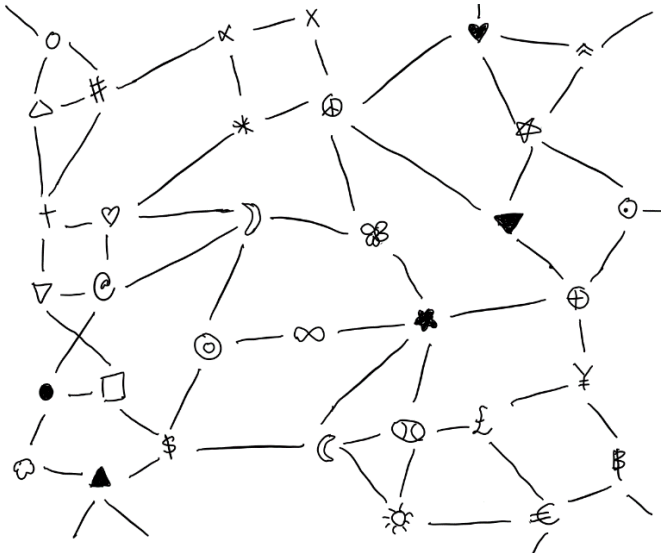


Figure 6.1 An abstract representation illustrating the complexities in ecologies of practices mapping

In Chapter 5, I examined specific practices to show how the sayings, doings and relatings are bundled together in the course-sites, and that those practices were always enmeshed with practice architectures to make teaching and learning possible. Based on observational data as well as the ecologies of practice summary diagrams for individual course-sites in Chapter 5, it was evident that practices within each workgroup link to form organised constellation of activities as academics and students worked together and related to each other's "fairly consistent patterns" (Trowler, 2020: 29). At the same time, they also interacted with the socio-material elements that co-constitute the practice and developed a shared "mutually constructed" understanding of the reality (Trowler, 2020: 29). The summary diagrams highlighted "the consistent patterns and practices" that were unique to each course-site but also showcased how they were "supported by specific set of practice architectures" (Kemmis et al., 2014: 33) and significant TLR

moments. Using this approach, three key pieces of information related to enactment of practice as outlined by Lamers et al. (2016: 232) can be identified for each of the HGL/EGL course-sites: (1) the “relevant components” and how these components combined together to enact a particular practice, (2) the “embeddedness” of practices and “material arrangements” within the course sites and (3) the “trajectory” of a specific practice and its interconnections with other practices. These were discussed and described in Chapter 5 and a comparative analysis on the agentic and structural factors that shaped the practice were also detailed.

The decision-making process on the choice and enactment of practices is agentic, such that, both the academic and student practitioners had contextualised them within the enabling and constraining elements of the institutional structures and policies related to the HGLE context. They used the “complex contextual and relational resources to jointly determine the practical matters” to shape the conditions of the teaching, learning and assessment practices (Johnsson & Boud, 2010:370). Insights from the research data showcased ways in which education happens at the course sites, and how the practices—the teaching practices, the learning practices, and the assessment practices—gets conceptualised and enacted at the course sites. Taking this ethnographic approach provided me with a means to discover the “local nuances of practices enacted across different contexts and times” (Mockler, 2017: xxii) while carefully considering the “situatedness of knowing, saying, doing and relating” (Trowler, 2020: 36).

Most students in the study confirmed that the gradeless option within the HGLE environment did not lead to a lacklustre attitude to learning, but instead identified the shared goal of excelling in courses. That is, for any course—be it graded or gradeless, be it an entirely gradeless or a hybrid gradeless type—students put consistent and best efforts into their learning and learning practices to succeed in a course. This led students to participate decisively in the learning practices to consciously acquire new identities and transform themselves such that their learning becomes purposeful and competent. This newly acquired identity strengthened their "agency in practice", enabled them to "become practitioners with a sense of self and purpose" (Trede & McEwen, 2012: 27).

Academic practitioners, on the other hand, tacitly assumed and believed that their students were less motivated to learn in the HGL/EGL courses. Their tacit assumptions revolved around their perspectives on the nature of their students such as "students spend less time on an EGL course" or "they don't put too much effort in HGL courses" given the highly competitive nature of the graded courses or that "students are so compartmentalized that they do not see beyond this course". Their beliefs and assumptions led to a modification of their teaching practices that not only supported students with more in-class initiation into learning practices but also further stirred them into learning practices through repetitive routines and actions during class. In addition, they emphasised on skills development practice to support students' imagined futures and careers.

Moreover, students are newcomers to the practices, particularly since HGL and EGL courses are taken during students' foundational years at the university. As newcomers they take the position of legitimate peripheral participants of the practice, and are granted the opportunity to discover, experiment and ask questions about the expected doings and sayings to carry out the practices. Enactments, re-enactments of practices and their performances generally shifted in response to other material arrangements and institutional structures. For example, the practice of active discourse in large lectures were shaped by teachers' purposefully placed and spaced encouragements and nudges (material artefacts), while its orchestration in tutorial classes significantly changed as active engagement was already an inherent feature of small-group tutorials. Thus, the social and material dimensions afforded by the HGLE space enabled learning and changing practices. But learning and change can only happen if practice-based-knowing becomes the predominant paradigm of practice, rather than the application of simply knowing to practice in vacuum. It can therefore be established that the practices within the HGLE context were "transformed not only by the sayings, doings and relatings, but also by modifying the practice architectures that enable and constrain the practice" (Kemmis & Mutton, 2012: 22).

There was no definitive validated approach to effectiveness for a specific practice that was consistent across and within the course-sites. They were determined by significant moments of TLR within specific operational

contexts, specific needs, local circumstances, affordances, and opportunities of the practices themselves.

With regards to learning practices, students were not only initiated into learning practices but were also stirred into repeating these learning practices. In the process, they learnt to apply rules and techniques, and at times challenged ingrained practices. I have also shown that as students learn to employ specific ways to accomplish learning based on their current and past practices, they become carriers of practice.

As for teaching practices, it has been established that teaching “initiated students into learning” (Kemmis et. al, 2014: 124) and assessment practices through deliberately designed and enacted teaching practices. Students’ changed practices of learning in response to teacher’s modified teaching practices, which then became “practice architectures that sustained changed ways of teaching”. (Kemmis et. al, 2014: 124).

Finally, in the case of assessment practices, it was predominantly seen as a practice that had the potential to change teaching practices and learning practices, and can be considered as, what Kemmis et al. (2014: 207) calls a “practice-changing practice”. It has been established that students adjusted their sayings and doings to fit to the performative expectations of assessments and to achieve specific outcomes to succeed in the course. I have also shown that assessment practices were centered around ideological positionings and conventions of appropriateness concerning graded and gradeless learning.

The study also confirmed disciplinary epistemology was important in accounts of pedagogical teaching practice. It was, however, significantly influenced by academic practitioners' own ideological positions as inherent in their curriculum and manifested in the way they defined their discipline and the discipline-specific skills that need to be developed in their students. It was also, for example, demonstrated in how they interpreted their course roadmap (syllabus) with reference to its intrinsic relation to the discipline and emphasised the importance of this relation in what they were trying to achieve (their curricular intentions), in terms of ensuring that students understood the structural/conceptual relations (epistemological) within it, students applied and integrated knowledge (application), and socialised students into the discipline (socialisation). Learning is thus regarded as the acquisition and embodiment of a repertoire of dispositions, where they are called upon in specific ways to accomplish different practices through active construction and participation that are specific to individual students and workgroups as they work to realise the practices.

Finally, an investigative and interpretive analysis like those performed in this study, we observe how site-based practices occur in relation to the specific practice architectures and the respective practice arrangement bundles that occurs at specific times when the classes were observed. Thus, what the academic and student practitioners have said and done, and how the individual workgroups in each of the site related to one another in the practice(s) is primarily shaped by the practice architectures of the site.

To a degree, it is also important to understand that my use of SPT as the theoretical lens to choreograph my story through my own interpretive analysis process, insights and conclusions is likely to vary when others offer their own interpretations. Such different interpretations may occur when they employ alternative social practice theories or even using the same SPT. There is always the other question of what other theories or methods can offer a fuller and better picture of the contexts of practices.

6.4 Original contributions to knowledge and the implications

The original contributions to knowledge from this research arise from a model to illustrate the conceptualisations and enactments of PBK in the course-sites. The ecologies of practice summary diagrams, discussed in chapter 5, is established as a tool for practice-focused ethnographic researchers in universities to illuminate the interconnections and interdependence between practices and to draw out significant moments of TLRs that exist in their course sites (see Figure 6.2). This model gives a way of mapping (1) the intended practices–what is intended to occur in terms of educational goals and learning outcomes; (2) the experienced practices–what students experience when they engage with the intended, enacted, and unintended aspects of the practice and how students learn through that experience; (3) the enacted practices–what is enacted by academic and student practitioners; and (4) the set of TLR moments that inform the family of practices and interactions–what constitutes the local instantiations of proto-practice reservoirs.

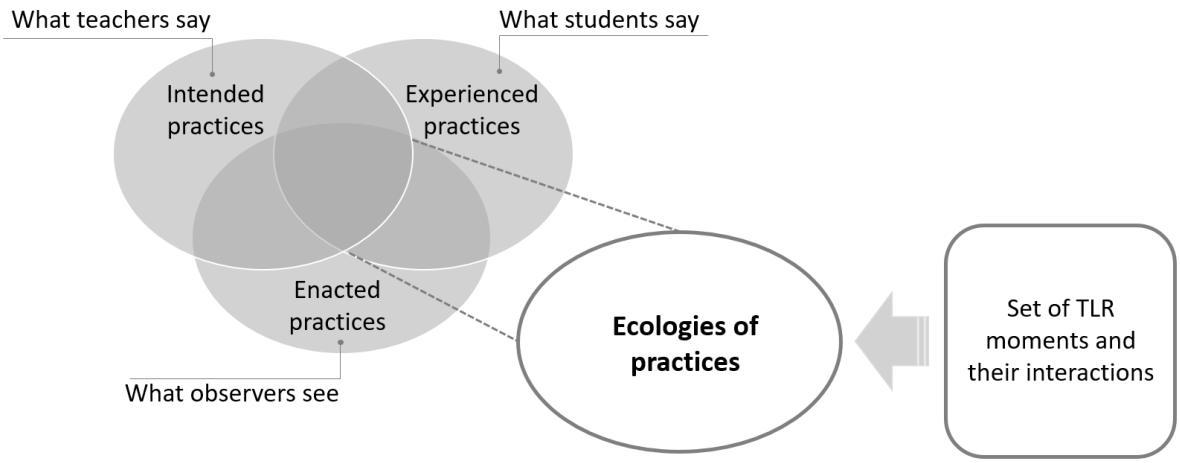


Figure 6.2 A model mapping the interconnected ecologies of practices and significant TLR moments

As I have argued earlier, the enacted practices are shaped by the values, the ideological positionings, the expertise (pedagogical and disciplinary), the experiences, and interpretations of what was intended by academic practitioners alongside other situational factors. Elsewhere, I have also argued that practices are enmeshed with each site's practice architectures, and the 'sayings, doings, and relatings' of a practice draw on the cultural-discursive, material, and social arrangements that exist within or brought into the site to make the practice possible. These 'sayings and doings' form the basis for the intended, experienced, and enacted practices while the 'relatings' are used to define the TLR moments and their interactions at the course site.

The interactions, the tensions, the interconnections between the significant TLR moments are also captured with arrows between the different moments. This depiction of the moments breaks away the bubble of narrow linear listing to capture the complexity and web of enmeshed moments. The model

mapping done for each of the course-sites in Chapter 5 allowed me to develop and offer a detailed descriptive, narrative, and explanatory insight into the development of educational practice at the nine course-sites. The implications of this model can be quite profound in the field of academic development and reflexive teaching.

This model aims to demonstrate a way of understanding educational practices in the university courses. From an ontological viewpoint, the development of education and educational practices, involves “engaging with education as it is realised at a particular site—at every particular site” (Kemmis et al., 2014: 218). For a site-by-site analysis and interpretation, this model mapping exercise can be a valuable self-reflection tool for academic practitioners to draw out the site-based practices in their own course-sites. They can use it to triangulate the evidence gathered from their own educational beliefs and teaching philosophy to illuminate their intended practices (what teachers say), the peer observation reports to comprehend the enacted practices (what observers see); and the student evaluation of teaching reports to recognise the experienced practices (what students say). In addition, the actuality, materiality, and situationality of the educational practices of the course-site is captured in the significant TLR moments.

Even as the evidence from this research setting highlighted that some TLR moments were more significant and prominent than others, many a time, it was not easy to distinguish one from the other, and as Trowler (2020: 71) emphasises, the different TLR moments in the course sites were observed to be ‘inseparably entangled and mutually infused”. This signifies that there is a

need in the future research to identify the degree to which TLR moments shape and condition practices, and probably assign weightages such that more clarity can be gained in interpreting the model mapping. Additionally, it may be useful to find ways of differentiating the different structural elements and constituents of practice-as-entity and their influences on practice-as-performance. It must be noted however that not all structural elements were amenable to agentic response, and an in-depth analysis on such elements were not considered.

The inseparability and fluidity of practices also proved difficulty in drawing boundaries around practices or answering the questions that emerge on what are the boundaries of a practice? These also apply to TLR moments—where are the boundaries of one TLR moment to another. There was also difficulty in considering where the boundaries of a course-site started or ended, particularly in the context of residential college courses.

Moving forward, employing a longitudinal study to examine the way TLRs emerge and change over time with the same course-sites (or a subset of them) would be beneficial. This can enable plotting the trajectory of different moments, and if coupled with the degree to which TLRs shape, change, and interlock differently would make a very useful study. Future research will not only need to use SPT and the model mapping exercise on similar HGLE type site ontologies but also on contrasting type site ontologies (e.g., a fully graded course) to further validate or challenge this thesis's research claims and or progress the use of SPT in such contexts.

Stemming from critical reflection, analysis, and interpretation of the model mapping exercise, it can become a way of comprehending education that will encourage academic practitioners and university administrators to reimagine education. More so, this model offers opportunities to re-look, review and change site-based practices as it offers a pathway to interrogate learning practices and the learning needs of their course-sites. At the same time, they can easily explore and learn from each other's model mappings to critically reflect on the shared understandings and practices and grow as a learning community.

Likewise, in the field of academic development, this can form the pivotal point for initiating significant conversations with academic practitioners and university leaders as it can offer a systematic structure and language to position such consultations. As Little and Palmer (2011: 104) assert such conversations that academic developers hold with academic practitioners is at the core of reimagining and revitalising education as the focus is on "changing perspectives and practices", about furthering "goals for teaching or professional development" and in helping university leaders "anticipate and respond to changes in ways that promote the core institutional mission." Importantly, it is hoped that the development of this model might aid future discussion on the nature of academic development practices and provide possible insights and directions for further practice-related research in the field of academic development.

In my earlier works (McMorran & Ragupathi, 2020; McMorran et al, 2017), I argued that academic practitioners need to consider new practices to enact

gradeless learning, but this current study has debunked my claim. Contrary to the belief that any approach to gradelessness—partial or otherwise—does not lie in what practices are being employed in the course-sites; but in how the practices and practice architectures are adapted and practised to suit the situational, contextual, socio-material, and cultural conditions. Given this finding, and the fact that these adaptations are influenced and informed by a set of TLR moments specific to each teaching and learning regime, attention must be focused on how practices interact with different moments and how they are conditioned on the ground. Given this understanding, it is clear that for gradeless education to work best, we need to focus on the bundle of site-based practices—that are interconnected and interdependent within the ecologies of practices—and not on a specific practice in isolation.

Plausibly minor, yet useful contribution is the development of an easy-to-use tool that aids in the quick coding of qualitative data, for qualitative researchers and ethnographers who may not possess, and most times, cannot afford specialised applications. I have developed a Macro script for Microsoft Word, that translates the codes entered as comments in Microsoft Word into a Microsoft Excel spreadsheet tabulated into four columns—the initial codes (derived from comments), the original referred text, page number, and line number. This spreadsheet can then be used for further analysis and categorising basic, organised, and global themes.

List of abbreviations

HGLE	Hybrid graded/gradeless education
EGL	Entirely gradeless
HGL	Hybrid gradeless
SPT	Social practice theory
TLR	Teaching and Learning Regimes
PBK	Practice-based-knowing
MOE	Ministry of Education
GPA	Grade point average
LMS	Learning Management System
FGD	Focus group discussion
TLRM-PWR	Power relations
TLRM-TTL	Implicit theories of teaching and learning
TLRM-CAP	Conventions of appropriateness
TLRM-RPT	Recurrent practices
TLRM-TAS	Tacit assumptions
TLRM-CDS	Codes of signification
TLRM-DSR	Discursive repertoires
TLRM-SUI	Subjectivities in interaction
TLRM-MTI	Materiality in interaction
TLRM-BSP	Backstories in process
TLRM-RGI	Regimes in interaction
TA	Teaching assistant
ACMF	Arguments-Concepts-Methods-Findings

Chapter 7: References

Akyea, S. G., & Sandoval, P. (2004). *A Feminist Perspective on Student Assessment: An Epistemology of Caring and Concern*. 15.

Aldrich, H. E., & Ruef, M. (2006). *Organizations evolving* (2nd ed.). Sage Publications Ltd.

Alexander, C. S., & Becker, H. J. (1978). The Use of Vignettes in Survey Research. *Public Opinion Quarterly*, *42*(1), 93. https://doi.org/10.1086/268432

Alkemeyer, T. & Buschmann, N. (2017). Learning in and across practices: enablement as subjectivation. In A. Hui, T. Schatzki, & E. Shove (Eds), *The Nexus of Practices: Connections, constellations, practitioners* (pp. 8–23). Routledge. https://doi.org/10.4324/9781315560816

Anderson, L. W. (2018). A critique of grading: Policies, practices, and technical matters. *Education Policy Analysis Archives*, *26*, 49. https://doi.org/10.14507/epaa.26.3814

Ashwin, P. (2009) *Analysing teaching–learning interactions in higher education: Accounting for structure and agency*. London: Continuum.

Attride-Stirling, J. (2001). Thematic networks: An analytic tool for qualitative research. *Qualitative Research*, *1*(3), 385–405. https://doi.org/10.1177/146879410100100307

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Prentice-Hall, Inc.

Barber, M. & Mourshed, M. (2007). *How the world's best-performing school systems come out on top*: A Report, McKinsey & Company.

Barter, C. & Renold, E. (1999). *The Use of Vignettes in Qualitative Research*. Social Research Update, 25, University of Surrey.

Beyer, C.H., Gillmore, G., & Fisher, A.J. (2007). *Inside the Undergraduate Experience: The University of Washington's Study of Undergraduate Learning*. Jossey-Bass.

Biggs, J. (1996). Enhancing teaching through constructive alignment. *Higher Education*, *32*(3), 347–364. https://doi.org/10.1007/BF00138871

Black, P., & Wiliam, D. (2009). Developing the theory of formative assessment. *Educational Assessment, Evaluation and Accountability*, *21*(1), 5–31. https://doi.org/10.1007/s11092-008-9068-5

Blaikie, N. W. H., & Priest, J. (2018). *Designing Social Research: The Logic of Anticipation*. EBSCO Publishing.

Bloodgood, R. A., Short, J. G., Jackson, J. M., & Martindale, J. R. (2009). A Change to Pass/Fail Grading in the First Two Years at One Medical School Results in Improved Psychological Well-Being: *Academic Medicine*, *84*(5), 655–662. https://doi.org/10.1097/ACM.0b013e31819f6d78

Boag, B. (2010) The Role of the Programme Team in the Implementation of Policy at Institutional Level - A Case Study in the UHI Millennium Institute. [EdD Dissertation, University of Stirling].

Boud, D. (2000). Sustainable Assessment: Rethinking assessment for the learning society. *Studies in Continuing Education*, *22*(2), 151–167. https://doi.org/10.1080/713695728

Boud, D., & Falchikov, N. (Eds.). (2007). *Rethinking assessment in higher education: Learning for the longer term*. Routledge.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Braun, V., & Clarke, V. (2022). *Thematic analysis: A practical guide to understanding and doing*, SAGE Publications.

Brown, G. T. L (2008). *Conceptions of assessment: Understanding what assessment means to teachers and students*. Nova Science Publishers, Inc., New York.

Brown, G. T. L., Gebril, A., & Michaelides, M. P. (2019). Teachers' Conceptions of Assessment: A Global Phenomenon or a Global Localism. *Frontiers in Education*, *4*, 16. https://doi.org/10.3389/feduc.2019.00016

Brown, G. T. L., & Harris, L. R. (Eds.). (2016). *Handbook of human and social conditions in assessment*. Routledge, Taylor & Francis Group.

Carless, D. (2007). Learning-oriented assessment: Conceptual bases and practical implications. *Innovations in Education and Teaching International*, *44*(1), 57–66. https://doi.org/10.1080/14703290601081332

Carless, D. (2015). Exploring learning-oriented assessment processes. *Higher Education*, *69*(6), 963–976. https://doi.org/10.1007/s10734-014-9816-z

Carr, W. (2007). Educational research as a practical science. *International Journal of Research & Method in Education*, *30*(3), 271–286. https://doi.org/10.1080/17437270701614774

Cohen, L., Manion, L., & Morrison, K. (2017). *Research Methods in Education* (8th ed.). Routledge.

Conradson, D. (2005). Focus Groups. In, Flowerdew, R. and Martin, D. (Eds.), *Methods in Human Geography: a guide for students doing a research project* (pp. 128–143) London, UK. Pearson.

Cousin, G. (2009). *Researching Learning in Higher Education: An Introduction to Contemporary Methods and Approaches* (1st ed.). Routledge.

Crooks, T. J. (1988). The Impact of Classroom Evaluation Practices on Students. *Review of Educational Research*, *58*(4), 438–481.

de Certeau, M. (1984) *The practice of everyday life*. Berkeley: University of California Press.

Delamont, S. (2016). Ethnography. In Dominic Wyse, et al. (Eds.), *The BERA/SAGE Handbook of Educational Research* (pp. 336–354). SAGE Publications.

Demirel, M. (2009). Lifelong learning and schools in the twenty-first century. *Procedia Social and Behavioral Sciences*, *1*(1), 1709–1716. https://doi.org/10.1016/j.sbspro.2009.01.303

Dewey, J. (1922). *Human nature and conduct: An introduction to social psychology*. New York: Modern Library.

Dewey, J. (1933). *How We Think: A Restatement of the Relation of Reflective Thinking to the Educative Process*. Boston, MA: D.C. Heath & Co Publishers.

Eagleton, T. (1991). *Ideology: An introduction*. Verso. London: New York

Ecclestone, K. (2007). Commitment, compliance and comfort zones: The effects of formative assessment on vocational education students' learning careers. *Assessment in Education: Principles, Policy & Practice*, *14*(3), 315–333. https://doi.org/10.1080/09695940701591925.

Elton, L. R. B., & Laurillard, D. M. (1979). Trends in research on student learning. *Studies in Higher Education*, *4*(1), 87–102. https://doi.org/10.1080/03075077912331377131

Fanghanel, J. (2009). Exploring Teaching and Learning Regimes in Higher Education Settings. In, Kreber, C. (Eds.), *The University and Its*

Disciplines: Teaching and Learning within and beyond Disciplinary Boundaries (pp. 196–208). London: Routledge.

Finch, J. (1987). The Vignette Technique in Survey Research. *Sociology*, *21*(1), 105–114. https://doi.org/10.1177/0038038587021001008

Frederiksen, J. R., & Collins, A. (1989). A Systems Approach to Educational Testing. *Educational Researcher*, 18(9), 27–32.

Geertz, C. (1973). Thick Description: Towards an Interpretive Theory of Culture. In C. Geertz (Ed.), *The Interpretation of Cultures*. New York: Basic Books.

Geertz, C. (1983). *Local Knowledge*. New York: Basic Books.

Gherardi, S. (2012). *How to Conduct a Practice-based Study*. Edward Elgar Publishing.

Giddens, A. (1984). *The Constitution of Society: Outline of the Theory of Structuration*. University of California Press, Berkeley.

Gipps, C. (1999). Socio-Cultural Aspects of Assessment. *Review of Research in Education*, *24*, 355. https://doi.org/10.2307/1167274

Grootenboer, P., Edwards-Groves, C., & Choy, S. (Eds.) (2017). *Practice Theory Perspectives on Pedagogy and Education: Praxis, Diversity and Contestation*. Springer Singapore. https://doi.org/10.1007/978-981-10-3130-4

Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. In *Handbook of qualitative research* (pp. 105–117). Sage Publications, Inc.

Hallinger, P. (2010). Making education reform happen: Is there an 'Asian' way? *School Leadership & Management*, *30*(5), 401–418. https://doi.org/10.1080/13632434.2010.502524

Hammersley, M., & Atkinson, P. (2007). *Ethnography: Principles in practice* (3rd ed). Routledge.

Hartley, J. F. (1983). Ideology and Organizational Behavior. *International Studies of Management & Organization*, *13*(3), 7–34. https://doi.org/10.1080/00208825.1983.11656364

Heng, S. K. (2015, March 06). Living the Pioneering Spirit: Learning for Mastery, Learning throughout Life, Learning for Life, *MOE FY 2015 Committee of Supply Debate - Speech by Minister Heng Swee Keat*. Singapore: Speech.

Hennink, M. M., & Leavy, P. (2014). *Understanding Focus Group Discussions*. Oxford University Press. https://doi.org/10.1093/acprof:osobl/9780199856169.001.0001

Higgs, J. (2012). Practice-based education: The practice-education-context-quality nexus. In J. Higgs, R. Barnett, S. Billett, M. Hutchings, & F. Trede (Eds.), *Practice-based education: Perspectives and strategies* (pp. 3–12). Sense Publishers.

Holley, K.A. (2009). Special Issue: Understanding Interdisciplinary Challenges and Opportunities in Higher Education. *Ashe Higher Education Report*, *35*, 1–131.

Hopfenbeck, N. T. (2018). Classroom assessment, pedagogy and learning – twenty years after Black and Wiliam 1998. *Assessment in Education: Principles, Policy & Practice*, *25*(6), 545–550. https://doi.org/10.1080/0969594X.2018.1553695

Hui, A., Schatzki, T., & Shove, E. (2017). Learning in and across practices: enablement as subjectivation. In A. Hui, T. Schatzki, & E. Shove (Eds), *The Nexus of Practices: Connections, constellations, practitioners* (pp. 8–23). Routledge. https://doi.org/10.4324/9781315560816

Johnsson, M. C., & Boud, D. (2010). Towards an emergent view of learning work. *International Journal of Lifelong Education*, *29*(3), 359–372. https://doi.org/10.1080/02601371003700683

Jonas, M., Littig, B., & Wroblewski, A. (Eds.). (2017). *Methodological Reflections on Practice Oriented Theories*. Springer International Publishing. https://doi.org/10.1007/978-3-319-52897-7

Kemmis, S. (2009). Understanding professional practice: a synoptic framework. In B. Green (Ed.), *Understanding and researching professional practice* (pp. 19–38). Rotterdam: Sense Publishers.

Kemmis, S., & Mutton, R. (2012). Education for sustainability (EfS): Practice and practice architectures. *Environmental Education Research*, *18*(2), 187–207. https://doi.org/10.1080/13504622.2011.596929

Kemmis, S., Wilkinson, J., Edwards-Groves, C., Hardy, I., Grootenboer, P., & Bristol, L. (2014). *Changing Practices, Changing Education*. Springer Singapore. https://doi.org/10.1007/978-981-4560-47-4

Knight, P., & Saunders, M. (1999). Understanding Teachers' Professional Cultures Through Interview: A Constructivist Approach. *Evaluation & Research in Education*, *13*(3), 144–156. https://doi.org/10.1080/09500799908666954

Koh, K. H. (2011). Improving teachers' assessment literacy through professional development. *Teaching Education*, *22*(3), 255–276. https://doi.org/10.1080/10476210.2011.593164

Krueger, R.A. and Casey, M.A. (2000) *Focus groups: A practical guide for applied research*. Sage Publications Inc, Thousand Oaks.

Kunda, G. (2013). Reflections on becoming an ethnographer. *Journal of Organizational Ethnography*, *2*(1), 4–22. https://doi.org/10.1108/JOE-12-2012-0061

Lamers, M., Spaargaren, G. & Weenink, D. (2016). The relevance of practice theory for researching social change. In G. Spaargaren, et al. (Eds.), *Practice Theory and Research: Exploring the Dynamics of Social Life* (pp. 229–242). Taylor & Francis Group.

Leonardo, Z. (2003). Discourse and critique: Outlines of a post-structural theory of ideology. *Journal of Education Policy*, *18*(2), 203–214. https://doi.org/10.1080/0268093022000043038

Little, D., & Palmer, M. S. (2011). A coaching-based framework for individual consultations. *To Improve the Academy*, *29*(1), 102–115. https://doi.org/10.1002/j.2334-4822.2011.tb00625.x

Lisewski, B. (2020). How tutor-practitioners conceptualised and enacted their practice-based knowing in a Higher Education Fashion School: A Teaching and Learning Regime approach. *Journal of Further and Higher Education*, *45*(6), 730–743. https://doi.org/10.1080/0309877X.2020.1812550

Little, D., & Palmer, M. (2011). A Coaching-based Framework for Individual Consultations. *To Improve the Academy*. *29*(1):102–115. http://dx.doi.org/10.3998/tia.17063888.0029.012

Mahon, K., Kemmis, S., Francisco, S., & Lloyd, A. (2017) Mahon, In K., Mahon, S. Francisco, & S. Kemmis. (Eds.), *Exploring Education and Professional Practice* (pp. 1–30). Springer Singapore. https://doi.org/10.1007/978-981-10-2219-7

Mathieson, S. (2012). Disciplinary cultures of teaching and learning as socially situated practice: rethinking the space between social constructivism and epistemological essentialism from the South African experience. *Higher Education*, *63*, 549–64.

McArthur, J. (2016). Assessment for social justice: The role of assessment in achieving social justice. *Assessment & Evaluation in Higher Education*, *41*(7), 967–981. https://doi.org/10.1080/02602938.2015.1053429

McMorran, C., & Ragupathi, K. (2020). The promise and pitfalls of gradeless learning: Responses to an alternative approach to grading. *Journal of Further and Higher Education*, *44*(7), 925–938. https://doi.org/10.1080/0309877X.2019.1619073

McMorran, C., Ragupathi, K., & Luo, S. (2017). Assessment and learning without grades? Motivations and concerns with implementing gradeless learning in higher education. *Assessment & Evaluation in Higher Education*, *42*(3), 361–377. https://doi.org/10.1080/02602938.2015.1114584

Mercer, J. (2007). The challenges of insider research in educational institutions: Wielding a double-edged sword and resolving delicate dilemmas. *Oxford Review of Education*, *33*(1), 1–17. https://doi.org/10.1080/03054980601094651

Merriam, S. B. (1988). *Case Study Research in Education: A Qualitative Approach*. Jossey-Bass, San Francisco.

Merton, R. K. (1972). Insiders and outsiders; a chapter in the sociology of knowledge, *American Journal of Sociology*, *78* (1), 9–47.

Michaelides, M., & Kirshner, B. (2005). Graduate Student Attitudes toward Grading Systems. *College Quarterly*, *8* (4). Seneca Press.

http://collegequarterly.ca/2005-vol08-num04-fall/michaelides_kirshner.html

Miettinen, R., Samra-Fredericks, D., & Yanow, D. (2009). Re-Turn to Practice: An Introductory Essay. *Organization Studies*, *30*(12), 1309–1327. https://doi.org/10.1177/0170840609349860

Ministry of Education. (2018, September 28). 'Learn For Life' – Preparing Our Students To Excel Beyond Exam Results [Press release] https://www.moe.gov.sg/news/press-releases/20180928-learn-for-life-preparing-our-students-to-excel-beyond-exam-results

Mockler, N. (2017). Foreword. In K., Mahon, S. Francisco, & S. Kemmis. (Eds.), *Exploring Education and Professional Practice* (pp. xix–xxiv). Springer Singapore. https://doi.org/10.1007/978-981-10-2219-7

Mok, K. H. (2015). Higher Education Transformations for Global Competitiveness: Policy Responses, Social Consequences and Impact on the Academic Profession in Asia. *Higher Education Policy*, *28*(1), 1–15. https://doi.org/10.1057/hep.2014.27

Morrison, E. W. (1993). Longitudinal study of the effects of information seeking on newcomer socialization. *Journal of Applied Psychology*, *78*, 173–183. https://doi.org/10.1037/0021-9010.78.2.173

Nicolini, D. (2009). Articulating Practice through the Interview to the Double. *Management Learning*, *40*(2), 195–212. https://doi.org/10.1177/1350507608101230

Nicolini, D. (2012). *Practice theory, work, and organization: An introduction*. Oxford: Oxford University Press.

Nicolini, D. (2017). Practice Theory as a Package of Theory, Method and Vocabulary: Affordances and Limitations. In M. Jonas, B. Littig, & A. Wroblewski (Eds.), *Methodological Reflections on Practice Oriented Theories* (pp. 19–34). Springer International Publishing. https://doi.org/10.1007/978-3-319-52897-7_2

Niewöhner, J. & Beck, S. (2017) Embodying Practices: The Human Body as Matter (of Concern) in Social Thought. In M. Jonas, B. Littig, & A. Wroblewski (Eds.), *Methodological Reflections on Practice Oriented Theories* (pp. 63–78). Springer International Publishing. https://doi.org/10.1007/978-3-319-52897-7_2

Pajares, M. F. (2021). *Teachers' Beliefs and Educational Research: Cleaning up a Messy Construct*. 27.

Ramsden, P. (2003). *Learning to Teach in Higher Education* (2nd ed.). Routledge. https://doi.org/10.4324/9780203507711

Read, B., & Francis, B. (2005). Editorial: Examining Assessment in Higher Education: Assessment as a Socially Situated Practice. *Assessment & Evaluation in Higher Education*, *30*(3), 209–213. https://doi.org/10.1080/02602930500063777

Reckwitz, A. (2002). Toward a Theory of Social Practices: A Development in Culturalist Theorizing. *European Journal of Social Theory*, *5*(2), 243–263. https://doi.org/10.1177/13684310222225432

Reimann, N., & Sadler, I. (2017). Personal understanding of assessment and the link to assessment practice: The perspectives of higher education staff. *Assessment & Evaluation in Higher Education*, *42*(5), 724–736. https://doi.org/10.1080/02602938.2016.1184225

Sadler, I., & Reimann, N. (2018). Variation in the development of teachers' understandings of assessment and their assessment practices in higher education. *Higher Education Research & Development*, *37*(1), 131–144. https://doi.org/10.1080/07294360.2017.1344199

Sambell, K., McDowell, L., & Montgomery, C. (2013). *Assessment for learning in higher education*. Routledge.

Schatzki, T. R. (2001). Introduction: practice theory. In T. R. Schatzki, K. K. Cetina & Savigny, E. (Eds.), *The Practice Turn in Contemporary Theory* (pp. 10–23). Routledge

Schatzki, T. R. (2005). Peripheral Vision: The Sites of Organizations. *Organization Studies*, *26*(3), 465–484. https://doi.org/10.1177/0170840605050876

Schatzki, T. R. (2006). On Organizations as they Happen. *Organization Studies*, *27*(12), 1863–1873. https://doi.org/10.1177/0170840606071942

Schatzki, T. R. (2012). A primer on practices: Theory and research In J. Higgs, R. Barnett, S. Billett, M. Hutchings, & F. Trede (Eds.), *Practice-based education: Perspectives and strategies* (pp. 13–26). Sense Publishers.

Schwartz-Shea, P., & Yanow, D. (2012). *Interpretive research design: Concepts and processes*. Routledge.

Sedlačko, M. (2017). Conducting Ethnography with a Sensibility for Practice. In M. Jonas, B. Littig, & A. Wroblewski (Eds.), *Methodological Reflections on Practice Oriented Theories* (pp. 47–60). Springer International Publishing. https://doi.org/10.1007/978-3-319-52897-7_4

Seidman, I. E. (1998). *Interviewing as qualitative research: A guide for researchers in education and the social sciences* (2nd ed.) New York: Teachers College Press.

Spaargaren, G., Weenink, D., & Lamers, M. (2016) Using practice theory to research social life In G. Spaargaren, et al. (Eds.), *Practice Theory and Research: Exploring the Dynamics of Social Life* (pp. 3–27). Taylor & Francis Group.

Stommel, J. (2017, October 26). *Why I Don't Grade*. Jesse Stommel. https://www.jessestommel.com/why-i-dont-grade/

Tannock, S. (2017). *No grades in higher education now!* Revisiting the place of graded assessment in the reimagination of the public university.

Studies in Higher Education, *42*(8), 1345–1357. https://doi.org/10.1080/03075079.2015.1092131

Tao, V. Y. K., & Hong, Y. (2000). A meaning system approach to Chinese students' achievement goals. *Journal of Psychology in Chinese Societies*, *1*, 13–38.

Tao, V. Y. K., & Hong, Y. (2014). When Academic Achievement Is an Obligation: Perspectives from Social-Oriented Achievement Motivation. *Journal of Cross-Cultural Psychology*, *45*(1), 110–136. https://doi.org/10.1177/0022022113490072

Trede, F. & McEwen, C. (2012). Developing a critical professional identity: Engaging self in practice. In J. Higgs, R. Barnett, S. Billett, M. Hutchings, & F. Trede (Eds.), *Practice-based education: Perspectives and strategies* (pp. 27–40). Sense Publishers.

Trowler, P. (1998). *Academics responding to change: New higher education frameworks and academic cultures*. Society for Research into Higher Education & Open University Press.

Trowler, P. (2003). *Education Policy, Policy Making, Policy Implementation and Policy Enactment*. A Brief Overview. [Lecture Notes]

Trowler, P. (2008). *Cultures and Change in Higher Education: Theories and Practices*. London: Palgrave Macmillan

Trowler, P. (2010). UK Higher Education: Captured by New Managerialist Ideology? In V. L. Meek, L. Goedegebuure, R. Santiago, & T. Carvalho (Eds.), *The Changing Dynamics of Higher Education Middle Management* (Vol. 33, pp. 197–211). Springer Netherlands. https://doi.org/10.1007/978-90-481-9163-5_10

Trowler, P. (2012). Wicked issues in situating theory in close-up research. *Higher Education Research & Development*, *31*(3), 273–284. https://doi.org/10.1080/07294360.2011.631515

Trowler, P. (2013). Can approaches to research in Art and Design be beneficially adapted for research into higher education? *Higher Education Research & Development*, *32*(1), 56–69. https://doi.org/10.1080/07294360.2012.750276

Trowler, P. (2014). Practice-focused ethnographies of higher education: Method/ological corollaries of a social practice perspective. *European Journal of Higher Education*, *4*(1), 18–29. https://doi.org/10.1080/21568235.2013.833485

Trowler, P. (2020). *Accomplishing Change in Teaching and Learning Regimes: Higher Education and the Practice Sensibility*. Oxford University Press. https://doi.org/10.1093/oso/9780198851714.003.0006

Trowler, P., & Cooper, A. (2002). Teaching and Learning Regimes: Implicit theories and recurrent practices in the enhancement of teaching and learning through educational development programmes. *Higher*

Education Research & Development, *21*(3), 221–240. https://doi.org/10.1080/0729436022000020742

Trowler, P., Fanghanel, J., & Wareham, T. (2005). Freeing the chi of change: The Higher Education Academy and enhancing teaching and learning in higher education. *Studies in Higher Education*, *30*(4), 427–444. https://doi.org/10.1080/03075070500160111

Trowler, P. and Knight, P. (2002) Exploring the implementation gap: Theory and Practices in Change Interventions. In P. Trowler (Ed.) *Higher Education Policy and Institutional Change*. Buckingham: Open University Press/SRHE.

Warde, A. (2005). Consumption and Theories of Practice. *Journal of Consumer Culture*, *5*(2), 131–153. https://doi.org/10.1177/1469540505053090

Watkins, D., Dahlin, B., & Ekholm, M. (2005). Awareness of the backwash effect of assessment: A phenomenographic study of the views of Hong Kong and Swedish lecturers. *Instructional Science*, *33*(4), 283–309. https://doi.org/10.1007/s11251-005-3002-8

Weenink, D., & Spaargaren, G. (2016). *Emotional agency navigates a world of practices*. In G. Spaargaren, et al. (Eds.), *Practice Theory and Research: Exploring the Dynamics of Social Life* (pp. 60–84). Taylor & Francis Group.

Wilkinson, C. (2014). On Not Just Finding What You (Thought You) Were Looking For. In D. Yanow & P. Schwartz-Shea (Eds.), *Interpretation and Method: Empirical Research Methods and the Interpretive Turn* (pp. 387–405).

Yamamoto, Y., & Holloway, S. D. (2010). Parental Expectations and Children's Academic Performance in Sociocultural Context. *Educational Psychology Review*, *22*(3), 189–214. https://doi.org/10.1007/s10648-010-9121-z

Yeo, M., & Boman, J. (2019). Disciplinary approaches to assessment. *Journal of Further and Higher Education*, *43*(4), 482–493. https://doi.org/10.1080/0309877X.2017.1367371

Zaharlick, A. (1992). Ethnography in anthropology and its value for education. *Theory Into Practice*, *31*(2), 116–125. https://doi.org/10.1080/00405849209543532