

University of  
**Southern  
Queensland**

**DEVELOPING A TYPOLOGY FOR DESIGNING  
APPROPRIATE LEARNING AND TEACHING  
PROFESSIONAL DEVELOPMENT STRATEGIES FOR  
AN AUSTRALIAN REGIONAL UNIVERSITY**

A Thesis submitted by

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## **ABSTRACT**

The topic of this study contributes to the growing research on professional development of academics who teach in Australian higher education. Specifically, this exploration focused on the under-represented perceptions of teaching academics within Australian regional universities. The research presented in this dissertation builds on the community of practice related to professional development for teaching academics, therefore, the voices of academics in regional-based universities were given opportunities to be heard. Furthermore, the evolving nature of higher education teaching in the face of new opportunities and challenges calls for an exploration of strategies that are being employed to facilitate learning and teaching professional development in the sector. Therefore, the study also aimed to inform the practice of and equip academic developers, who design and deliver learning and teaching professional development, with a typological tool. This dissertation first establishes a broader context of learning and teaching professional development in the Australian landscape, prior to investigating the perceptions of teaching academics and their motivation to participate in professional development in Australian regional universities. A typology is then presented as a tool to assist with uptake and implementation of learning and teaching professional development. Pragmatism was used as the research paradigm to guide this research study's design and methods. For the purposes of this research study, an exploratory sequential mixed methods design was appropriate. This Thesis was conducted over four years (2019-2023) and was presented across three academic journal articles. Three papers are embedded in this Thesis by Publication presenting the literature review, semi-structured interviews, and survey respectively. The context of academics teaching in higher education has changed dramatically with the emergence of new realities, opportunities, and challenges. The findings of this research study open opportunities for relevant and strategic learning and teaching professional development activities that academics are motivated to participate in. The dissertation ends with a discussion of the relevance of this research to the sector and answers the research questions, as well as outlines its limitations, directions for future research and implications for practice. A personal reflection of the author's learning journey is then given.

## CERTIFICATION OF THESIS

I, Katherine Herbert, declare that the PhD Thesis entitled *Developing a typology for designing appropriate learning and teaching professional development strategies for an Australian regional university* is not more than 100,000 words in length including quotes and exclusive of tables, figures, appendices, bibliography, references, and footnotes.

This Thesis is the work of Katherine Herbert except where otherwise acknowledged, with the majority of the contribution to the papers presented as a Thesis by Publication undertaken by the student. The work is original and has not previously been submitted for any other award, except where acknowledged.

Date: 22 September 2023

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Student and supervisors' signatures of endorsement are held at the University.

## STATEMENT OF CONTRIBUTION

The following detail is the agreed share of contribution for candidate and co-authors in the presented publications in this Thesis.

### Paper 1:

Herbert, K., & van der Laan, L. (2021). Towards a typology of learning and teaching professional development practice uptake by university academics in Australia.

*Professional Development in Education*, 1-17.

<https://www.tandfonline.com/doi/full/10.1080/19415257.2021.1973068>

Student contributed 80% to this paper. Assoc Prof Luke van der Laan contributed the remainder.

### Paper 2:

Herbert, K., van der Laan, L., & Danaher, P.A. (2023). Towards an Australian regional university professional development typology: A qualitative exploration of the academic voice. *International Journal for Academic Development*.

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Student contributed 80% to this paper. Collectively, Assoc Prof Luke van der Laan and Prof Patrick Danaher contributed the remainder.

### Paper 3:

Herbert, K., & van der Laan, L. (n.d.). Demystifying academic learning and teaching professional development: The university professional development ecosystem and academics' motivations to participate. *Journal of Further and Higher Education*. [This is the Author's Original Manuscript (OAM) – submitted]

Student contributed 80% to this paper. Assoc Prof Luke van der Laan contributed the remainder.

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## **DEDICATION**

“Everyone is in a position to help anyone, no matter where they are in their own life. It feels good to be there for other people.” – Andrew Zimmern

In memory of Carmen Manaloto Cunanan, who taught me that everyone has the choice to be a better version of themselves, every single day.

Dedicated to Romeo and Lourdes Seguis.

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## ABBREVIATIONS

The following abbreviations were used in this thesis:

AD .....	Academic Developer
ADU.....	Academic Development Unit
AI.....	Artificial Intelligence
AOM.....	Author's Original Manuscript
CLT .....	Centre of Learning and Teaching
CoP .....	Community of Practice
COVID-19.....	Coronavirus Disease (2019)
CSU.....	Charles Sturt University
FIR .....	Fourth Industrial Revolution
GFC.....	Global Financial Crisis
HE .....	Higher Education
HREC .....	Human Research Ethics Committee
HERDSA...	Higher Education Research and Development Society of Australasia
JB I.....	Joanne Briggs Institute
L&T.....	Learning and Teaching
PD .....	Professional Development
SoTL.....	Scholarship of Teaching and Learning
STEM .....	Science, Technology, Engineering, Mathematics
TEQSA .....	Tertiary Education Quality and Standards Agency
UniSQ.....	University of Southern Queensland
WEF .....	World Economic Forum
WW .....	World War

# CHAPTER 1: INTRODUCTION

## 1.1. Organisation of the exegesis

This Thesis by publication was carried out in accordance with the University of Southern Queensland's (UniSQ) policy on Higher Degree by Research Thesis Presentation Schedule (University of Southern Queensland, n.d.). It therefore contains both chapters and academic journal articles, commonly referred to as papers, that present the author's contribution to the literature on learning and teaching (L&T) professional development (PD). There are six chapters and three papers within this exegesis. The organisation of the chapters is described below.

Chapter One provides the orientation to this Thesis by Publication. It lays out the organisation of the exegesis and papers. The background of the research, its scope and rationale including the scope of the work-based project and the location of the researcher is provided.

Chapter Two is the literature review of the current state of L&T PD, moving from the broad global view to the more local Australian landscape. L&T PD practices in Higher Education (HE) are explored; the challenges of PD implementation in HE are outlined; and the Australian HE context that led to the research questions of this Thesis is discussed. Paper One (Herbert & van der Laan, 2021) is situated in this chapter as a scoping literature review of academic literature relevant to the Australian university context. It described the application of a scoping literature review that informed the creation of an initial typology. The typology that emerged from the scoping review and how this informed the next stages of the research is also discussed. The chapter culminates in the presentation of the research questions underpinning the rest of the study.

Chapter Three outlines the explicit research design and methods implemented in the study in order to rigorously respond to the research questions. Following an exploratory sequential mixed method research design, the study captured qualitative and quantitative data, the nature of which is discussed in detail in this chapter.

Chapter Four and Chapter Five chronologically presents Paper Two and Paper Three, that were products of the qualitative and quantitative data collection and analysis respectively. Paper Two (Herbert et al., 2023) presented the data collected from semi-structured interviews and the findings. Paper Three (Herbert & van der Laan, n.d) presented the quantitative data analysis results of the survey

which tested the PD clusters against a larger population of the sample population, Australian regional university academics.

Chapter Six provides the responses to the research question, and the research findings. The contributions and impacts of this research are discussed, including the limitations of the research, and possible directions for future research. It concludes with a personal reflection on the study.

### **1.1.1. Terms**

In this Thesis, the term ‘academic developer’ was used to describe those who design and implement L&T PD. Beyond this, academic developer was intentionally used in this Thesis to place the professional development of academics teaching in HE, specifically in universities, within the continuum of universities’ mission to provide quality learning and teaching experiences. In various education systems and countries, the term academic developer is interchangeable with educational designer/developer, learning designer, faculty developer and instructional designer (Mori et al., 2022). While there are slight differences in the job descriptions, the literature (Heggart & Dickson-Deane, 2022; Little, 2019; Mori et al., 2022; Xie et al., 2021) mainly points to the overlapping responsibility of these roles to facilitate development of academics’ L&T practice. Embracing all these roles under the academic developer umbrella places the value on developing academics’ teaching capabilities.

For the purposes of this Thesis and the work-based project, the Thesis used the term ‘higher education’ interchangeably with ‘universities’ to align with the Australian regulatory body’s mandate. The regulatory body, Tertiary Education Quality and Standards Agency (TEQSA), has a mandate to work with “...public and private universities, Australian branches of overseas universities, university colleges and institutes of higher education” (TEQSA, 2023) to ensure students receive quality HE opportunities. The University has historical links with the term higher education where higher learning and research in the arts and sciences are seen as essential in the development of society (Chankseliani et al., 2020; Lybeck, 2021). In Australia, universities are seen as the pinnacle of HE and it is in this context that this research study is conducted.

## **1.2. Context and research problem**

L&T PD has been part of the discourse of HE since the early 20th Century. Universities saw the expansion and diversification of their student enrolments in

post-World War I (WWI) and then again post-World War II (WWII) (Boud & Brew, 2013; Lee et al., 2010; Norton & Cakitaki, 2016). This brought about a shift in the connections between teaching delivery and L&T capabilities of HE academics.

Centres of Learning and Teaching (CLT) such as Academic Development Units (ADUs) were born out of the need to address student concerns about the quality of teaching being provided in HE institutions. The interest in L&T PD has since seen further growth in the 21st Century with the exponential speed at which new realities in the world have emerged (Sutherland, 2018). Most recently, the COVID-19 pandemic provided a stage on which every level of society was impacted, driving even further the need to transform capabilities (Leiber, 2022; McKenzie et al., 2020; Watermeyer et al., 2022).

The World Economic Forum (WEF) declared that we are experiencing the Fourth Industrial Revolution (FIR) (Penprase, 2018; Terstegen et al., 2022). The late 20th Century brought us into the digital information age, and the 21st Century quickly transported us into the conceptual age. The conceptual age is characterised by changes in the networks of power, the unabated evolution of technologies and an increased focus on continuous learning and capability-building (Fergusson et al., 2020; Penprase, 2018; Terstegen et al., 2022). As the impacts of the FIR are felt in the various levels of our societies and communities, there is consensus that universities need to stay relevant if they are to continue to provide value to the communities they serve (Boud & Brew, 2013; Terstegen et al., 2022; van der Laan & Ostini, 2018; Zhou, & Tu, 2021).

HE will need to evolve and respond to the changing realities brought about by FIR; accelerated further by such events as the response to COVID-19. To stay relevant updating L&T practices and building teaching capabilities are necessary for universities' mission to cater to their students' futures.

The topic of this Thesis contributes to the growing research on L&T PD of academics who teach in HE. The study principally seeks to build on the professional practice of teaching academics related to L&T, while informing the practice of those who design and deliver L&T PD. It aims to represent teaching academics' perceptions of L&T PD in Australia, i.e., expectations, attitudes, and experiences. While there is evidence in the literature that there is interest in L&T PD strategies in the Australian HE landscape, there was no holistic picture of what this looked like (Herbert & van der Laan, 2021).

The literature on L&T PD strategies in Australia was largely confined to disciplinary boundaries, which highlighted the disjointed nature of this research area. Studies that emerged also focused on the bigger metropolitan-based universities, with an absence of extensive investigations of PD practices in Australian regional universities. As such, this exegesis lays out the results from the research and gives (i) a holistic picture of what constitutes L&T PD in Australian universities as evidenced by the extant literature; (ii) the teaching academics' perception of L&T PD practice in a regional Australian university; (iii) the results and interpretation of a broader sample of teaching academics' perceptions across Australian regional universities; and (iv) a typology and conceptual framework that can inform the development, design, and implementation of L&T PD.

Historically, L&T PD is seen as an annex to an academic's professional practice, that being only second to or outside their main role as a researcher at a university (Hughes et al., 2020; Mason & de la Harpe, 2020). Hughes et al. (2020) pointed to L&T practices sitting outside the professional practice of university academics, often seen as activities outside their normal role. This is the focus of Chapter Two where it argues that despite the efforts to support the development of HE L&T PD practices, academics who teach have met these efforts with a lack of interest and even resistance.

Consequently, it is essential for L&T PD research to understand the uptake of L&T PD among academics who teach in universities. The overarching research question therefore is:

*What is current practice in Australian regional universities and what are the future needs of academics that may address resistance to PD based on their perceptions?*

This Thesis aims to deepen the understanding of L&T PD practice in Australian regional universities and identify possible strategies to help and support the increased uptake of PD opportunities among teaching academics. To do this, it is helpful to look at the underpinning concepts that framed this research, and used as a lens to explore L&T PD.

### **1.3. Underpinning theories**

In this section, the underpinning concepts of the study related to L&T PD practices in the Australian HE landscape, derived from the extant literature, are outlined.



### **1.3.1. Capability**

Capability intentionally framed this study. Based on Nussbaum's (2011) Capability Approach, capability is the demonstration and application of acquired knowledge and skills to unfolding opportunities in the world. That is, capability is an outcome of the development of knowledge and skills that can be transferred to different contexts now and in the future (rather than merely meeting the predefined demands of a task). Lester (2014), who expanded on this further, suggested that the concept of capability is the continuous development of skills through the interaction with new scenarios.

Building capability into the teaching practices of academics is essential to delivering on students' learning experiences in HE. As a result, it is no longer enough for teaching academics to have discipline knowledge and skills, they are also expected to transfer knowledge and skills that will prepare their students for work now, as well as in terms of how it evolves in the future (Benito-Capa et al., 2017; McCowan et al., 2022).

As previously noted in the background section, the FIR has brought about changes in networks of power that has increased the complexity of work and is focused on continuous learning and capability building as jobs of the future change and new jobs quickly emerge. These unfolding opportunities, new work and life realities, further exacerbated by the recent pandemic, continues to impact on what is expected of teaching academics and their capabilities.

Focusing on capability-building, as suggested by Lester (2014), can leverage both discipline knowledge and tacit knowledge. That is, knowing your limitations and skill level while having the ability to reflect and use judgement to see ways to overcome the limitations and learn new skills. Changing work practices, in this case L&T PD practices, where building teaching academic capabilities can occur (Boud & Brew, 2013; McCowan et al., 2022).

### **1.3.2. Professional development**

HE has always been seen as an institution that delivers for the public good. That being HE has an obligation to contribute to society's economic and social growth by developing employability skills in their students (Hogan et al., 2021; Ling, 2020). To uphold this obligation and to meet the increasingly volatile market, the needs of life, and emerging work realities, PD for teaching academics is an essential consideration.

PD looks very different in every industry; therefore, it was important to frame the concept of PD within the context of HE. PD in HE emerged at the same time as staff development and organisational development in other fields. Globally, universities sought to operationalise teaching skill development through initiatives and programs that provided academic growth and acquisition of new skills to meet changing student learning needs (Fahara et. al., 2019; Hogan et al., 2021; Ling, 2020; Sutherland, 2018). This was seen to improve universities' effectiveness, as well as progressing the profession of the academic who was expected to teach in new and enhanced ways, within the changing learning environments, to meet the needs of the discipline, and the industry that they are expected to serve (Hogan et al., 2021).

The concept of PD is necessarily linked to the types of development activities academics participate in to develop their teaching skills. Borrowing from Merkle and Artman's (1983) seminal definition, PD for teaching academics should not only support how they teach, but it should also provide a pathway for academics to grow their academic careers and their personal goals. In turn, their development will feed into improving organisational effectiveness.

L&T PD sits within the literature of academic development. Sutherland's definition of L&T PD was helpful in scoping the literature search conducted here. That is L&T PD is professional development that is clearly focused on supporting academics in their teaching endeavours (Sutherland, 2018).

### ***1.3.3. Professional identity***

The professional identity of academics has been extensively explored in international studies (Kálmán, et al., 2020; McCune, 2021; O'meara, 2011; Trowler & Cooper, 2002). These studies have found that the development of professional identity may vary depending on the individual's discipline, departmental culture, and length of academic service. A common theme however is that most academics who teach at universities were never expected to have formal teaching training, therefore teaching skills were often seen as an afterthought (Barbarà-i-Molinero et al., 2017; Buckingham et al., 2021; McCowan et al, 2022).

For the purposes of this research, Brownell and Tanner (2012) provide a useful definition of professional identity, specifically among academics. That is professional academic identity is how academics view themselves and their work in

the context of their discipline and how they accrue status among their professional colleagues as academics.

As already noted, teaching practice and its development have historically been seen as separate to the professional identity of academics. It is therefore important to associate L&T PD to how academics see their professional identity. As Kálmán et al. (2020) found in a similar study, L&T PD should be seen as a professional activity that forms part of the academic's identity if uptake of PD is to be successful.

#### **1.4. Rationale**

It is proposed that the products of this study, namely:

1. A scoping literature review;
2. An overarching exegesis and ethnographic account;
3. A typology of learning and teaching professional development; and
4. Academic journal articles,

have practical and theoretical implications for both teaching academics and academic developers' PD practices and strategies.

The rationale behind developing a typology, that is underpinned by capability within the context of PD and its location in professional identity, is being able to map attributes of L&T PD activity that enable strategic capability-building. The work started by Lee et al. (2010) on the evolution of academic development in HE provided the impetus to develop a typology. Lee et al. (2010) highlighted that a full picture of PD practices across the Australian HE landscape was at best sporadic. There was a need to explore what strategies are being employed to facilitate L&T PD in the sector, as a response to the perceived needs of academics and their institutions (Boud & Brew, 2013, van der Laan & Ostini, 2018).

A typology is a classification system that allows a researcher to explore a complex or broad phenomenon through type-building (Kuckartz, 2014). Typologies draw from interrelated attributes structured according to similarities and differences. Unlike taxonomies where things are classified and categorised into independent and finite patterns or models, typologies are concerned with multidimensional patterns (Kuckartz, 2014), which could have infinite possibilities based on a combination of attributes found in a phenomenon. L&T PD practices in Australian HE are highly complex and heterogenous and will be discussed further in Chapter Two. The typology is an effective way to assimilate perspectives across the three phases of

data collection in this research. It considered i) motivations for university academics to participate in learning and teaching PD; ii) PD programs and practices that are evolving strategically to meet the needs of academic capabilities; and iii) the location of L&T PD practices within the professional practice of university academics. The typology is a tool to help identify and illustrate strategies for designing and implementing PD programs effectively.

The scoping literature review and the resulting first publication represent the gap in the literature which Lee et al. (2010) describes as disjointed studies on PD in the Australian universities' context. Utilising content analysis, a classification of types was drawn from current PD practices as described in the extant literature, among teaching academics and academic developers. The resulting typology could assist with conceptualising constructs of L&T PD, which in turn will provide academic developers a guide in their future work to develop more PD workshops and programs that caters to the future PD needs of teaching academics that acknowledges their own perceptions of L&T PD.

### **1.5. Work-based project**

The work-based project which is an essential outcome of this research study is discussed here. The purpose of this project was to develop a typology for designing appropriate L&T PD strategies for an Australian regional university. It not only looked to build on the community of practice related to PD for teaching academics, but it also aimed to inform the practice of academic developers, specifically those situated in Australian regional universities.

#### **1.5.1. Project objectives**

At the end of the project, the author will be able to:

1. Identify strategies of academic L&T PD in Australian universities;
2. Present a fit-for-future typology of L&T PD for academics teaching in Australian regional universities; and
3. Report on how the typology can be used to inform the design of future L&T PD in an Australian regional university.

#### **1.5.2. Scope**

The limitations to the project scope are outlined here. These limitations enabled the researcher to capture as many data sources as possible in the timeframe permitted to complete this Thesis.

The first phase consisted of a literature search. The literature search focused on academic development conference proceedings, as well as literature drawn from UniSQ and Charles Sturt University (CSU) journal databases around academic development in Australian HE. As mentioned earlier, L&T PD sits within the academic development literature and therefore it was within this area of research that the literature search began. Australian HE research organisations such as Higher Education Research and Development Society of Australasia (HERDSA) and their conferences are well-established and provided a wealth of academic development proceedings to review. The scoping literature review was followed by textual and content analysis and a typology was constructed around themes and types in such a way that academic perceptions of PD were identified.

Based on the scoping literature review, a semi-structured interview was formulated to test the typology against the Australian regional university context. Teaching academics and academic developers were purposely chosen from a single institution, an Australian regional university, to participate in the one-to-one interviews. The qualitative data collected from the interviews was then used to inform the third phase of the project, a quantitative survey.

The quantitative survey was designed from the resulting data of the semi-structured interviews to triangulate the typology against a larger sample of Australian regional universities. Due to the heterogeneous nature of L&T PD attributes, patterns and factors were difficult to detect, and a whole of practice was unclear (Gellatly et al., 2019; Lee et al., 2010; Sutherland, 2018). Therefore, factor analysis techniques helped reveal both interesting and interpretable patterns where underlying complexities and relationships between capability, PD and professional identity could be drawn out. The findings across the three phases of the work-based project allowed this author to refine the resulting typology.

## **1.6. Location of the researcher in the study**

The researcher and author of this Thesis is an academic in an Australian regional university. This study, along with the resulting journal articles, were essential to her professional practice as lecturer and academic developer. Not only did the journal articles contribute to the literature on L&T PD, but also the typology formed part of her professional practice and was offered to fellow academic developers across the various Australian universities.

The problem outlined in this Thesis posed both a professional and personal challenge to the researcher. While technology and learning environments advance and develop, it is perceived that teaching academic staff still largely implement traditional teaching practices that remain in the teacher-centred arena (Benito-Capa et al., 2017; Botham, 2018). Conversely, as observed by Hennessy et al. (2014), I have witnessed a few strategies that have resulted in teaching academics enthusiastically taking up PD opportunities that opened up their teaching to new practices.

I have been involved in PD for 20 years. In the last 10 years, my focus has been mentoring teaching academic staff, at an Australian regional university, in emerging learning environments. The main purpose and practical importance of this research was to increase my understanding and knowledge of my own professional practice and learning objectives. This points to the triple dividend return (Fergusson et al., 2020) wherein completing research that is work-based and include a work-based project contributes to three areas. That is, the author of this Thesis builds her own skills and knowledge as a lifelong learner in her profession and industry; which in turn benefits the community of academics who teach in universities; which then benefits students who are preparing to engage with unfolding and new realities. Therefore, I am an Insider-Researcher (IR) which is defined as someone conducting research within their place of work, and who's work role contributes to the research data being analysed (Hays & Singh, 2012, Unluer, 2012, Newby, 2014).

While there has been much written about the disadvantages of being an IR, including bias, work position constraints, and ethical considerations such as organisation privacy (Unluer, 2012), there has also been much written to ensure transparency and objectivity, i.e., Trustworthiness (Williamson, 2017). To achieve this, triangulation, which is the intentional use of mixed methods to ensure rigour and breadth of a study (Williamson, 2017), was needed. Taking a pragmatic approach, as outlined in the methodology section of this Thesis, my study moved from a Qualitative to Quantitative study which allowed for triangulation of multiple sources of data collection.

Similar to Unluer (2012), I was acutely aware that I had a rich history with the university I worked for and that I was embedded in the very topic that I was researching. I therefore had to be able to recognise my biases, as well as be mindful of the ethical implications of data collection. To deal with the former, I was aware that

I had assumptions based on my own experiences. I knew however that these assumptions needed to be evidenced and tested, therefore this research moved from a literature search and analysis to interviews and surveys from different populations, which then informed the development and refinement of the products of this research.

Triangulation was important throughout my study, therefore the use of a pragmatic approach which is discussed in the methodology chapter of this Thesis, was appropriate. In addition, my research supervisors, as outside observers and advisors, were able to check my biases through discussion and conversations about my research throughout the study. These checks and balances began with keeping a research journal as I progressed through the study. In terms of the ethical implications of data collection, I carefully outlined how I dealt with ethical issues around research in my workplace under the Ethical Considerations section of this Thesis.

## **CHAPTER 2: LITERATURE REVIEW**

### **2.1. About this Chapter**

This chapter expands on the conversation introduced in Chapter One that L&T PD is an important consideration in supporting universities' pursuit of improving their teaching delivery as a core function of their mission. It is essential therefore to understand the ways in which academics perceive and respond to upskilling and capability-building within the context of delivering quality L&T experiences.

To this end, this chapter first addresses the beginnings of L&T PD across universities worldwide. It then traces how these practices were implemented by CLTs and ADUs in Australian universities. This sets the scene for Paper One: Towards a typology of learning and teaching professional development practice uptake by university academics in Australia (Herbert & van der Laan, 2021). Paper One goes on to describe what L&T PD practices in Australian universities have been reported as being successfully implemented across Australian universities, before proposing a typology and conceptual framework.

The outline of this chapter is as follows:

#### **Section 2.2: Mapping the scholarly field**

- 2.2.1. Scoping literature review
- 2.2.2. Report on studies
- 2.2.3. Brief overview
- 2.2.4. Paper One [published]
- 2.2.5. Additional studies reviewed

#### **Section 2.3: Conceptual model and research questions**

- 2.3.1. Reporting on L&T PD practices (limitations)
- 2.3.2. L&T PD typology
- 2.3.3. Research questions

Section 2.2 of this chapter begins with an explanation of the chosen method, a scoping literature review. A brief report on studies of and developments in L&T PD in HE, moving from global to the Australian universities' contexts. Paper One of the Thesis by publication is then presented. Additional studies which were not included in the scoping literature review are then addressed.

Section 2.3 begins with a discussion of aspects of the research where less emphasis has been given, and in particular, where gaps in the literature were



identified. The development of a typology as a tool for understanding L&T PD capability-building is then explained using the conceptual framework which was informed by the scoping literature review. Thereafter, the main research question, as well as the sub-research questions, are stated. These research questions were developed to address the problem noted in Chapter One, and it speaks to the gap identified in the scoping literature review.

## **2.2. Mapping the scholarly field**

L&T PD literature is largely complex and heterogenous; therefore, a scoping literature review was determined as an appropriate approach to establishing the parameters of the phenomenon and the identification and definition of key concepts (Munn et al., 2018). Using a scoping literature review provided a way to map and extract evidence of the L&T PD practices that exist within the context of HE.

An initial scoping literature review was conducted between 2019 and 2020. It explored the literature and traced relevant studies and developments that framed and informed L&T PD practices in HE. Beginning with a broad picture of how L&T PD is already implemented, the scoping literature review explored where studies focused their research efforts.

### **2.2.1. Scoping literature review**

The scoping literature review follows the guidance and framework put forward by the Joanna Briggs Institute (JBI) of the University of Adelaide, Australia. The JBI scoping review outlines five steps:

1. Identify the question and focus of the review
2. Identify your search strategy
3. Select relevant studies
4. Extract and map the data
5. Report the data collected

(Munn et al, 2018)

The literature review was first focused on a broad and more global search using the following search question:

*What does the literature search on PD strategies say about current L&T PD practice in universities?*

A search strategy was developed with the assistance of a university librarian. An Australian university's library database, Primo.exlibrisgroup, was initially searched for relevant literature on global L&T PD strategies and practices within the

context of HE using appropriate synonyms and truncations. This led to search terms defined as a search string in Figure 2.1.

Search string (Primo.exlibrisgroup)	(Higher education or tertiary or universities) AND Academic AND (learning and teaching) AND (Professional development or academic development)	480 results
Search string (EBSCO)	(Higher education or tertiary or universities) AND Academic AND (learning and teaching) AND (Professional development or academic development)	6907 results

Figure 2.1 Search string, synonyms, and truncations

The results from Primo.exlibrisgroup led to the EBSCO database.

Guided by the search question, PD practices and programs that focused on L&T were sought out. Specifically, studies were excluded if they did not provide an answer to the search question mentioned above. The search was confined to peer-reviewed papers and included both qualitative and quantitative studies. The paper titles and abstracts were then manually reviewed to establish inclusion and exclusion of articles.

After the initial literature search, a further delimitation of the literature search was performed to include studies contextualised in the Australian university landscape. The delimitation pointed to a more relevant database, Taylor and Francis Online. Taylor and Francis is the publisher of the HERDSA journal. The search terms were refined to a search string (Figure 2.2) in response to the following search question:

*What does the literature search on PD strategies say about current L&T PD practice in Australian universities?*

Search string (EBSCO)	(Australian or Australia) AND (higher education or tertiary or universities) AND Academic AND (Learning and teaching) AND (Professional development or academic development)	1294 results
Search string (Taylor & Francis Online – HERDSA)	[All: australia or australian] AND [All: higher education or university or tertiary] AND [All: academic] AND [All: learning and teaching] AND [All: professional development] AND [in Journal: Higher Education	113 results

Research & Development] AND [Publication Date:  
(01/01/2015 TO 12/31/2020)]

Figure 2.2 Refined search terms and string used in EBSCO and HERDSA

The search was confined to peer-reviewed papers, including conference proceedings that were double-blind peer-reviewed for the annual HERDSA conferences. The paper titles and abstracts were then manually reviewed based on the inclusion and exclusion criteria established during the initial global search. Guided by the search question, PD practices and programs that focused on L&T in Australian universities were sought out. For this round of reviews, articles that were not located in an Australian University context were excluded. A final exclusion exercise was completed through a further text reading and articles that directly answered the search question emerged. Based on the data extracted, a report on where authors of these studies focused their energies was put together for this chapter and published as Paper One in the Journal of Professional Development in Education.

Notifications framed around the search strings were then set up within the library databases mentioned above. This ensured that new research and studies that mapped to the constructs and attributes of L&T PD practices already reviewed were captured as this study progressed. The same inclusion and exclusion exercise was applied to the reading of titles and abstracts of the newer studies before they were read in full. These additional studies were evaluated against literature in Paper One. Further studies that were reviewed after Paper One was published are discussed in section 2.2.5.

### **2.2.2. Report on studies**

Paper One presents the scoping literature review of studies on L&T PD practices in the Australian landscape. The Paper comprises a report of where L&T PD studies have focused their energies and provides insight into the gaps in the research to date. It endeavoured to provide a more holistic picture of what L&T PD practices look like across the Australian university sector, culminating in a conceptual framework which informed an initial typology of L&T PD. The Paper was guided by the following questions:

- *What does the literature search on PD strategies say about the current learning and teaching PD practices in Australian universities?*

- *What typology can be drawn from the review and analysis of the literature search?*

### **2.2.3. Brief overview**

The extant literature pointed to three key drivers of the growth in L&T PD practices, namely: 1) the massification of HE from post-WWs onwards; 2) the impact of new realities such as FIR on all levels of societies; and 3) the competitive global market where students are seen as consumers and where universities have to raise their value profile to ensure their share of the market (Boud & Brew, 2013; Cheong, 2017; van der Laan & Ostini, 2018).

The beginnings of L&T PD practices can be traced within the academic development literature. Sutherland (2018) traced the beginnings and development of PD that focused on supporting academics' teaching practice through mentoring and training. The goal of these PD activities was to enhance teaching skills of HE academics, which in turn impacted on students' learning, enabling students to successfully complete their qualifications (Hennessy, 2014). In Sutherland's (2018) review of the literature on academic development work internationally, PD focused on L&T emerged in the 1960s and 1970s when universities found themselves opening to a bigger and more varied cohort of students due to new realities and socio-political changes (e.g., post-WWs, the end of apartheid), and the evolution in technologies that impacted on L&T (e.g., computers, the Internet). Universities needed to ensure that teaching quality not only supported students' ability to learn, but also that access to knowledge was equitable (Sutherland, 2018). HE institutions attempted to address these challenges through the creation and implementation of Centres of Learning and Teaching (CLT) infrastructure and staff support (Benito-Capa et al, 2017). Let it be noted that the emergence of academic development work brought about the creation of professional organisations which aided and supported those who worked in the area of academic development. These organisations include the Higher Education Research and Development Society of Australasia in Australia; Professional and Organizational Development Network in the USA; and Pedaforum in Finland (Sutherland, 2018). Sutherland (2018) explains that academic development as a field, where L&T PD practices are embedded, came into its own in the 1990s when the International Consortium for Educational Development was established. It is not in the reach of this essay to discuss academic development in

all its form, but it is essential to acknowledge that L&T PD's literature resides within this broader field.

Similarly, in Australia, as documented by the seminal work of Lee et al. (2010), formal and organised L&T PD and the creation of CLTs could be traced to the mid-20th Century. CLTs were referred to as Academic Development Units (ADUs) in Australia. An increase in enrolments and the diversified cohorts of students from various backgrounds called for Australian universities to focus on developing the teaching capabilities of university academics. The creation of ADUs in Australia was also a response to the growing dissatisfaction of university students who cited poor teaching quality as the main reason they did not complete their qualifications (Lee et al., 2010). Having traced the beginnings of L&T PD, it became clear that the emergence of CLTs and ADUs was a reactive response by universities, and the support for teaching skills was at best improvised and inconsistent (Lee et al., 2010).

To counter this, efforts to develop teaching skills in a systematic way were sought. In the last three decades, the literature reported on how teaching quality frameworks and strategies were developed (Núñez-Canal et al., 2022; McCowan et al., 2022; Sutherland, 2018). In the late 1990s, the most prominent of these approaches came to fruition. Scholarship of Teaching and Learning (SoTL), an inquiry-driven approach was introduced into the teaching practices in HE in the US (Hutchings & Huber, 2008). This approach aimed to improve the practices of teaching academics in a systematic way through continuous reflection on and closely looking at how their students were learning (i.e., a student-centred focus) and improving their courses and programs accordingly (Hutchings & Huber, 2008). The uptake of this reflective practice of developing L&T skills within a specific unit, course, or subject was observed in the Australian HE context in the early 2010s. Teaching academics, coached and mentored by academic developers, focused on their day-to-day teaching capabilities based on feedback of students on the progress of their learning (Boud, & Brew, 2013).

#### **2.2.4. Paper One – [Published]**

Paper One now follows, and builds on the beginnings of L&T PD traced above. This article moved from global to Australian universities' context, as well as described the development and implementation of L&T PD across Australia. Paper One makes the following contribution to the overall research: It captured the holistic

view of the current landscape of HE L&T PD practices across Australian universities as reported in the literature; and it proposed a typology. In doing so, the proposed typology gives insight into the gap in the literature and provides the necessary next steps in this study to understanding the ways in which academics perceive and respond to capability-building efforts within the context of delivering quality L&T experiences.

Herbert, K., & van der Laan, L. (2021). Towards a typology of learning and teaching professional development practice uptake by university academics in Australia. *Professional Development in Education*, 1-17.

<https://www.tandfonline.com/doi/full/10.1080/19415257.2021.1973068>

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### **2.2.5. Additional studies reviewed**

As illustrated by Paper One, L&T PD in HE is an area of great interest. The scoping literature review considered studies on L&T PD and identified that the focus of these studies evaluated teaching upskilling in HE. There were studies that focused on the impact of student feedback on redeveloping teaching practice (Al-Mahmood et al., 2020; Greaves, 2015; Thomson & Trigwell, 2016). The roles of Centres for Learning and Teaching (CLTs) were also of interest in various studies (Benito-Capa et al., 2017; Botham, 2018; Hood & Houston, 2016; Shephard et al., 2020; Slade et al., 2020; Winter et al., 2017). There was a growth in research focused on self-directed and peer-to-peer PD practices (Cheong, 2017; Gan Joo Seng, & Geertsema, 2018; Grainger et al., 2016; Heinrich, 2015; Hughes et al., 2020; Sutherland, 2018; Trautwein et al., 2015).

The literature on L&T PD practices is constantly evolving owing to new realities, such as the COVID-19 pandemic. Therefore, new research and trends that emerged as the study progressed were evaluated against the literature already reviewed, to enable a continuous mapping of the scholarly field. In this section, the initial literature review expands to include newer studies that focused on L&T PD practices in Australia conducted during and post COVID-19. As mentioned at the beginning of Chapter Two, if the development of a typology as a tool was to be undertaken then an accurate picture of past studies was needed to shape future capability-building efforts.

Paper One was published at the beginning of the COVID-19 pandemic. It was unsurprising that the studies that came after Paper One explored L&T PD and the impacts of the COVID-19 pandemic on the quality of teaching in HE where online platforms and educational technologies were paramount to the continuity of students' education (Alqahtani et al., 2022; McKenzie et al., 2020; Núñez-Canal et al., 2022; Watermeyer et al., 2022).

It is acknowledged that the newer studies that emerged while conducting this study expanded on the topics identified in the initial literature review. It was clear, after evaluating newer studies against the original literature review, that understanding the teaching academics' perception of motivations to participate in L&T PD remained relevant and continued to evolve. Therefore, finding the answer to this Thesis' research question remained relevant, complementing, and interacting with the evolving research on L&T PD.

Having evaluated the newer studies against the initial literature review, insights were gained into the factors that affect uptake of L&T PD innovation, initiatives, and interventions. In particular, it became clear that little is known about the perceptions of motivation and resistance by academics to take up PD activities, which in turn enables or constrains L&T PD from taking root within universities (Boud & Brew, 2013; Sutherland, 2018; McCowan et al., 2022).

Seemingly, with ADUs' various L&T PD resources readily available to teaching academics, it is easy to assume that teaching academics are highly motivated to participate in L&T PD activities available to them. Despite having such departments as CLTs, ADUs, and even with PD pedagogical interventions and approaches such as SoTL in place, it has emerged that efforts are met with a lack of interest and even resistance (Botham, 2018; McCowan et al., 2022). As seen in the L&T PD studies conducted internationally pre- and post- COVID-19, both top-down and horizontally facilitated, participation by teaching academic staff in PD activities remain low (Alqahtani et al., 2022; Benito-Capa et al, 2017; Botham, 2018; Hennessy et al, 2014; Núñez-Canal et al., 2022; Watermeyer et al., 2022).

In Australia, HE faces a similar challenge that is worsened by uncertainty of funding and questions of economic value (Irvin & Ryan, 2019; Ling, 2020; van der Laan, & Ostini, 2018). Since the Global Financial Crisis (GFC) of 2008, governments, who have publicly funded HE, have had to look at reducing funding in the HE sector as a response to calls for austerity measures. Measures included changes in the public funding model for undergraduate and postgraduate degrees, and a refocus on qualifications for specific industries (e.g., Science, Technology, Engineering, Mathematics (STEM) professions) (Borrego & Henderson, 2014; Irvin & Ryan, 2019; Ling, 2020). Further exacerbated by the impacts of COVID-19 on employment and employability, these funding decisions have impacted on the financial viability of universities (Irvin & Ryan, 2019). Not to mention the exodus of international students, who made up a big portion of Australian universities' income, during the COVID-19 pandemic lockdown in Australia (Ling, 2020). In response to the need for universities to find their space in the market, the mission to provide quality teaching has become more pronounced.

TEQSA increased its focus on pedagogical interventions. Recently, SoTL implementation by the universities has become one way for the Australian government and TEQSA to monitor how universities are effectively giving back to the

community's capability-building efforts (McCubbin et. al, 2022). This monitoring, underpinned by media reports of employability and framed by the perception that HE graduates are ill-prepared for new realities, industries, and jobs they enter, placed added pressure on universities to explicitly target the quality of the teaching within their institutions (Irvine & Ryan, 2019). Universities continue to counteract these perceptions by introducing L&T innovations, initiatives, and reforms that target dialogue with employers, professional bodies, and industry.

The impact of the COVID-19 pandemic since 2020 only magnified the need for continuous teaching capability-building across HE. The pandemic's effect on teaching practice at all levels of education was seen in the learning disruptions, cuts in funding, the reliance on technology, and the changed spaces for teaching, i.e., remote and distance delivery. L&T PD and those that support the implementation of PD activities, such as the ADUs, became central to 'digital resettling of learning, teaching and assessment' (Watermeyer et al., 2022, p. 148).

Studies reported in Paper One already showed that teaching academics do acknowledge that there is a need to continuously upskill, but do not readily provide insight into motivations or resistance to participate in L&T PD. A few reasons for resistance to the uptake of L&T PD, identified by Boud and Brew (2013) and echoed by Heinrich in 2015 and then again by Sutherland in 2018, pointed to L&T PD practices that assume that teaching academics work on a deficit model.

Studies reviewed after Paper One was published had similar views. Studies showed that those who design and implement PD programs and strategies assume that university academics do not know how to teach or are not prepared for teaching expectations in new and evolving realities (McCowan et al., 2022; Núñez-Canal et al., 2022). Similar to Boud and Brew, the studies concluded that it is this perception by ADs and ADUs that immediately creates a barrier between teaching academics and academic developers. Furthermore, Hughes et al. (2020) pointed to the role of teaching sitting outside the professional practice of university academics, and therefore, is often seen as an activity outside their normal role.

With the pressures on universities to provide their communities with capability-building and job-readiness, it has become urgent that the perspectives of the teaching academics and their experiences with L&T PD activities are captured if future-proofed strategies are to be developed. The instances of uptake of L&T PD in the extant literature do not show the full picture of what is going on within universities

in Australia. By illuminating these areas of constraint and resistance, well-intentioned L&T PD practices can have deep and lasting impacts on teaching academics' capabilities.

### **2.3. Conceptual model and research questions**

In Lee et al.'s (2010) seminal study documenting the development of L&T PD practices across Australian universities, it was clear that PD practices and strategies were largely unmapped and lacked a holistic view. Almost a decade later, studies on L&T PD development and implementation reiterated the same findings (Dawson & Dawson, 2018; Gellatly et al., 2019).

Paper One illustrated that studies such as those that appeared in conference proceedings papers presented at the HERDSA annual conference in the last few years (Davis & Goody, 2016; Heinrich & Bourke, 2020; Thomas et al., 2015; Wache & Houston, 2018; Walker & Bedford, 2017) demonstrated that standalone PD strategies have resulted in the positive uptake of PD by academics. It also became clear that the voices and perceptions of Australian regional universities were under-represented, a gap which this study aims to address.

This section of Chapter Two begins by discussing the gap in the literature and how the development of a typology of L&T PD can help address this gap as proposed in Paper One.

#### ***2.3.1. Reporting on L&T PD practices (limitations)***

The literature on L&T PD studies in Australia appeared to lack extensive investigation of PD practices in regional Australian universities. The literature search revealed that studies that focused on L&T PD practices came from larger, metropolitan-based universities. While this may not have been intentional, it was evident that the voices of Australian regional universities have yet to be captured. For a typology to become more than a classification of types and to become a useful tool, the collective capabilities, and processes of the whole Australian HE community needs to be considered. Thus, a problem that this study specifically addresses is to explain the relative uptake, or lack thereof, of L&T PD practices in Australian regional HE, as well as academics' perceptions of these practices in regional universities. What is missing from the literature is a more holistic discussion of the teaching academic's context, both in the metropolitan and regional areas.

Not unexpectedly, there also appears to be no attempt to link L&T PD with university academics' professional practice. As acknowledged by international

studies (Brownell & Tanner, 2012; Kaasila et al., 2021; McCune, 2021; O'Meara, 2011), academics' professional practice is often measured and quantified through research grants and publications. Academics who teach in HE come into the profession already embedded in their research and subject matter expertise, without any expectations of having a teaching qualification.

The tension between research and teaching identities following academics throughout their career, often with the teaching identity taking a backseat (Brownell & Tanner, 2012; McCune, 2021). However, with the added pressures on universities to focus on teaching accountability and employability of future graduates, it has become imperative that teaching as well as research activities come together within academics' professional practice (McCune, 2021; Sutherland, 2018). Therefore, a whole of practice needs to be considered within L&T PD practices and strategies.

Borrega and Henderson (2014) who applied organisational change strategies to enhancing teaching STEM in HE in the US, found that many reports on L&T PD focused on single perspectives or strategies which increased the chance of missing other factors and processes that could better influence lasting change. In the same vein, this study considers a wider range of perspectives that will inform a whole picture of L&T PD practices, leveraged by complementary and intersecting insights from both metropolitan and regional universities.

Studies in European and African universities in recent years (Kálmán et al., 2020; McCowan et al., 2022) have found that academics' teaching practices and how they develop their teaching strategies are strongly connected with their context. Furthermore, they suggested that the uptake of L&T PD practices was directly influenced by the environment in which an academic teaches. In line with the argument by Boud and Brew (2013) and Sutherland (2018), the uptake of L&T PD can be aided by a better understanding of the teaching academics' contexts and of how PD forms part of their professional practice. The scope of this study was implicitly limited to the current and Australian level as these needed to be explored and understood before broad-based initiatives can be reached. Therefore, it was this gap, the perspectives of Australian regional universities, that this research address through the next phases of the development of an L&T PD typology.

### ***2.3.2. L&T PD typology and a conceptual framework***

Within the regional context, this research study includes the development of a practical tool, a typology, that academic developers can use to gauge teaching

academics' PD needs. Paper One presented the initial typology, outlining and describing the three typological clusters and their attributes. This is summarised here in Table 2.1.

*Table 2.1 Typology of L&T PD in Australian HE (Herbert & van der Laan, 2021).*

<b>Cluster</b>	<b>Attributes</b>
L&T-informed PD cluster	Characterised by development activities underpinned by teaching pedagogy and teaching strategies, this cluster was generally delivered by an Academic Development Unit (ADU) or a Centre for Learning and Teaching (CLT) of a university. There was evidence of some peer learning, but the literature mostly pointed to a top-down implementation of PD.
Community of Practice PD cluster	This cluster illustrated efforts to cater to the different, and mostly discipline-specific contexts of academics within their environment, department, or unit. These were characterised by informal conversations of peers within their disciplines. CoP is a social theory of learning (Wenger et. al., 2002), however in the context of the typology, CoP could be seen as a strategy that can be implemented as part of L&T PD practices.
Policy-driven PD cluster	This cluster was top-down driven and directive in nature, and PD activities under this cluster were informed by internal and external policies and regulation. Often, these PD activities form part of the universities' strategic plans.

A Venn diagram that accompanies the typology, is informed by the typology and the scoping literature review, illustrates the intersectional relationships and the multidimensional attributes of the typological clusters in Figure 2.3.

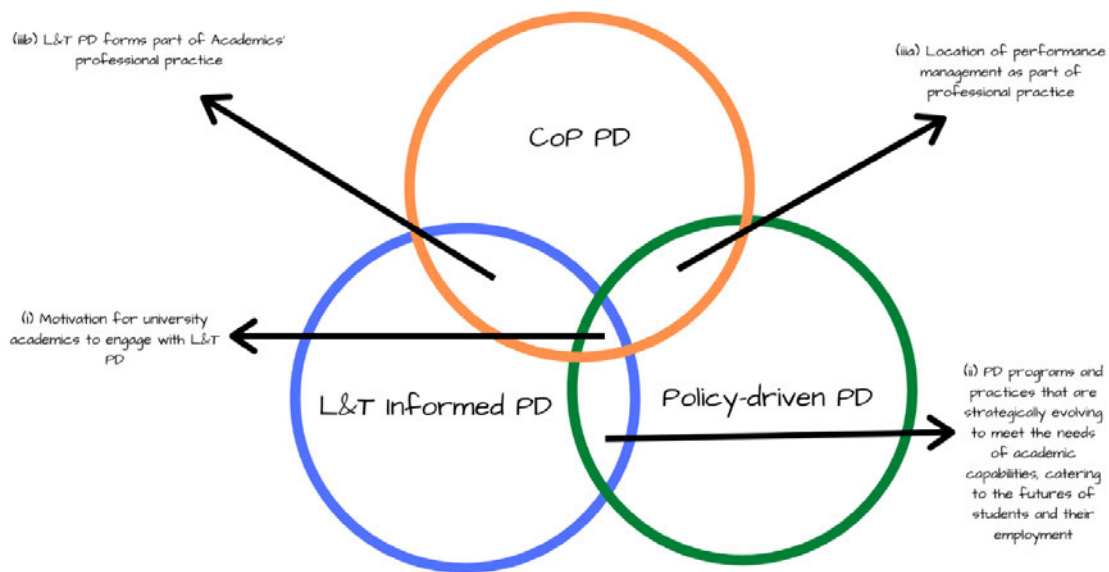


Figure 2.3 The Venn diagram of L&T PD typological clusters (Herbert & van der Laan, 2021)

The typological clusters and their attributes suggest three dimensions of the relationship between the three types of PD that exists in the Australian HE landscape. Located at the centre of Figure 2.3 is dimension (i): motivation for university academics to engage with L&T PD. Dimension (ii) is located in the intersection between the L&T-informed PD cluster and the Policy-driven PD cluster. This dimension brings together the capability needs of academics, as well as catering to the students' learning in preparation for their employment and futures. Dimension (iii) intersects within the typology at two points, namely at: (iia) the intersection between the Policy-driven PD cluster and the CoP PD cluster; and, at: (iib) the intersection between the CoP PD cluster and the L&T-Informed PD cluster. The latter intersection (iib) shows the need to link L&T PD with academic professional practice. Intersection (iia) links academics' disciplines, research, and teaching, (i.e., their professional practice) with policies that govern and impact on their performance management, and their academic employment. From this Venn diagram a conceptual framework is proposed in Figure 2.4. The findings in Paper One hints that the intersectional relationships between the three types of PD impacts on the design and implementation of PD activities. It suggests that it is the intersectional relationships between the types of PD that informs academics' motivation to participate in L&T PD. This will be explored further in this research study.

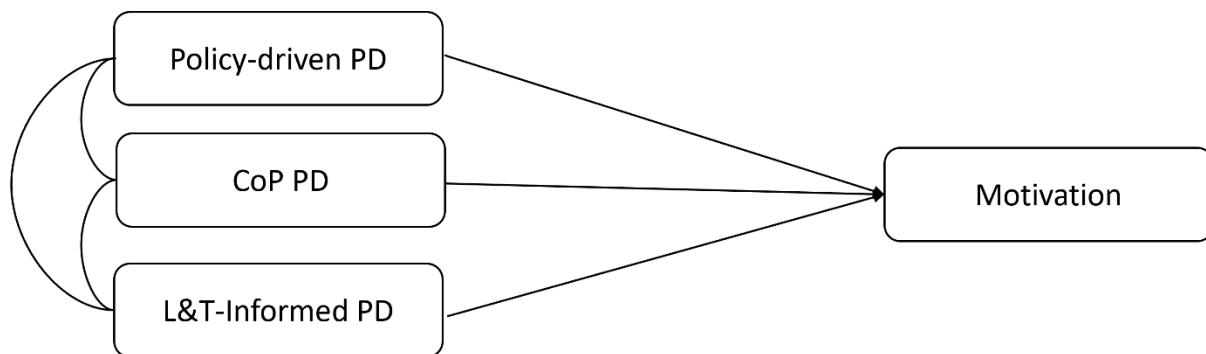


Figure 2.4 Proposed conceptual framework drawn from initial typology

Studying the literature was a good starting point, however as identified by Dawson and Dawson (2018), reporting bias often occurs in L&T research. Factors that result in reporting bias include professional identity and performance reputation by academics who report only positive aspects of their L&T experiences; influence of research funding bodies who encourage positive reporting of L&T research; ADU staff whose roles are based on successful implementation of L&T PD and therefore report only successful instances of the strategies.

The development of a typology as a tool to understand L&T PD practices and strategies supports the implementation of L&T PD strategies across Australian universities. Its usefulness is predicated on a holistic picture of reported L&T PD practices, which currently only provides one perspective, that of the metropolitan universities in Australia.

Consequently, the design of each stage of the study was informed by the gap identified in this chapter. Triangulation of information and data extracted from the literature necessitates the capturing of academics' perspective through interviews before a survey of the larger population of Australian regional university academics could be considered.

### **2.3.3. Research questions**

The following research question was formulated to address the gaps outlined in this chapter. If we are to accept that there exists a tension between uptake of and resistance to L&T PD:

*What is current practice in Australian regional universities and what are the future needs of academics that may address resistance to PD based on their perceptions?*

The following sub-questions guided and facilitated the research towards answering the research question:



1. What does the literature search on PD strategies say about current L&T PD practices in Australian universities?
2. What typology can be drawn from the review and analysis of the literature search?
3. What are the perceptions related to L&T PD experiences of academics who teach at an Australian regional university?
4. What are the current PD strategies that are reported by academic developers as being successful in an Australian regional university?
5. What is the underlying factorial structure that could explain Australian regional university academics' motivations to participate in learning and teaching PD?
6. What is the relationship between the types of learning and teaching PD and the motivations to participate in learning and teaching PD by academics in Australian regional universities?

#### **2.4. Summary**

Chapter Two consisted of the review of the literature related to research in L&T PD in HE, moving from global studies to studies in the Australian HE context. The literature reviewed and presented in Paper One, thereafter the analysis of additional literature after Paper One was published confirms the identified gap, that the research on L&T PD in the Australian HE context has largely come from the bigger metropolitan-based universities, and that the voices of academics who teach in Australian regional universities were missing, remains. Given the review of the extant literature, the conclusions of the published Paper One, and emerging research questions, Chapter Three outlines the paradigm adopted in viewing a response to the research questions outlined at the end of Chapter Two and details the research design.

## **CHAPTER 3: METHODOLOGY**

### **3.1. About this Chapter**

Chapter Three describes methodology and methods employed in this research study. An exploratory sequential mixed method research design was adopted to find the answers to the research question and sub-questions outlined at the end of Chapter Two. Therefore, this chapter provides a linear narrative of the two-phased research design. The research paradigm is discussed first in section 3.2, thereafter methodological approach is explained in section 3.3. The qualitative and quantitative research methods applied at each phase of the research are then presented. Outlining the research methods in this chapter serves as the jumping point for Paper Two (Chapter Four) and Paper Three (Chapter Five) wherein the procedures for the qualitative methods and quantitative methods are explained respectively. Finally, the ethical considerations that were taken into account when undertaking human research is provided at the end of the chapter.

### **3.2. Research Paradigm**

There exist numerous methodologies, each with its own set of epistemological and ontological positions when undertaking research (Bryman, 2012; Creswell & Creswell, 2018; Denzin & Lincoln, 2018; Morgan, 2014b). A critical consideration when thinking about a study's methodological approach to responding to the research question(s) is the paradigmatic 'lens' through which the phenomenon is best observed. These differ depending on the nature of the phenomenon being observed; the research questions; and to what extent a depth of understanding and breadth of generalisability of the findings is desired.

Before a methodology, including the research design and methods, can be chosen and implemented, it is helpful to understand the set of beliefs that guides the 'whys' and 'hows' of researching a phenomenon. The set of beliefs that guides the choice of methodology is the research paradigm (Creswell & Creswell, 2018; Denzin & Lincoln, 2018). Durdella (2019) explains that the research paradigm is central to understanding the study to be undertaken and helps to make sense of and analyse the data collected. That is, research paradigms are the foundations of scholarly research and offer insight into the reasons a researcher applied a certain methodology over another. It is beyond the reach of this Thesis to have an extended discussion on the various paradigms or 'worldviews', as referred to by Creswell and

Creswell (2018). It is however helpful at this point to discuss the particular research paradigm proposed in this study; provide a definition of the research paradigm; and how this particular paradigm shaped the methodology and research design of the Thesis. Before defining pragmatism as a paradigm, a brief overview of the philosophical orientation of the pragmatic paradigm is described next.

**Philosophical orientation.** The philosophy of pragmatism is said to have been derived from Kant's work *Critique of pure reason* originally published in 1787. In his work, Kant posits that the link between the knower and the known (i.e., the conversion of the object in the world into knowledge) is the knower's experiences of the known, informing the knower's belief and vice versa (Henschen, 2013). From this philosophical argument, pragmatism evolved through the work of such scholars as Peirce, James, Dewey, Mead, and Cherryholmes (Creswell & Creswell, 2018; Henschen, 2013). Pragmatism as a worldview maintains that an individual's knowledge is formed based on their experience of the world. This perception of the world is unique, yet the individual's perception of knowledge is a socially shared one. That is, the individual's perception of the world and acquisition of knowledge is influenced by social activity and created as they experience these activities within the communities they live in (Creswell & Creswell, 2018; Kaushik & Walsh, 2019, Morgan, 2014a).

**Pragmatism Paradigm.** Pragmatism as a paradigm is said to be a recent development and has evolved into a research paradigm at the same time as mixed methodology emerged (Creswell & Creswell, 2018; Kaushik & Walsh, 2019; Morgan, 2014a; Morgan, 2014b). Maintaining that research problems could be addressed using a plurality of methodologies, mixed method researchers argued that there is a false dichotomy between qualitative and quantitative approaches, and utilising one over the other may not give a complete understanding of a phenomenon (Creswell & Creswell, 2018; Morgan, 2014b). In recent years, scholars such as Morgan (2014a & 2014b), Kaushik, and Walsh (2019) extended the idea of pragmatism as a paradigm. They proposed that research is more than an inquiry of knowledge. Research is in fact part of human experience based on the beliefs and actions of the actual researchers (Morgan 2014a; Kaushik and Walsh, 2019). That is, pragmatism not only considers designing research around the practicalities of the research methods, but it also pays attention to the factors that influence both the choices the researcher makes at each stage of the study, as well as the ways data is interpreted and

analysed. Creswell and Creswell (2018) summarised this as making research design and method decisions based on the context of the study, where an individual's knowledge evolves as their experience grows (Creswell & Creswell, 2018).

In this research study, the pragmatic paradigm was deemed an appropriate worldview wherein the evolving nature of L&T PD could be observed. It is proposed that the exploration of a holistic picture of what L&T PD practice looked like in the Australian HE landscape can be best studied using a pragmatic 'lens'.

### **3.3. Methodological Approach**

In this section, the mixed methodology used in this research study is described. Methodology according to Cottrell (2014) and Saunders et al. (2015) should have a description of methods used while demonstrating the connection between the research question and the means by which the research study arrives at its conclusions. With the pragmatism paradigm in mind, and the complexity and contextual factors that surround understanding L&T PD in the Australian HE landscape in the forefront of this study, implementation of a mixed methodology where a qualitative method followed by a quantitative method is the most suitable approach for this study.

As summarised by Kaushik and Walsh (2019), the work presented by Dewey and refined by Morgan provided the following five-step model of research methodology implementation under pragmatism:

- (1) Recognise a situation (phenomenon) as a research problem as it sits in context and its environment;
- (2) Reflect on the research problem using the researcher's existing beliefs (practice-based insights);
- (3) Reflect on possible research methods that could find a solution to the research problem;
- (4) Choose the most appropriate research methods that can answer the research question; and
- (5) Conduct the research that is informed by insights from step one through to step four (Kaushik & Walsh, 2019, p. 8).

It is important to mention that step one through to step four act as a continuous cycle in pragmatism-based research methodology, with each phase of the research being informed by the previous phase. In this way, the researcher embraces a more flexible approach that enables them to select the research design

and methodologies that can best address the research question and move towards yielding a meaningful response to the problem. This flexibility of approach is aided by two strategies, namely: triangulation and abductive reasoning.

On Triangulation, researchers from various disciplines have used triangulation as a strategy whereby multiple methods, data sources and viewpoints are compared and contrasted to validate information, data and stories in a pragmatic manner. The result being a fuller picture of the phenomenon being studied (Caillaud et al., 2019; Denzin & Lincoln, 2018; Johnson et al., 2017). Therefore, triangulation was a useful strategy in the context of L&T PD practices in Australian universities because it explored constructed, multidimensional, and ever-changing realities (Merriam & Tisdell, 2016) of teaching in HE settings.

Pragmatism employs abductive reasoning. Abductive reasoning involves the process of decision-making by the researcher using insights from their own experiences, and the experiences of the community, while learning from experiences of others (Kaushik & Walsh, 2019). Abductive reasoning, as summarised by Morgan (2014b), employs both the inductive reasoning from the qualitative phase and the deductive reasoning from the quantitative phase of mixed methodology. Often, moving one from another. As will be described later in this chapter, the qualitative phase of this research study informs the development of the quantitative instrument, the survey, in the second phase. The former utilised inductive reasoning where the research began by collecting information from participants, e.g., from open-ended interviews, thereafter, the information was categorised into generalised themes. The latter utilises deductive reasoning where the generalised themes from the qualitative phase were tested on participants to confirm or disconfirm the themes that emerged in the qualitative phase.

Given the practical concerns and considerations outlined in Chapter One, the pragmatic paradigm matches the aims of this study and works toward addressing the main research question by answering the research sub-questions through the implementation of a sequential mixed method as the study progressed.

To address the first aim of this Thesis, (i) to provide a holistic picture of what constitutes L&T PD in Australian universities, answering the research sub-questions: *1. What does the literature search on PD strategies say about current L&T PD practices in Australian universities?* and *2. What typology can be drawn from the*

*review and analysis of the literature search?* required the mapping of the literature as outlined in Chapter Two.

The results of the scoping literature review led to discovering the gap in the knowledge. That is teaching academics' perception of L&T PD practices in regional Australian universities. This gap informed the second aim of the Thesis, (ii) present the teaching academics' perception of L&T PD practice in a regional Australian university.

A qualitatively driven study which implemented a semi-structured interview in a single institution was well suited to meeting the second aim of the Thesis, as well as answering the next two research sub-questions: 3. *What are the perceptions related to L&T PD experiences of academics who teach at an Australian regional university?* 4. *What are the current PD strategies that are reported by academic developers as being successful in an Australian regional university?* This allowed for developing a depth of understanding using the qualitative method, semi-structured interview, to meet the first two aims and move towards answering the main research question.

Thereafter, the collection of data using quantitative techniques needed to be considered. The quantitative findings from a survey can help determine the breadth of generalisability of this study. The online survey, meets the final two aims of the study: (iii) present the results and interpretation of a broader sample of teaching academics' perceptions across Australian regional universities; and (iv) provide a validated typology that can inform the development, design, and implementation of L&T PD. In particular, the survey was well-suited to answering the final research sub-questions: 5. *What is the underlying factorial structure that could explain Australian regional university academics' motivations to participate in learning and teaching PD?* 6. *What is the relationship between the types of learning and teaching PD and the motivations to participate in learning and teaching PD by academics in Australian regional universities?*

### **3.4. Research design**

This section describes the research design employed in this research study. An exploratory sequential mixed methods design, designated by Phase 1 QUAL> Phase 2 QUAN, was utilised in this study. This research design points to first gathering and analysing of qualitative data to gain a deeper understanding of the research problem. Thereafter, the insights from Phase 1 were used to inform the

development of the quantitative data collection instrument, and thus building one dataset on another. This enables the researcher to refine the plan and design of the study at each phase of the study, informed by the results from each phase (Creswell & Creswell, 2018).

The exploratory sequential mixed methods design was appropriate for the purpose of this study. According to Creswell and Creswell (2018) this design is intent on collecting qualitative data from a small sample that will then inform a development of a tool or instrument that is calibrated and validated using quantitative data. Developing the tool, i.e., the typology, justified a mixed method enquiry into identifying possible strategies aimed at increasing uptake of PD opportunities.

The design described by Creswell & Creswell represents some of the most current literature on exploratory sequential mixed methods design and mostly resembles the research design used in this research study. The scoping literature review that resulted in an initial typology presented in Chapter Two, was followed by a qualitative study. The qualitative study took the results from the scoping literature review and applied what was learnt from the review to inform the semi-structured interviews. The semi-structured interviews were administered to a sample of the population, academics who teach at an Australian regional university. The quantitative study that followed then tested the typology against responses collected from a survey of a bigger sample of the population, academics who teach in Australian regional universities.

### 3.5. Mixed methods data collection and analysis procedures

Following the exploratory sequential mixed method research design, the study captured data in sequential phases. Table 3.1 presents the output at each stage of the data collection, aligning each step with the relevant research sub-questions.

*Table 3.1 Summary of research sub-questions mapped against outputs*

Method	Question	Output
Scoping literature review (qual)	1.What does the literature search on PD strategies say about current L&T PD practices in Australian universities?  2.What typology can be drawn from the review and analysis of the literature search?	Paper One
Semi-structured interviews (QUAL)	3.What are the perceptions related to L&T PD experiences of academics who teach at an Australian regional university?  4.What are the current PD strategies that are reported by academic developers as being successful in an Australian regional university?	Paper Two

Method	Question	Output
Survey (QUAN)	<p>5.What is the underlying factorial structure that could explain Australian regional university academics' motivations to participate in learning and teaching PD?</p> <p>6.What is the relationship between the types of learning and teaching PD and the motivations to participate in learning and teaching PD by academics in Australian regional universities?</p>	Paper Three

This is further illustrated by the Research Value Chain underpinning the study (Figure 3.1). The Research Value Chain illustrates the reflective steps taken based on the 5-step model of pragmatism-based research methodology outlined in section 3.3.

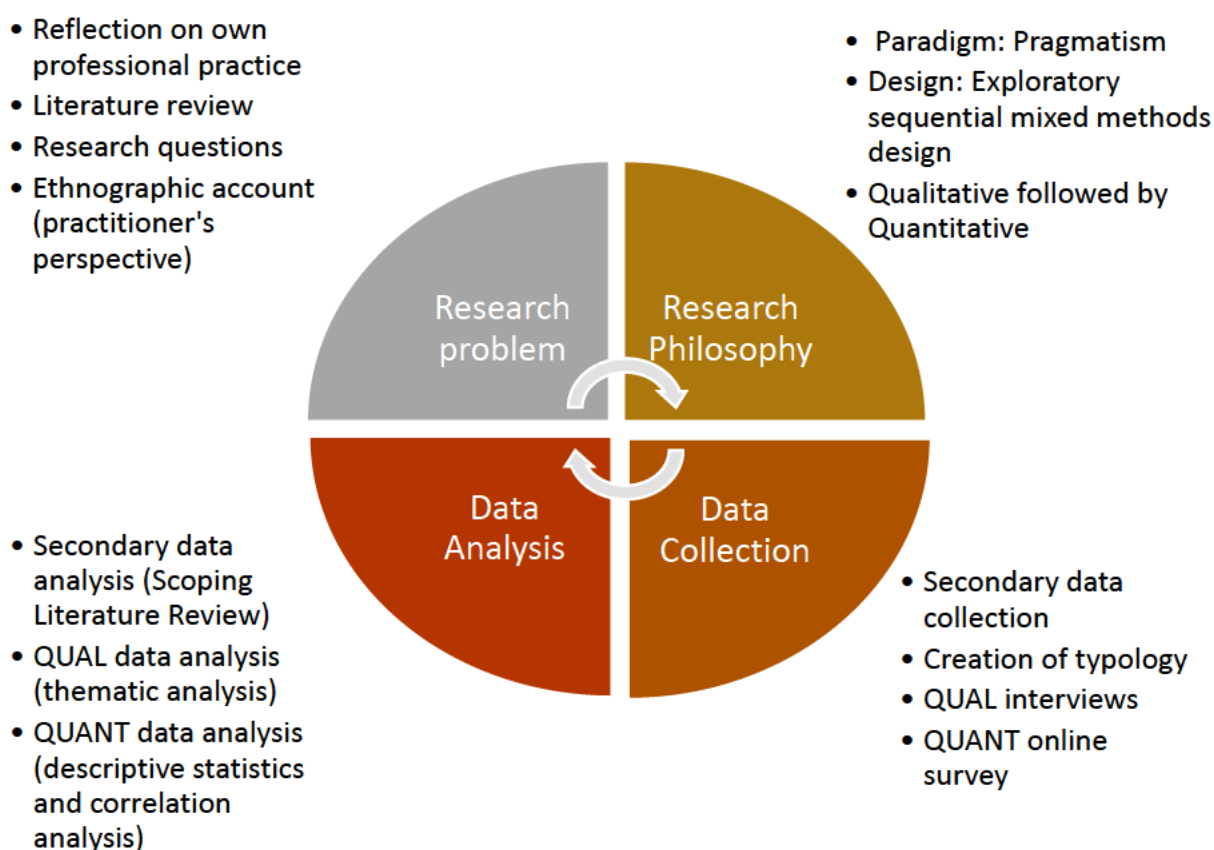


Figure 3.1 Research Value Chain

### 3.5.1. Qualitative study: Semi-structured interviews

This first phase of the research design took the form of a study of a single research site, an Australian regional university. This QUAL phase of the study involved the semi-structured interviews of teaching academics and academic developers at an Australian regional university, as a representative sample of the broader population. It sought to form part of the triangulation of data, i.e., offering



different sources of data to view the same phenomenon, as well as inform the quantitative phase of the research.

The QUAL phase involved asking open-ended questions intended to elicit views and opinions, allowing participants to narrate their experiences as storytellers (Creswell & Creswell, 2018) around L&T PD in a regional-based university. The utility of qualitative research is to gain greater depth of understanding of the phenomenon. The participants were given opportunity to speak extensively about their experiences in their university, providing them a chance to directly or indirectly add insights about their perceptions of motivation to participate in L&T PD activities.

Utilising thematic analysis, the data was explored against and grounded in the insights that emerged from the conceptual framework in Chapter Two. Informed by theoretical assumptions, thematic analysis provided an opportunity to test the insights (Braun & Clark, 2021) from the typology against the perceptions of academics who currently taught in an Australian regional university.

A thematic analysis is appropriately undertaken where the participants' experiences are foregrounded to construct meaning within their contexts (Braun & Clarke, 2021). There are six steps to thematic analysis outlined by Braun and Clarke (2021):

1. Data familiarisation;
2. Systematic data coding;
3. Generating initial themes from coded data;
4. Developing and reviewing themes;
5. Refining, defining and naming themes; and
6. Writing up the results. (p. 331)

This qualitative study was guided by the following research sub-questions:

*(3) What are the perceptions related to L&T PD experiences of academics who teach at an Australian regional university?*

*(4) What are the current PD strategies that are reported by academic developers as being successful in an Australian regional university?*

The researcher had a list of specific topics to be covered, however, the format of a semi-structured interview provided flexibility to unearth additional or complementary topics that better informed the findings of the research (Bryman, 2012).

Implementing a progressive comprehensive style (Morse, 2012) in three iterations of interviews enabled a more holistic understanding of the phenomenon. Extending the questions during each iteration allowed the researcher to saturate the data which helped identify the main themes that emerged in each iteration.

Purposive sampling allowed the researcher to target specific topics with individuals that had knowledge of the phenomenon being explored and provided useful insights and perspectives on it (Beitin, 2014). Purposeful sampling is a non-probability sampling technique that intentionally selects cases that are relevant to the line of enquiry and judged to be information-rich (Etikan et al., 2016).

A series of semi-structure interviews were conducted with those who undertook, as well as designed and implemented L&T PD within a regional-based university. This process helped with confirming the attributes identified in the scoping literature review, given that the types of L&T PD activities that emerged were from the perspectives of mainly metropolitan-based universities. In conducting these semi-structured interviews, academics' perceptions and lived experiences in the context of an Australian regional university was captured to add to the holistic picture of L&T PD practices in the Australian university landscape.

Human ethics approval was granted by the relevant Human Research Ethics Committee (HREC) before any participant was recruited and before interviews were conducted. Participants were recruited from a single site. To capture the current state of L&T PD practices in an Australian regional university, a total of 15 participants were approached. To reflect diversity of disciplines, ten of the participants were purposefully recruited from three different faculties within the university and were actively teaching. The remaining five participants were recruited from university staff members with academic development roles, both from the central ADU, and from staff embedded within the three faculties. All fifteen invitations were accepted.

Prior to the interviews, the interviewees received a Participant Information Sheet (PIS) for the study (Appendix A). A scheduled interview was booked once signed consents were collected. The interviews were held at a mutually convenient time and place for both interviewer and interviewee.

Interviews were conducted between February and July 2021, using the ZOOM online meeting platform, with each interview lasting between 45 minutes to one hour. Participants were asked to respond to the questions as per an interview protocol

(Appendix B), and they were also given the opportunity to withdraw at any time. None of the participants indicated a wish to withdraw.

Participants were advised that interviews would be audio recorded. These were then transcribed. All participants were given the opportunity to opt out of the audio recording. One participant expressed their wish not to be recorded. Therefore, the interviewer transcribed their responses during the interview, and the transcription was then included into the coding.

After the interview, participants were provided with a copy of the transcript of their interview to confirm its accuracy. Using pseudonyms, the participant responses were then anonymised for coding. Initially, text frequency using the NVivo software was used to draw out a list of codes. From there, the iterative refining, defining, and naming of sub-themes and main themes were conducted manually. From the fifteen interviews, 136 passages emerged.

### **3.5.2. Quantitative study: Survey**

Framed by the typology of L&T PD and informed by the results from the qualitative analysis mentioned above, this next phase of the research analysed survey data collected from 116 academics who currently teach in nine Australian regional universities.

The survey was designed in order to (a) determine the extent to which the qualitative results could be confirmed across a broader sample, (b) view the same phenomenon from a different perspective (triangulation), and (c) discover the underlying factorial structure of the phenomenon of L&T PD motivations and uptake in Australian universities.

The construction of the survey instrument was informed by Paper One (Chapter Two) and Paper Two (Chapter Four), respectively (Herbert & van der Laan, 2021; Herbert et al., 2023). Leading to the following research sub-questions:

*(5) What is the underlying factorial structure that could explain Australian regional university academics' motivations to participate in learning and teaching PD?*

*(6) What is the relationship between the types of learning and teaching PD and the motivations to participate in learning and teaching PD by academics in Australian regional universities?*

Using an online survey, responses were collected between February and April 2022. A purposeful non-random sampling technique was adopted. The online survey

was disseminated from the UniSQ online survey platform in accordance with the university's human research ethics approval. The researcher approached the appropriate gatekeepers in each of the nine regional universities, who then disseminated and distributed the link to the online survey through internal communications. The researcher also shared the link via social media networks on LinkedIn and twitter.

The survey was conducted in line with the UniSQ's Human Research Ethics Committee before the survey was disseminated and data collected. All participants were given written information to ensure their informed consent (Appendix C), and their right to withdraw from participation during the survey was highlighted. However, once de-identification and data analysis were completed, it was not possible for participants to withdraw their consent. To minimise the risk of indirect identification through a combination of submitted responses such as job role and location, the names of the universities were not included as participants' characteristics in the analysis.

In addition to questions collecting demographic data associated with the respondents, the survey consisted of three inventories. The first inventory presented statements drawn from the PD attributes in the typology of learning and teaching PD (Herbert, & van der Laan, 2021). The second inventory presented statements around trust and professional practice that suggests motivations for academics to participate in L&T PD (Herbert et. al., 2023). The third inventory further explored motivations for and resistance to participate in L&T PD within the context of universities' measurement of teaching quality. A Likert scale of 1 to 7 was used, with 1 equating to strongly-disagree and 7 to strongly-agree. The question inventories are presented in Appendix D.

Using IBM SPSS software, the data collected was cleaned and screened by first checking for missing values, and thereafter performing tests of the normality of distribution of data.

All 116 participants from the nine Australian regional universities answered all questions presented in each section of the survey. The data collected did not produce any missing answers.

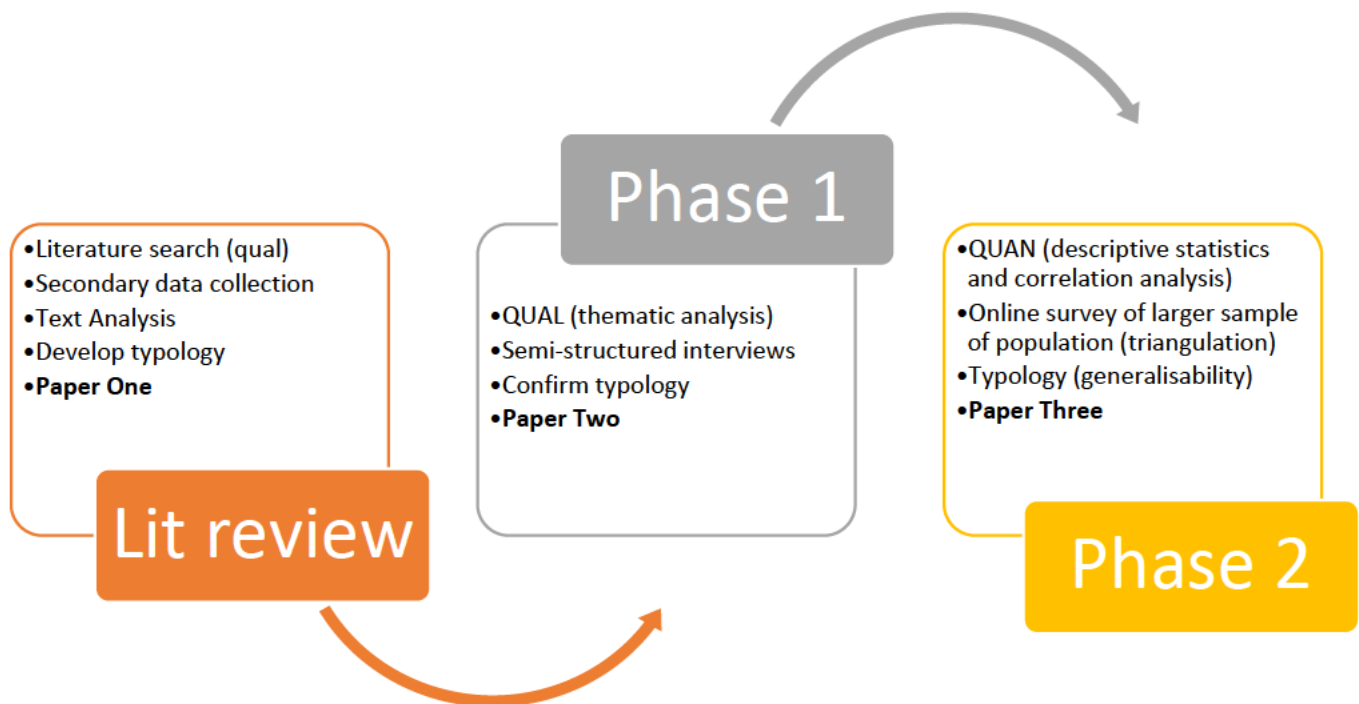
The normality of distribution of data was checked by running P-P plots for each item. Visual checks confirmed that the data were distributed normally and that

no outliers were detected. Descriptive statistics of Skewness and Kurtosis were also checked. Both confirmed that the data were normally distributed for all items.

Exploratory Factor Analysis (EFA) is used when analysing multivariate data. Principal Component Analysis (PCA), which is an EFA technique, was deemed the most appropriate technique to answer research question (5): *What is the underlying factorial structure that could explain Australian regional university academics' motivations to participate in learning and teaching PD?* PCA offers a robust way to reduce the number of items and explain the underlying factorial structure (if any) associated with all the variance created by the items (Brown, 2013; Hair et al., 2019). As this was an exploratory study, PCA was used to identify factors which captured the largest share of explained variance.

Component correlation analysis derived from the PCA results was deemed appropriate to answer the research question (6): *What is the relationship between the types of learning and teaching PD and the motivations to participate in learning and teaching PD by academics in Australian regional universities?* This is due to it being able to measure the strength and direction of the relationship between two or more variables (Hair et al., 2019; Nardi, 2014; Pallant, 2016). In this study, the bivariate correlations measured through the Pearson's Product-Moment Correlation Coefficient (Hair et al., 2019, Pallant, 2016) was used to identify the strength of the relationship between the types of learning and teaching PD and the motivations of academics to participate in PD.

Chapter Four of this Thesis presents the findings from the qualitative study (Paper Two) and Chapter Five presents the findings from the quantitative study (Paper Three). The research methods and corresponding papers are illustrated in Figure 3.2.



*Figure 3.2 Methodology and products*

### 3.6. Ethical considerations

This study explored the perceptions that can inform motivations of teaching academics and academic developers who are individuals and persons. Any study that involves individuals and persons will require respectful approaches to gathering data both in the qualitative and quantitative phases of a study (Creswell & Creswell, 2018). Human Ethics approval, H20REA161, was granted by the UniSQ Research Ethics Committee before any interview or survey was conducted.

As mentioned in sections 3.4.1 of this chapter, Human ethics approval was granted by the relevant Human Research Ethics Committee (HREC) before any participant was recruited and before interviews were conducted. Participants were recruited from a single site; therefore, it was paramount that anonymity of teaching academics and academic developers were strictly maintained. As highlighted by Boud & Brew's (2013), as well as Botham's (2018) study, a power struggle exists between teaching academics and academic developers, as well as teaching academics and university leadership. Anonymity and a safe space to capture the

interviewees responses were required at all times to ensure that participants did not feel at risk of losing their jobs for sharing their perceptions of L&T PD in their university. Prior to the interviews, the interviewees received a PIS. A scheduled interview was booked once signed consents were collected. Participants were asked to respond to the questions as per an interview protocol, and they were also given the opportunity to withdraw at any time. None of the participants indicated a wish to withdraw. During and post de-identification, transcripts and recordings were not only anonymised but also stored in a safe/private platform.

As mentioned in sections 3.4.2 of this chapter, the survey was conducted in line with the UniSQ's Human Research Ethics Committee before the survey was disseminated and data collected. All participants were given written information to ensure their informed consent, and their right to withdraw from participation during the survey was highlighted. De-identification of the data, as well as minimising indirect identification through a combination of submitted responses, were mitigated by the exclusion of the names of universities that participants belonged to in the participant characteristics analysis. In the quantitative online survey phase, Creswell & Creswell (2018) suggested that the distribution and completion of the online survey should not impede on the organisation's daily operations. That is, to access regional university teaching academics and academic developers, it may be ideal to go through a gatekeeper who will distribute the survey to their population. This is what this researcher undertook to disseminate the survey to the nine Australian regional universities, noted earlier in this chapter. The UniSQ survey platform was used to deploy and store responses which ensured the anonymity of participants, safeguarding their answers.

### **3.7. Summary**

Chapter Three presented the multi-layered methodological approach and triangulation of data used to investigate the L&T PD practices in the Australian regional HE context. Underpinned by a pragmatic paradigm, each stage of this research study not only informed the next stage, but each stage also reinforced the approach of the other. Using the exploratory sequential mixed methods research design, the research study moved from a qualitative study using data collected from semi-structured interviews to a quantitative study using data collected from a survey.

Triangulation was a useful strategy in the context of L&T PD practices in Australian universities, whereby multiple methods, data sources and viewpoints form

part of a cyclical process of data collection to validate information in a pragmatic manner. The results are a fuller picture of the phenomenon being studied (Merriam & Tisdell, 2016).

In the next two chapters, Chapter Four and Chapter Five, the findings and analysis of each stage of the research study is presented in Paper Two and Paper Three, respectively.



## CHAPTER 4: QUALITATIVE STUDY

### 4.1. About this Chapter

In this chapter, Paper Two (Herbert et al., 2023) is presented. As outlined in Chapter Three, an exploratory sequential mixed method approach was applied to this research study. Paper Two represents the qualitative phase of this research and Paper Three (Chapter Five) represents the quantitative phase. Creswell and Creswell (2018) explained that there are advantages of completing a qualitative phase prior to the quantitative phase. The qualitative data, personal stories, and anecdotes provides the rich detail which is then used to develop the quantitative measure, a survey.

Steps towards answering the primary research question were made within Paper Two by exploring these two research sub-questions:

- (3) *What are the perceptions related to L&T PD experiences of academics who teach at an Australian regional university?*
- (4) *What are the current PD strategies that are reported by academic developers as being successful in an Australian regional university?*

Paper Two follows on from the findings in Paper One. Paper One proposed a typology of L&T PD in the Australian universities' landscape with a caveat that the studies were predominately from metropolitan-based universities. There was a lack of perspectives from academics who teach in regional-based universities in the literature. Therefore, the contribution of Paper Two to the overall research study can be mapped to addressing the gap identified in Paper One. To avoid what Dawson and Dawson (2018) calls reporting bias within L&T research, and to add the voices of Australian regional university academics to the picture of Australian universities' L&T PD landscape, the qualitative phase of this research study employed semi-structured interviews to further understand L&T PD practices from the regional-based academics' point of view.

### 4.2. Paper 2 –Towards an Australian regional university professional development typology: A qualitative exploration of the academic voice.

Herbert, K., van der Laan, L., & Danaher, P.A. (2023). Towards an Australian regional university professional development typology: A qualitative exploration of the academic voice [in-print]. *International Journal for Academic Development*.

<https://doi.org/10.1080/1360144X.2023.2242816>

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### 4.3. Summary of findings

In Chapter Four, the findings of the qualitative study was presented. Paper Two described the study which addressed the following research sub-questions:

*(3) What are the perceptions related to L&T PD experiences of academics who teach at an Australian regional university?*

*(4) What are the current PD strategies that are reported by academic developers as being successful in an Australian regional university?*

In response to the first question, the article revealed that academics in a regional-based university face the same challenges as those teaching in metropolitan-based universities in terms of capability-building requirements. That being academics' work is not exclusive to their subject matter expertise and includes preparing their students for jobs now and in the future. As with metropolitan-based academics, regional-based academics are faced with keeping up with new realities facing the communities they serve. The article suggests that the types of PD identified in Paper One exists in the regional university context. In addition, the findings confirmed that L&T PD was received better by academics when ADUs developed and implemented PD within the context of disciplinary boundaries.

In response to the second question, the article described general reasons for academics' motivations and resistance. Furthermore, the findings hint at reasons relevant to strategic opportunities for developing L&T PD activities. The article concluded that teaching academics who see themselves as part of a greater plan, where their professional identities were linked to their teaching practice, were more likely to incorporate and implement L&T PD skills and knowledge into their practice.

This however is a single institution, and the research study would need further testing across a bigger sample of Australian regional universities to triangulate the data and determine the extent to which the findings in the qualitative study are reflective of the perceptions of teaching academics across Australian regional universities. It is appropriate to mention that the findings also suggested that the role of hierarchical trust affected motivations of academics to participate in L&T PD. It therefore stands to reason that the relationship between motivation and trust needs to be further explored and should be included in the survey inventory in the quantitative study that follows.

## CHAPTER 5: QUANTITATIVE STUDY

### 5.1. About this Chapter

In this chapter, Paper Three [AOM] (Herbert & van der Laan, n.d) is presented. Having been informed by Paper Two (Chapter Four), Paper Three represents the quantitative phase of this research. Using the rich details taken from the personal stories and anecdotes within the semi-structured interviews, the survey was developed to test the typology against a bigger sample of the target population, academics who teach at Australian regional universities. Together, Paper Two and Paper Three moved towards answering the primary research question:

*What is current practice in Australian regional universities and what are the future needs of academics that may address resistance to PD based on their perceptions?*

Paper Three investigated academics' motivation to participate in capability-building within the context of delivering quality learning and teaching experiences. Paper Three's contribution to the overall research study can be mapped to it answering the following research sub-questions:

*(5) What is the underlying factorial structure that could explain Australian regional university academics' motivations to participate in learning and teaching PD?*

*(6) What is the relationship between the types of learning and teaching PD and the motivations to participate in learning and teaching PD by academics in Australian regional universities?*

Following on from Paper Two, a study of a single institution, Paper Three reported on results from testing the typology and motivations to participate in L&T PD across a bigger sample of Australian regional universities. The quantitative measure, the survey, was designed to triangulate the data and determine the extent to which the findings in the qualitative study are reflective of the perceptions of teaching academics across Australian regional universities. The design included measures that could (a) discover the underlying factorial structure of the typology of L&T PD; (b) identify the relationship (if any) between the typological structure and motivations of academics to participate in L&T PD; and (c) view the phenomenon of academics' motivations to participate in L&T PD from a different perspective (that of a bigger sample from Australian regional universities).

**5.2. Paper 3 – [AOM] Demystifying academic learning and teaching professional development: The university professional development ecosystem and academics' motivations to participate.**

The AOM is presented below. Appendix E provides the AOM submission details and progress which was taken from the Journal of Further and Higher Education's author's dashboard.

# **Demystifying academic learning and teaching professional development: The university professional development ecosystem and academics' motivations to participate**

Katherine Herbert<sup>a</sup>, and Luke van der Laan<sup>b</sup>

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\*Corresponding author

An important consideration in supporting universities' pursuit of improving the quality of their teaching delivery is the motivations of academics to participate in learning and teaching professional development. This paper reports on an investigation of academics' motivations to participate in capability-building within the context of delivering quality learning and teaching experiences in higher education. The study, informed by a typology of learning and teaching professional development, was deployed across nine Australian regional universities. Exploratory Factor Analysis was conducted yielding a six-component model solution. The solution illustrates the relationship between the types of professional development and academics' motivations to participate. The factorial solution identifies the key factors associated with academics' motivations to participate in learning and teaching professional development and contributes to the theory relevant to the improvement of quality learning and teaching practices in higher education.

Keywords: capability, factor analysis, higher education, professional development, quality learning and teaching, typology

## **Declarations and statements**

**Ethics approval:** Human Ethics approval, [approval number], was granted by the [University] Human Research Ethics Committee before the survey was disseminated and data collected.

**Declarations:** Funding -This research has been supported by an Australian Government Research Training Program Scholarship.

**Conflicts of interest/Competing interests:** The authors have no relevant financial or non-financial interests to disclose.

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**Data availability:** The datasets generated during and/or analysed during the current study are available from the corresponding author on reasonable request.

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# **Demystifying academic learning and teaching professional development: The university professional development ecosystem and academics' motivations to participate**

An important consideration in supporting universities' pursuit of improving the quality of their teaching delivery is the motivations of academics to participate in learning and teaching professional development. This paper reports on an investigation of academics' motivations to participate in capability-building within the context of delivering quality learning and teaching experiences in higher education. The study, informed by a typology of learning and teaching professional development, was deployed across nine Australian regional universities. Exploratory Factor Analysis was conducted yielding a six-component model solution. The solution illustrates the relationship between the types of professional development and academics' motivations to participate. The factorial solution identifies the key factors associated with academics' motivations to participate in learning and teaching professional development and contributes to the theory relevant to the improvement of quality learning and teaching practices in higher education.

Keywords: capability, factor analysis, higher education, professional development, quality learning and teaching, typology

## **Introduction**

It has long been held that the public good is at the core of higher education's mission (Hogan et al., 2021). Quality teaching in higher education spaces, such as universities, is important to achieving their mission to deliver on the public good (Hogan et al., 2021; van der Laan & Ostini, 2018). Consequently, the connection between the quality of learning and teaching delivery and the academics' teaching capabilities in the university setting, as well as the development of the same, has become an important area of research (Lim et al., 2022; McCowan et al., 2022; Sutherland, 2018).

A critical consideration in supporting universities' pursuit of improving the quality of their teaching delivery is understanding what motivates academics to participate in learning and teaching professional development (PD). Understanding academics' motivations



to participate in learning and teaching PD can provide useful insights towards designing PD aimed at improving the quality of teaching.

Quality improvement of teaching is said to be predicated on transformative changes in the ways that learning and teaching is conceived and delivered (McCowan et al., 2022; Sutherland, 2018). Learning and teaching PD can assist with this transformation but only if the PD is taken up and implemented by the academics (McCowan et al., 2022). Little is known however about the motivations and resistance to learning and teaching PD uptake, and how it manifests in academics' teaching practice (Boud & Brew, 2013; Fahara & Tobias, 2019, McCowan et al., 2022).

Learning and teaching studies have largely focused on how student-centred teaching practices can be enhanced through PD (Lim et al., 2022), seldomly drawing on an understanding of how academics perceive the PD, and whether improvement of teaching could be directly attributed to participation in the PD (McCowan et al., 2022). It is essential therefore to understand the ways in which academics perceive and respond to upskilling and capability-building facilitated by PD in order to improve the design and delivery of quality learning and teaching experiences.

The central premise of this study is that developing a greater understanding of academics' motivations to participate in learning and teaching PD leads to better-informed PD design and quality improvement of learning and teaching delivery. To this end, the aim of the study sought to investigate university academics' motivations to participate in learning and teaching PD in Australian regional universities.

The scope of this study was explicitly limited to the Australian regional universities' context, i) as an extension of a larger study, and ii) to address a gap in the literature related to learning and teaching PD design and uptake in regional higher education contexts (Herbert & van der Laan, 2021). The focus of this study further provides a different perspective to the

more dominant discourses of larger metropolitan-based institutions. It is suggested that the learning and teaching contexts of regional universities have lower resourcing and arguably different student needs.

## **Background**

The core function of universities is to provide for the public good by creating effective learning environments that act as conduits for student learning, converting knowledge into real world life and work skills (Hogan et al., 2021; van der Laan & Ostini, 2018). This expectation has intensified due to quickly evolving realities such as the Fourth Industrial Revolution (FIR), and more recently the COVID-19 pandemic (Ashour, 2020; Terstegen et al., 2022; Fahara & Tobias, 2019). In addition, industry and discipline expectations of graduate outcomes has impacted on how quality learning and teaching is perceived (Terstegen et al., 2022; Hogan et al., 2021; McCowan et al., 2022). This infers that those academics who teach in higher education are no longer expected to simply deliver subject-matter expertise and thereby knowledge transfer common to traditional didactic approaches. They are also expected to provide students with opportunities to learn new higher order capabilities that can be transferred to their work now and in the future. Quality learning and teaching is therefore seen as the source of universities' efforts to equip students and the communities they serve with knowledge and skills required to navigate the rapidly changing environment (Ashour, 2020; Hogan et al., 2021). It is increasingly being recognised as a source of strategic differentiation and legitimacy for universities (Miotto et al., 2020)

Learning and teaching PD refers to professional development undertaken by academics to enhance their teaching skills that will lead to a more effective student learning experience (Sutherland, 2018). Evidenced by studies on learning and teaching PD, it is commonly understood that academics who commence teaching at universities do so without the expectations that they have teaching training (Hogan et al., 2021; Lim et al., 2022;

McCowan et al., 2022; McCubbin et al., 2022). This has resulted in varying quality of the way learning and teaching is delivered (Lim et al., 2022).

Learning and teaching PD in universities emerged during the early 20<sup>th</sup> Century when an increase in student enrolments led to the massification of universities (Sutherland, 2018). This saw students enrolling from all walks of life which called for a shift in teaching delivery. This shift meant moving teaching practice from teacher-centred learning to student-centred learning. Therefore, PD programs and activities in relation to learning and teaching emerged from i) the need to develop effective teaching skills resulting in quality learning due to the changing demographics of higher education, and ii) to support academics as they commence teaching (Boud & Brew, 2013; Sutherland, 2018).

So called Academic Development Units were formed in universities to develop PD programs and operationalise teaching training that would equip academics with essential teaching skills (Boud & Brew, 2013; Sutherland, 2018). From there, learning and teaching PD evolved into the intentional support for delivering effective student learning experiences, while advancing quality teaching skills of academics (Sutherland, 2018). Despite the growth of intentional support for developing learning and teaching skills, studies have found that efforts have been met with a lack of interest and even resistance from academics (Botham, 2018; McCowan et al., 2022). Therefore, for Academic Development Units to succeed in building and supporting quality teaching capabilities, academics' motivations and resistance should be identified and understood. Once motivations and forms of PD are identified, resistance can be strategically addressed in order to increase the uptake of PD opportunities by academics.

### ***Proposed conceptual framework***

In Australia, learning and teaching PD is heterogenous in nature (Boud & Brew, 2013;

McCubbin et al., 2022; Sutherland, 2018). Due to the heterogenous nature of learning and teaching PD, reasons underpinning academics' motivations to participate and factors that influence the uptake of learning and teaching PD are difficult to detect. To the best of the authors' knowledge, there is no recognised conceptual framework that illustrates the academics' motivation to participate in learning and teaching PD. Therefore, a conceptual framework is proposed in this study.

The proposed conceptual framework integrates the Typology of Learning and Teaching PD (Herbert & van der Laan, 2021) with the findings of a qualitative study (Herbert et al, 2023) that tested the typology against the perceptions of academics from one Australian regional university.

From the former, a typology of learning and teaching PD, against which academics' motivations to participate could be mapped, offered a holistic picture of what is currently in place in the Australian university sectors. As can be seen in Table 1, the typology describes the three main sources, or types of PD, that inform learning and teaching PD practice in the Australian university context.

*Table 1 Typological clusters and their attributes (Herbert & van der Laan, 2021)*

Cluster	Attributes
L&T-informed PD cluster	Characterised by development activities underpinned by teaching pedagogy and teaching strategies, this cluster was generally delivered by an Academic Development Unit (ADU) or a Centre for Learning and Teaching (CLT) of a university. There was evidence of some peer learning, but the literature mostly pointed to a top-down implementation of PD.
Community of Practice PD cluster	This cluster illustrated efforts to cater to the different, and mostly discipline-specific contexts of academics within their environment, department, or unit. These were characterised by informal conversations of peers within their disciplines. CoP is a social theory of learning (Wenger et. al., 2002), however in the context of the typology, CoP could be seen as a strategy that can be implemented as part of L&T PD practices.
Policy-driven PD cluster	This cluster was top-down driven and directive in nature, and PD activities under this cluster were informed by internal and external policies and regulation. Often, these PD activities form part of the universities' strategic plans.

A Venn diagram showing the intersectional relationships of the types of learning and teaching PD to each other (Figure 1) accompanied the typology. The intersectional

relationships suggest reasons underpinning academics' motivations to participate in learning and teaching PD, and hint at factors that influence its uptake.

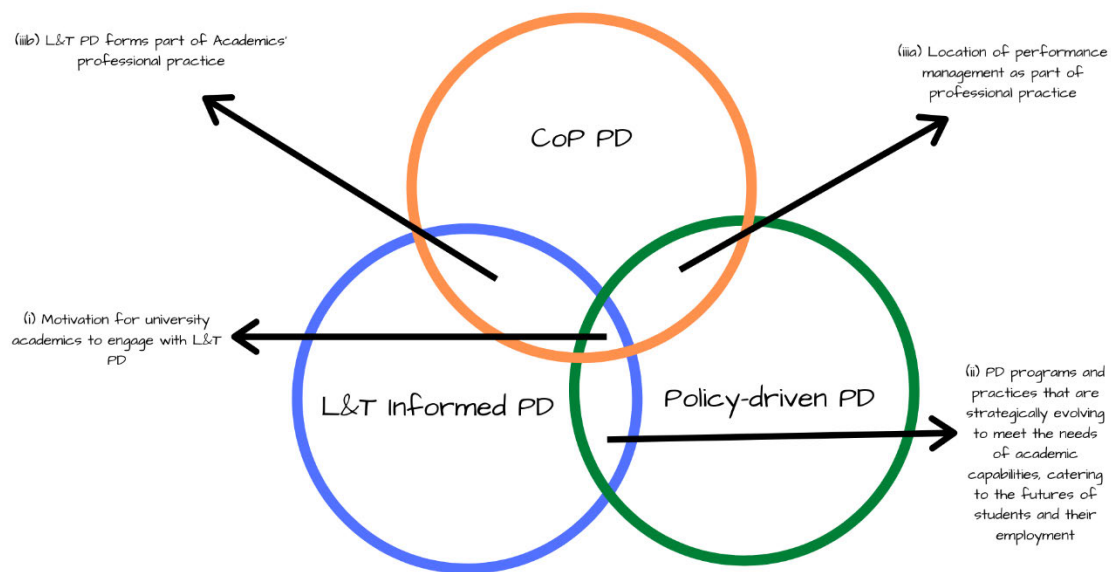


Figure 1 Venn diagram of learning and teaching PD in Australian universities (Herbert & van der Laan, 2021)

Following on from the typology, a qualitative study tested the typology against perceptions of academics in an Australian regional university followed on from the typology. The findings of the qualitative study provided evidence of the types of PD that were present in the Australian regional university context. In addition, the study found that trust, in this study hierarchical trust, was a consideration when exploring motivations to participate in learning and teaching PD (Herbert et al, 2023). Taking this into account and drawing from the Venn diagram (Figure 1) the proposed conceptual framework underpinning this study is illustrated in Figure 2.

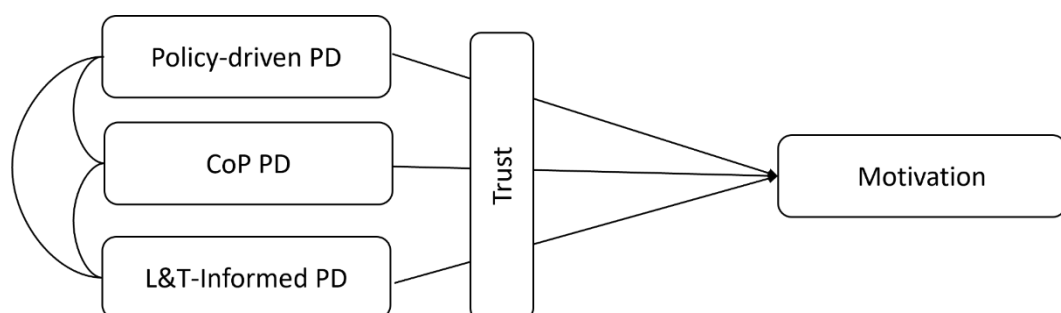


Figure 2 Proposed conceptual framework

Based on the extant literature and aforementioned studies, the proposed conceptual framework suggests that academics' motivations to participate in learning and teaching PD is related to the typological clusters and interactions between the types of PD. The aim of the study was therefore to explore whether the factorial structure proposed by the conceptual framework is valid and reflects academics' motivations to participate in learning and teaching PD in Australian regional universities.

Using the conceptual framework of this study, the research questions posed were:

1. *What is the underlying factorial structure that could explain Australian regional university academics' motivations to participate in learning and teaching PD?*
2. *What is the relationship between the types of learning and teaching PD and the motivations to participate in learning and teaching PD by academics in Australian regional universities?*

## **Method**

The study was exploratory and quantitative. This was deemed appropriate as the study sought to capture a broader sample of academics so as to allow for a generalisation of the findings. An online survey was based on the previous studies and designed in order to (a) discover the underlying factorial structure of the typology of learning and teaching PD; (b) identify the relationship (if any) between the typological structure and motivations of academics to participate in learning and teaching PD; and (c) view the phenomenon of academics' motivations to participate in learning and teaching PD from a different perspective (that of a bigger sample from Australian regional universities). In this way, this research could answer the research questions posed in this study and determine the internal validity (or not) of the typology and constructs presented in the previous studies.

### ***Participants***

Data was collected from nine Australian regional universities. The responses were collected in 2022. A purposeful non-random sampling technique was adopted. The online survey was disseminated by invitation and thereafter snowballing in accordance with the [university] human research ethics approval. The research team invited each of the nine regional universities to participate, who then disseminated the link to the online survey through internal communications.

### ***Question inventory***

The survey consisted of three inventories. The first inventory looked at statements relating to the attributes of the learning and teaching PD types described in the typology. The second inventory consisted of statements in relation to trust and professional identity that motivates academics to participate in learning and teaching PD. The third inventory investigated motivations for and resistance to participate in learning and teaching PD within the context of universities' measurement of teaching quality. A likert scale of 1 to 7 was used, with 1 equating to strongly-disagree and 7 to strongly-agree. All questions required a forced response in order to limit missing values and incomplete cases. Appendix A presents the constructs and items of each inventory.

### ***Data preparation***

Using IBM SPSS software, the data collected was cleaned and screened by first checking for missing values, and thereafter performing tests of the normality of distribution of data.

All 116 participants from the nine Australian regional universities answered all questions presented in each section of the survey. The data collected did not produce any missing values due to all questions requiring a forced response.

The normality of distribution of data was checked by running P-P plots for each item. Visual checks confirmed that the data were distributed normally and that no outliers were

detected. Descriptive statistics of Skewness and Kurtosis were also checked. Both confirmed that the data were normally distributed for all items.

### ***Data analysis technique***

Principal Component Analysis (PCA), which is an exploratory factor analysis (EFA) technique, was deemed the most appropriate multivariate analysis technique to answer the first research question: *What is the underlying factorial structure that could explain Australian regional university academics' motivations to participate in learning and teaching PD?* PCA offers a robust way to reduce the number of items and explain the underlying factorial structure (if any) associated with all the variance created by the items (Brown, 2013; Hair et al., 2019). As this was an exploratory study, PCA was used to identify factors which captured the largest share of explained variance.

Component correlation analysis derived from the PCA results was deemed appropriate to answer the second research question: *What is the relationship between the types of learning and teaching PD and the motivations to participate in learning and teaching PD by academics in Australian regional universities?* This is due to it being able to measure the strength and direction of the relationship between two or more variables (Hair et al., 2019; Nardi, 2014; Pallant, 2016).

## **Quantitative results**

### ***Participant response***

In total 116 complete cases were extracted from the responses that met the inclusion criteria of the study, i.e., active academics in Australian regional universities. Table 2 illustrates the characteristics of the respondents.

*Table 2 Characteristics of the respondents from the nine Australian regional universities*

Characteristics	Variable	Distribution percentage
Gender	Female	67.24%
	Male	31.90%
	Non-binary/other	0.86%
Total		100%



<b>Age</b>	26 to 35	10.34%
	36 to 45	24.14%
	46 to 55	32.76%
	56 to 65	23.28%
	66 and above	9.48%
<b>Total</b>		100%
<b>Main job role</b>	Teaching and research	53.45%
	Teaching duties, research, and academic development	28.45%
	Teaching duties only	16.38%
	Academic development only	1.72%
<b>Total</b>		100%
<b>Employment type</b>	Full-time permanent	68.97%
	Casual contract	17.24%
	Full-time fixed term	2.59%
	Part-time permanent	7.76%
	Part-time fixed term	3.45%
<b>Total</b>		100%
<b>Teaching delivery (post COVID-19)</b>	On campus and online	56.90%
	Online classes only	37.07%
	I do not teach	2.59%
	On campus only	3.45%
<b>Total</b>		100%

The sample were distributed between female (67.24%) and male (31.90%) respondents, with one respondent identifying as non-binary/other. Approximately 97% of the sample consisted of academics who have teaching duties as part of their role, with about 80% of the sample having research duties as well as teaching duties. 30% of the sample have academic development duties as well as teaching or research. 75% of the sample were permanently employed, and 23% were casual or fixed term employed. Post COVID-19 teaching delivery appeared to be a mix of both campus-based and online, with on-campus-only delivery being limited to 3.45% of the sample.

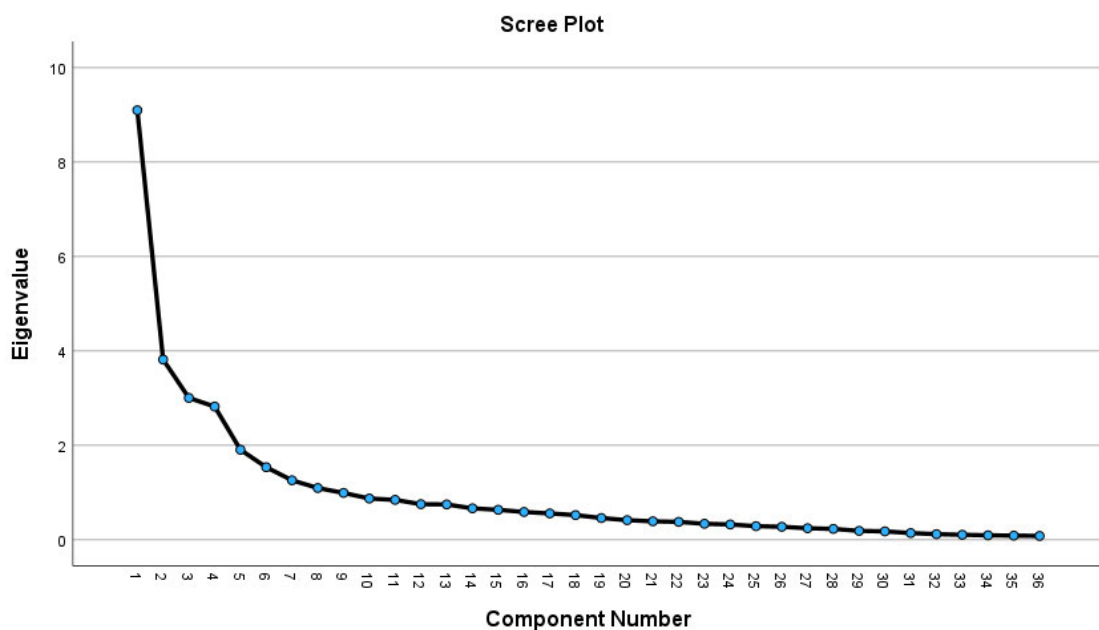
### ***PCA sampling adequacy***

The Kaiser-Meyer-Olkin (KMO) estimation of sampling adequacy was 0.81, exceeding the recommended value of 0.6 (Hair et. al., 2019). The Bartlett Test of Sphericity reached statistical significance (Approx. Chi-square = 2540.00, df = 630; and Sig. = .000), supporting the factorability of the variables (Hair et. al., 2019). Analysing the underlying structure of the variables would yield principal components that can explain the most variance (Hair et al., 2019; Pallant, 2016).

### ***Factor extraction***

A series of PCA with a Varimax rotation were conducted on the items in the question inventories to ensure that variables with larger variances do not dominate the analysis and to account for differences in the scaling of the variables (Hair et al., 2019; Pallant, 2016). It was anticipated that the resulting clusters of the inventory items (components) generally would not correlate, therefore Varimax which is an orthogonal rotation approach was appropriate.

After each PCA, items with factor loadings  $< .400$  were excluded. Item removal was only applied when it was theoretically justified (Hair et al., 2019). A total of six items were removed. The final solution contained 36 items. Using the scree plot (Figure 3), it was decided to retain six components with Eigen values  $> 1$  for further investigation.



*Figure 3 Eigenvalues for PCA*

The six-component model explained 61.6% of the items' variance. This indicates that the items provide a 'Simple Structure' solution (Pallant, 2016). A Simple Structure solution suggests that the factorial structure points to a convergent-discriminant validity (Brown, 2013). The six-component model is presented in Table 3.

Table 3 Rotated component matrix: Item loadings and components

ITEM	1	2	3	4	5	6
C6 The development of my academic career is supported by my institution	0.877					
C10 I feel like my opinions and suggestions on teaching strategies are being heard by the leaders in my institution	0.804					
C7 The leaders in my institution support the development of my teaching skills	0.798					
C8 The leaders in my institution support the development of my research skills	0.788					
C9 I feel like my feedback on Learning & Teaching PD activities are being heard by the leaders in my institution	0.771					
B21 There are Learning & Teaching PD opportunities and resources available when I need them the most	0.610					
B22 The Learning & Teaching PD strategies are developed in consultation with the academics who teach	0.490				0.417	
B4 I observe the way that colleagues in my discipline/department teach in their subjects/courses/units		0.851				
B8 I implement new or improved teaching strategies based on the successful implementation by colleagues in my discipline/department		0.814				
B3 I observe the way that my colleagues teach the subjects/courses/units that I also teach		0.811				
B7 I implement new or improved teaching strategies based on the successful implementation by colleagues who teach the same subjects/courses/units that I do		0.794				
B6 I discuss teaching strategies informally with colleagues in my discipline/department		0.750				
B5 I discuss teaching strategies informally with colleagues who teach the same subjects/courses/units that I do		0.681				
D4 Learning & Teaching practice expectations do not take on board individual teaching experiences			0.776			
D5 Learning & Teaching practice expectations are determined by compliance with government regulations and policies			0.706			
D3 Rapidly changing Learning & Teaching practice expectations increase my resistance to engage with Learning & Teaching PD			0.668			
B17 Participating in Learning & Teaching PD activities is compliance-driven			0.630			
B16 Learning & Teaching PD activities do not recognise my discipline's or students' contexts			0.615			
D1 Measurement of teaching quality is driven by executive/management			0.595			
B23 Learning & Teaching PD activities are simply a tick-the-box activity			0.572			
D2 The one-size-fits-all teaching quality model does not enable discipline-based nuances			0.510			
B13 I attend scheduled Learning & Teaching PD (online or face-to-face) based on the relevance to my teaching delivery needs				0.795		
B12 I attend scheduled Learning & Teaching PD (online or face-to-face) sessions run by the Academic Development Unit (ADU)				0.755		
B14 Learning & Teaching PD activities are rapid and reactive				0.614	0.489	
B19 I can see a direct link between Learning & Teaching PD activities and my academic role				0.596	0.440	
B10 I seek out Academic Developer (AD)/Educational Designer (ED)/Learning Designer (LD) support to improve and develop my teaching practice	0.420			0.595		
B18 Participating in Learning & Teaching PD activities is part of my performance management expectations				0.478		
C11 I will implement a change in my teaching strategy only after talking to an Academic Developer (AD)/Educational Designer (ED)/Learning Designer (LD)					0.748	
C12 I rely on Academic Developer (AD)/Educational Designer (ED)/Learning Designer (LD) to keep me updated on the educational and teaching technology used at my university					0.698	
B11 Academic Developer (AD)/Educational Designer (ED)/Learning Designer (LD) support is essential to my teaching preparation and delivery				0.502	0.606	

C14 I am confident that those who facilitate or lead internal Learning & Teaching PD sessions/workshops at my university are experts in learning and teaching	0.438				0.596	
C13 I often seek out feedback on my teaching delivery from an Academic Developer (AD)/Educational Designer (ED)/Learning Designer (LD)					0.590	
C2 I am confident in my teaching practice and delivery						0.744
B1 I can apply pedagogical research to my own teaching practice						0.740
B9 I seek out pedagogical literature to support my teaching practice						0.604
<b>% of Variance (Rotation sums of squared loadings)</b>	<b>13.1%</b>	<b>12.0%</b>	<b>11.4%</b>	<b>10.0%</b>	<b>8.9%</b>	<b>6.1%</b>

Extraction method: Principal Component Analysis

Rotation Method: Varimax with Kaiser Normalization

Based on the PCA, the six factors identified and labelled were:

- (1) 'Hierarchical Trust'
- (2) 'Community of Practice (CoP) PD'
- (3) 'Policy-driven PD'
- (4) 'Motivation'
- (5) 'L&T-informed PD'
- (6) 'Self-directed Learning'

'Hierarchical Trust' had the highest loading explaining 13.1% variance, and 'Self-directed Learning' had the least explaining 6.1% variance. The item loadings on 'Hierarchical Trust' relate to the trust academics feel they have in their institutions as it relates to developing their teaching skills. The item loadings on 'CoP PD' relate to development of teaching skills and learning delivery improvements together with peers. The item loadings on 'Policy-driven PD' relate to top-down, hierarchically driven PD activities that were informed by internal and external policies and regulation. The item loadings on 'Motivation' relate to motivation to participate in PD activities. The item loadings on 'L&T-informed PD' relate to learning derived by academics from their interaction with academic developers and academic development units. Lastly, the final component, labelled 'Self-directed Learning', relates to activities that academics sought out themselves in relation to developing their own teaching skills and knowledge.

The Component Correlation Matrix is presented in Table 4. The results indicate that 'Hierarchical Trust' had a strong negative correlation with 'Policy-driven PD'. Furthermore, 'Hierarchical Trust' had a strong positive correlation with 'Motivation', as well as 'L&T-

informed PD’. Along with ‘Hierarchical Trust’, ‘Motivation’ was identified as having a strong positive correlation with ‘CoP PD’, ‘L&T-informed PD’ and ‘Self-directed Learning’.

*Table 4 Component Correlation Matrix*

Components	1	2	3	4	5	6
1	1.0					
2	.303**	1.0				
3	-.362**	-.137	1.0			
4	.410**	.373**	-.233*	1.0		
5	.319**	.197*	-.167	.536**	1.0	
6	.324**	.341**	-.277**	.448**	.238*	1.0

\*\*Correlation is significant at the 0.01 level (2-tailed)

\*Correlation is significant at the 0.05 level (2-tailed)

### ***Reliability***

To check the consistency of the measurement instrument, a reliability analysis was conducted using the Chronbach’s Alpha statistic. The Chronbach’s Alpha coefficient of 0.84 for the categorised values was produced, which is above the acceptable lower limit of 0.70 (Hair et al., 2019). This confirms that the set of items that make up the instrument are internally consistent (internal validity) and its derived item values measure the same attributes.

### **Discussion**

This article began by asking two questions:

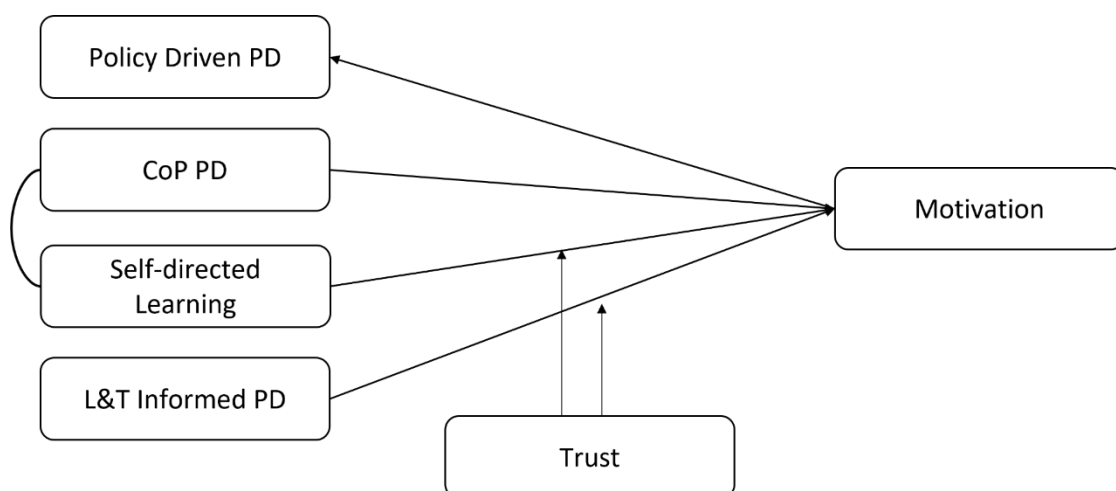
1. *What is the underlying factorial structure that could explain Australian regional university academics’ motivations to participate in learning and teaching PD?*
2. *What is the relationship between the types of learning and teaching PD and the motivations to participate in learning and teaching PD by academics in Australian regional universities?*

In addressing these two questions, the empirical solution derived from the PCA confirmed that the three types identified in the typology are present in Australian regional

universities. ‘Self-directed Learning’ as a type of learning and teaching development activity also emerged as an underlying component.

This self-directed component of the typology compliments the institutional forms of PD in that it develops the academic’s professional identity in conjunction with ‘CoP PD’. It has been argued in some international studies that ‘Self-directed Learning’ as a teaching development activity could be the link between an academic’s professional identity and their teaching practice (Avidov-Ungar & Herscu, 2020; Kálmán et al., 2019; Parker & Roessger, 2020). Along with ‘Self-directed Learning’, ‘Hierarchical Trust’ in conjunction with ‘L&T-informed PD’ emerged as sources of motivation to participate.

The PCA solution suggests that the types of PD are separate from each other, with ‘CoP PD’ and ‘Self-directed Learning’ being moderately correlated components. It also confirms that ‘Hierarchical Trust’ is positively associated with ‘Motivation’, specifically as it relates to ‘L&T-informed PD’, and ‘Self-directed Learning’. Furthermore, the findings highlight that ‘Policy-driven PD’ negatively impacts the ‘Motivation’ of academics to participate in formalised PD. A modified conceptual framework is therefore presented in Figure 4.



*Figure 4 Modified conceptual framework based on the six-component solution*

The modified conceptual framework provides new insights into how the key concepts related to academic learning and teaching PD interrelate. The emergence of ‘Hierarchical Trust’ and ‘Self-directed Learning’ provides a more complete understanding than the initial conceptual framework and typology.

### ***Hierarchical Trust***

The revised conceptual framework shows that ‘Hierarchical Trust’ makes a significant contribution to academics’ motivation to participate in learning and teaching PD. In particular, the motivation to participate in ‘L&T-informed PD’ and ‘Self-directed Learning’ depends on the level of ‘Hierarchical Trust’ academics feel towards the PD activities they will undertake. Of note, is the suggestion that ‘CoP PD’ activities do not rely on trust to motivate academics to participate in these activities as they are independent of formal institutional mechanisms.

The revised conceptual framework also suggests that while the relationship of the ‘Policy-driven PD’ to ‘Motivation’ is negative, academics do participate with an understanding that these PD activities are compliance-based. According to the literature (Cook-Sather et al., 2021; Leibowitz, 2014; Sugrue et al., 2017), trust is said to be cultivated if top-down oriented PD activities consider the academics’ context and input into the PD activities design and implementation. The solution illustrates that ‘Hierarchical Trust’ is needed to enhance academics’ motivation to participate with ‘L&T-informed PD’.

### ***Types of PD***

The findings support the existence of the three types of PD: ‘Policy-based PD’, ‘L&T-informed PD’, and ‘CoP PD’. These are complimented by ‘Self-directed Learning’ as a type of learning and teaching development activity.

‘Self-directed Learning’ has been extensively discussed in the literature with a strong tradition associated with teacher development (Hargreaves, & Fullan, 1992). However, the

same level of research attention is much less common in the HE context and is mostly not associated with learning and teaching PD (Avidov-Ungar & Herscu, 2020; Parker & Roessger, 2020). Learning and teaching PD research in Australia associated with ‘Self-directed Learning’ as a type of learning and teaching development activity is rare and limited to topics such as Tomitsch et al.’s (2021) undertaking of ‘Self-directed Learning’ activities within an online PD platform. The notion of ‘Self-directed Learning’ includes experimentation with teaching techniques, reflection on teaching practice and learning from sources outside the institution (Kálmán et al., 2019).

There is support in international studies around ‘Self-directed Learning’ as a form of development of learning and teaching capabilities in HE, without being associated with formal institutional forms of learning and teaching PD. The studies point to academics identifying teaching skills and knowledge needed to cater to their discipline or subject matter. They then proactively seek out learning opportunities mostly from external sources that will build their teaching capability within their discipline context (Avidov-Ungar & Herscu, 2020; Lau, 2018; Pan et al., 2022; Parker & Roessger, 2020).

Taking the above insights into account, a modified Venn diagram of the four types of learning and teaching PD is proposed in Figure 5.



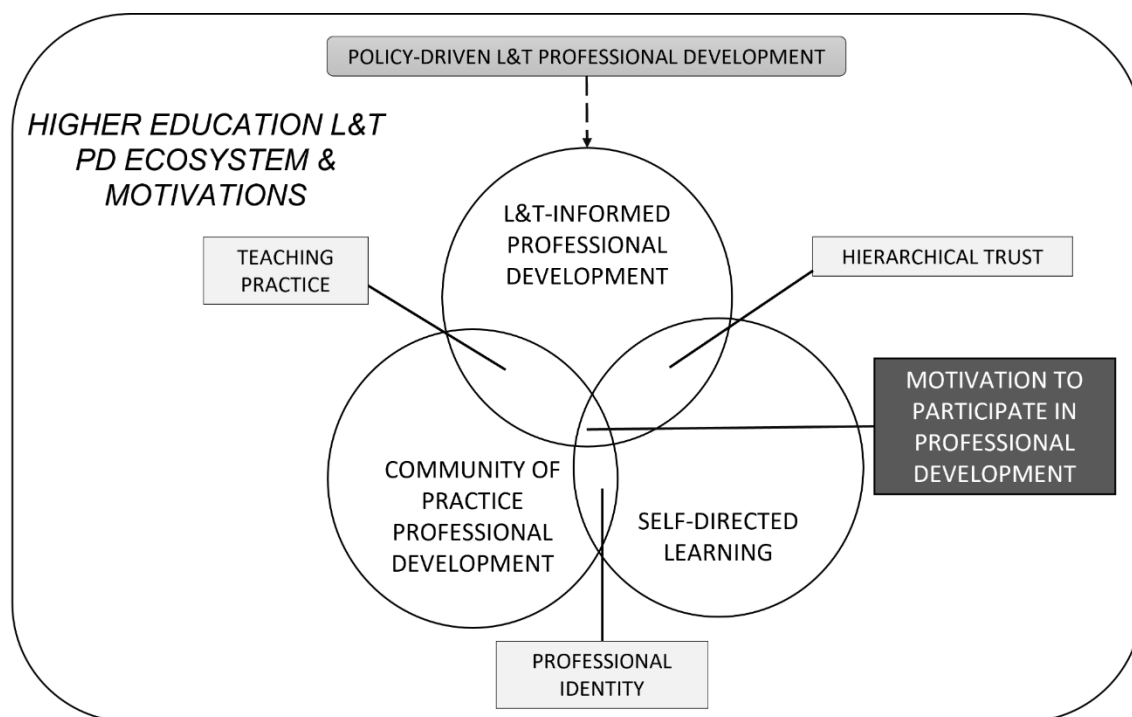


Figure 5 Modified Venn diagram: Higher Education Learning and Teaching Professional Development Ecosystem and Motivations

Based on the modified Venn diagram, a modified table of typological clusters and their attributes is also presented here (Table 5).

Table 5 Modified typological clusters and their attributes

Cluster	Attributes
L&T-informed PD	Characterised by being informed by university strategic goals translated into development activities underpinned by teaching pedagogy and teaching strategies this cluster is generally not compliance-based and is delivered by an Academic Development Unit (ADU) or a Centre for Learning and Teaching (CLT) of a university. Typified by individuals' 'Hierarchical Trust' when decoupled from compliance-driven Policy-informed PD.
Community of Practice PD	This cluster illustrates efforts to cater to the different, and mostly discipline-specific contexts of academics within their environment, department, or unit. It is mostly not institutionalised and typified by horizontal communication. These PD activities are characterised by informal conversations of peers within their disciplines. CoP is a social theory of learning (Wenger et. al., 2002), however in the context of the typology, CoP is seen as a strategy that is implemented as part of L&T PD practices. No relationship to 'Hierarchical Trust' due to institutionally independent nature of CoP.
Policy-driven PD	This cluster is top-down oriented and directive in nature. PD activities under this cluster are informed by internal and external policies and regulation, and mostly compliance driven. These PD activities form part of the universities' strategic plans. Typified by low level of 'Hierarchical Trust' and negatively associated with 'Motivation'.
Self-directed learning PD	This cluster includes activities that academics seek out in relation to developing their own teaching skills and knowledge. They are mostly in the form of seeking out external sources of learning, experimentation, and reflection on learning and teaching practice. Typified by low level of individual 'Hierarchical Trust' which stimulates motivation to self-learn.

In this section, a discussion of the converged solution of the PCA, along with the component correlation matrix that addresses these research questions respectively was provided.

In order for a typology to capture factors that influence academics' motivations to participate in learning and teaching PD, a tailored PD solution based on the perceptions of the academics is needed. This tailormade solution and the use of a typological tool however cannot be used in isolation. It will not work as a solution unless the broader issues of the academics' trust in their institution is addressed and high levels of trust are achieved.

## **Conclusion**

The findings of the study primarily contribute to the improvement of quality learning and teaching practices in HE through the identification of the key factors that influence academics' motivations to participate in PD. Furthermore, the relationship of each type of learning and teaching PD to motivation provides insight into how PD types are perceived by academics, with the emergence of an additional type of PD, 'Self-directed Learning'. The results show that learning and teaching PD development and implementation are not a quick and automatic process and cannot be solved by one-size-fits-all learning and teaching PD strategies.

The developed typology for identifying strategies and approaches to PD that exist in Australian universities, and academics' motivation to participate in learning and teaching PD, can help in understanding the need of various disciplines and their contexts. The teaching academics who perceive their discipline, unit or department to be highly supportive and collaborative are key agents for transforming quality teaching and learning. The challenge is not falling into a trap of creating more siloed practices, but by entertaining cross-disciplinary/unit/departmental interaction to facilitate shared learning and teaching practices.

## **Limitations**

The study was exploratory and therefore has its limitations. Due to the study being exploratory, causality cannot be confirmed. While this study demonstrated empirical strong correlations between the factors, the confirmation of the underlying factorial structure should be addressed in future research based on this study.

The sample includes academics who currently teach in all nine Australian regional universities, but it is acknowledged that the small sample size may reduce the generalisability and representativeness of the study. Considering that the respondents knew they were consenting to a survey on motivations to participate in learning and teaching PD, it may suggest that the responses only include those who already had an interest in the learning and teaching PD uptake. The voices of those who may be ambivalent to the motivations to participate in learning and teaching PD may have been excluded, and potentially skewed the results towards those who were already highly motivated to participate in learning and teaching PD. Therefore, the broader implications related to transformative changes to teaching practices in the global context are also acknowledged and will need to be addressed in future studies.

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## APPENDIX A

### Online survey question inventory

Section	Construct	Items	Items
Section A	Demographic	A1-A7	A1 Age group A2 Gender A3 University A4 Job role A5 Employment type A6 Teaching delivery (on-campus/online/both) A7 City/region
Section B	Community of Practice (CoP) PD cluster	B1-B8	B1 I can apply pedagogical research to my own teaching practice. B2 I develop my teaching practice and strategies based on student feedback. B3 I observe the way that my colleagues teach the subjects that I also teach. B4 I observe the way that colleagues in my discipline/unit/department teach in their subjects. B5 I discuss teaching strategies informally with colleagues who teach the same subjects that I do. B6 I discuss teaching strategies informally with colleagues in my discipline/unit/department. B7 I implement new or improved teaching strategies based on the successful implementation by colleagues who teach the same subjects that I do. B8 I implement new or improved teaching strategies based on the successful implementation by colleagues in my discipline/unit/department.
Section B	Learning and teaching informed PD cluster	B9-B16	B9 I seek out pedagogical literature to support my teaching practice. B10 I seek out academic developer/ educational designer/ learning designer support to improve and develop my teaching practice. B11 Academic developer/ educational designer/ learning designer support is essential to my teaching preparation and delivery. B12 I attend scheduled PD (online or face-to-face) sessions run by the Academic Development Unit (ADU). B13 I attend scheduled PD (online or face-to-face) based on the relevance to my teaching delivery needs. B14 Learning and teaching PD activities are rapid and reactive. B15 Learning and teaching PD activities are mostly technology-focused. B16 Learning and teaching PD activities do not recognise my discipline's or students' contexts.
Section B	Policy-driven PD cluster	B17-B23	B17 Participating in learning and teaching PD activities is compliance-driven. B18 Participating in learning and teaching PD activities is part of my performance management expectations. B19 I can see a direct link between learning and teaching PD activities and my academic role. B20 I found the compulsory program on teaching in Higher Education (HE) offered by the institution very helpful. B21 There are learning and teaching PD opportunities and resources available when I need them the most. B22 The learning and teaching PD strategies are developed in consultation with the academics who teach. B23 Learning and teaching PD activities are simply a tick-the-box activity.
Section C	Academics' role and their professional practice	C1-C5	C1 Teaching is as important as research in professional practice. C2 I am confident in my teaching practice and delivery. C3 I feel ownership of the subjects that I design and teach. C4 We will stop being a university if we do not teach well. C5 We will stop being a university if we do not research well.
Section C	Hierarchical trust and the role of ADUs	C6-C14	C6 The development of my academic career is supported by my institution. C7 The leaders in my institution support the development of my teaching skills.

			<p>C8 The leaders in my institution support the development of my research skills.</p> <p>C9 I feel like my feedback on PD activities are being heard by the leaders in my institution.</p> <p>C10 I feel like my opinions and suggestions on teaching strategies are being heard by the leaders in my institution.</p> <p>C11 I will implement a change in my teaching strategy only after talking to an Academic Developer (AD)/Educational Designer (ED)/Learning Designer (LD).</p> <p>C12 I rely on AD/ED/LD to keep me updated on the educational and teaching technology used at my university.</p> <p>C13 I often seek out feedback on my teaching delivery from an AD/ED/LD.</p> <p>C14 I am confident that those who facilitate or lead internal L&amp;T PD sessions/workshops at my university are experts in learning and teaching.</p>
Section D	Teaching quality measurement	D1-D5	<p>D1 Measurement of teaching quality is driven by executive management.</p> <p>D2 The one-size fits all teaching quality model does not enable discipline-based nuances.</p> <p>D3 Rapidly changing L&amp;T practice expectations increase my resistance to engage with L&amp;T PD.</p> <p>D4 L&amp;T practice expectations do not take on board individual teaching experiences.</p> <p>D5 L&amp;T practice expectations are determined by compliance to government regulations and policies.</p>



### 5.3. Summary of findings

In Chapter Five, the findings of the quantitative study were presented. Paper Three described the study which addressed the following research sub-questions:

*(5) What is the underlying factorial structure that could explain Australian regional university academics' motivations to participate in learning and teaching PD?*

*(6) What is the relationship between the types of learning and teaching PD and the motivations to participate in learning and teaching PD by academics in Australian regional universities?*

To explain the variance in academics' motivation to participate in L&T PD, a six-component solution emerged where 'Hierarchical Trust' had the heaviest variance loadings. The solution suggests that 'Hierarchical Trust' makes a significant contribution to academics' motivation to participate, particularly when undertaking 'L&T-informed PD' which is led by ADUs and ADs. In addition to the three types of PD identified in Paper One and Paper Two, a fourth 'type' emerged, 'Self-directed learning'.

Of particular interest is the modified conceptual framework presented at the end of Paper Three. The conceptual framework shows that the types of PD are separate from each other, with 'CoP PD' and 'Self-directed Learning' being moderately correlated components. It also confirmed that 'Hierarchical Trust' is positively associated with 'Motivation', specifically as it relates to 'L&T-informed PD', and 'Self-directed Learning'. Furthermore, the findings highlight that while 'Policy-driven PD' negatively impacts the 'Motivation' of academics to participate in formalised PD, 'L&T-informed PD' is necessarily informed by the former type of PD for it to have traction (Benito-Capa, 2017; Botham, 2018; Fahara, & Tobias, 2019; Shephard et al., 2020).

The participants' stories (Paper Two) along with PCA solution to the two research sub-questions explored in Paper Three not only provides a more complete picture of motivations to participate in L&T PD, combining qualitative and quantitative studies also provides this research with triangulated findings. Together, Paper Two and Paper Three moved towards answering the primary research question:

*What is current practice in Australian regional universities and what are the future needs of academics that may address resistance to PD based on their perceptions?*

This is presented in the final chapter of this thesis.

## **CHAPTER 6: DISCUSSION AND CONCLUSION**

### **6.1. About this chapter**

Chapter Six restates the aims of the research and will highlight the original contribution to knowledge. It will explain the limitations of the research and discuss the future directions for research. Finally, a personal reflection concludes this chapter and the Thesis.

### **6.2. The aim of the research**

The topic of this study contributes to the growing research on PD of academics who teach in Australian HE. Specifically, this exploration focused on the under-represented perceptions of teaching academics within Australian regional universities. The research presented in this dissertation builds on the community of practice related to PD for teaching academics, therefore, the voices of academics in regional-based universities were given opportunities to be heard.

This Thesis aimed to deepen the understanding of L&T PD practice in Australian regional universities and identify possible strategies to help and support the increased uptake of PD opportunities among teaching academics.

The central concern of the research was to (i) give a holistic picture of what constitutes L&T PD in Australian universities as evidenced by the extant literature; (ii) report on the teaching academics' perception of L&T PD practice in a regional Australian university; (iii) present the results and interpretation of a broader sample of teaching academics' perceptions across Australian regional universities; and (iv) produce a typology, and associated conceptual framework that can inform the development, design, and implementation of L&T PD. The results of this research study also contributed to a work-based project which aimed to provide academics and ADs with a tool, an L&T PD typology.

Framed by the underpinning concepts of capability, professional development and professional identity, the research study followed a pragmatic paradigm. Using an exploratory sequential mixed method design. That is, a qualitative study followed by a quantitative study was presented in three journal articles.

### 6.3. Response to research questions

The research investigated the academics' motivation to participate in L&T PD practices in the context of Australian regional universities using the main research question:

*What is current practice in Australian regional universities and what are the future needs of academics that may address resistance to PD based on their perceptions?*

To aid in answering the main research question, a set of sub-questions were used to guide each phase of the research study. As an exploratory sequential mixed method study, the sub-questions were informed by the findings in each phase of the study. Table 6.1 illustrates where the research sub-questions mapped throughout this research study.

*Table 6.1 Summary of research sub-questions mapping*

Method	Question	Output	Findings
Scoping literature review (qual)	1.What does the literature search on PD strategies say about current L&T PD practices in Australian universities?  2.What typology can be drawn from the review and analysis of the literature search?	Paper One	Mapped L&T PD practices across literature within Australian Universities.  Initial typology and conceptual framework proposed.  The findings identified a gap in the literature, namely that the voices from Australian regional universities were silent in the literature. This needed to be addressed in the next phase of the research study, while further developing the typology.
Semi-structured interviews (QUAL)	3.What are the perceptions related to L&T PD experiences of academics who teach at an Australian regional university?  4.What are the current PD strategies that are reported by academic developers as being successful in an Australian regional university?	Paper Two	Added the voice of academics who teach in an Australian regional university to the picture of L&T PD strategies across Australian universities.  Results confirmed the three types of PD, with the added variable of hierarchical trust.  This study enabled the collection of personal stories and anecdotes from a single institutions, an Australian regional university. While the data suggested that the challenges faced by Australian regional universities were similar to the metropolitan-based universities, the findings needed to be tested with a bigger sample of the targeted population. The quantitative phase of this research addressed this.
Survey (QUAN)	5.What is the underlying factorial structure that could explain Australian regional university academics' motivations to participate in learning and teaching PD?	Paper Three	The six-component solution explained the variance in academics' motivation to participate in L&T PD, with 'Hierarchical Trust' having a strategic impact on

Method	Question	Output	Findings
	6.What is the relationship between the types of learning and teaching PD and the motivations to participate in learning and teaching PD by academics in Australian regional universities?		<p>motivation especially with 'L&amp;T-informed PD' and 'Policy-driven PD'.</p> <p>The empirical solution also revealed a fourth type of L&amp;T PD, that being 'Self-directed Learning', which had a positive correlation with 'CoP PD'.</p> <p>Finally, using the factorial structure and correlation analysis, a final typology was provided with a modified conceptual framework.</p>

The findings of the studies within this research study offer the answers to the main research question through forming a full picture of current practice, identifying academics' future needs based on their perceptions, and developing a final typology to be offered as a tool for both academics and ADs.

### 6.3.1. *Current practice*

On current practice and a holistic picture of the current L&T PD practice, the academic voice related to L&T PD was an important consideration. The findings established a broader context of L&T PD in the Australian landscape with the inclusion of the perceptions of teaching academics in Australian regional universities. Furthermore, when this research study began the literature review consisted of experiences of current L&T PD practices prior to the COVID-19 pandemic, as the study progressed, the impacts and disruptions from the pandemic on HE was weaved into the research study, thus ensuring that the full picture of the L&T PD landscape in Australian universities were accurately presented in this dissertation. The Thesis developed and evolved the typology based on the emergent insights. The final typology and its attributes pulled together what current practice looks like in the Australian university landscape, inclusive of both metropolitan-based and regional-based perceptions (Table 6.2).

*Table 6.2 Final Typology of L&T PD in Australian HE (Herbert & van der Laan, n.d).*

Cluster	Attributes
L&T-informed PD	Characterised by being informed by university strategic goals translated into development activities underpinned by teaching pedagogy and teaching strategies this cluster is generally not compliance-based and is delivered by an Academic Development Unit (ADU) or a Centre for Learning and Teaching (CLT) of a university. Typified by individuals' 'Hierarchical Trust' when decoupled from compliance-driven Policy-informed PD.
Community of Practice PD	This cluster illustrates efforts to cater to the different, and mostly discipline-specific contexts of academics within their environment, department, or unit. It is mostly

	not institutionalised and typified by horizontal communication. These PD activities are characterised by informal conversations of peers within their disciplines. CoP is a social theory of learning (Wenger et. al., 2002), however in the context of the typology, CoP is seen as a strategy that is implemented as part of L&T PD practices. No relationship to 'Hierarchical Trust' due to institutionally independent nature of CoP.
Policy-driven PD	This cluster is top-down oriented and directive in nature. PD activities under this cluster are informed by internal and external policies and regulation, and mostly compliance driven. These PD activities form part of the universities' strategic plans. Typified by low level of 'Hierarchical Trust' and negatively associated with 'Motivation'.
Self-directed Learning	This cluster includes activities that academics seek out in relation to developing their own teaching skills and knowledge. They are mostly in the form of seeking out external sources of learning, experimentation, and reflection on learning and teaching practice. Typified by low level of individual 'Hierarchical Trust' which stimulates motivation to self-learn.

The accompanying Venn diagram was also modified based on the factorial solution. This is presented in Figure 6.1. The interconnectedness of 'CoP PD', 'Self-directed Learning', and 'L&T-informed PD' emerged from the solution. Paper Three showed that 'Hierarchical Trust' has a positive relationship with 'L&T-informed PD' and 'Self-directed Learning'. As initially found in Paper One (Figure 2.1), the intersectional relationship between L&T-informed PD and CoP PD, and the successful uptake of these two PD types lie in the link that ADs make between pedagogy and academic teaching practice. On the other hand, the new findings from Paper Three changed the intersectional relationships of Policy-driven PD. The empirical solution suggests that while Policy-driven PD exists and academics have a negative relationship to undertaking this type of PD, there still exists a link with academics' disciplines, research, and teaching, (i.e., their professional practice) with policies that govern and impact on their performance management, and their academic employment. Therefore, Policy-driven PD necessarily informs L&T-informed PD for the latter to have traction within PD activities.

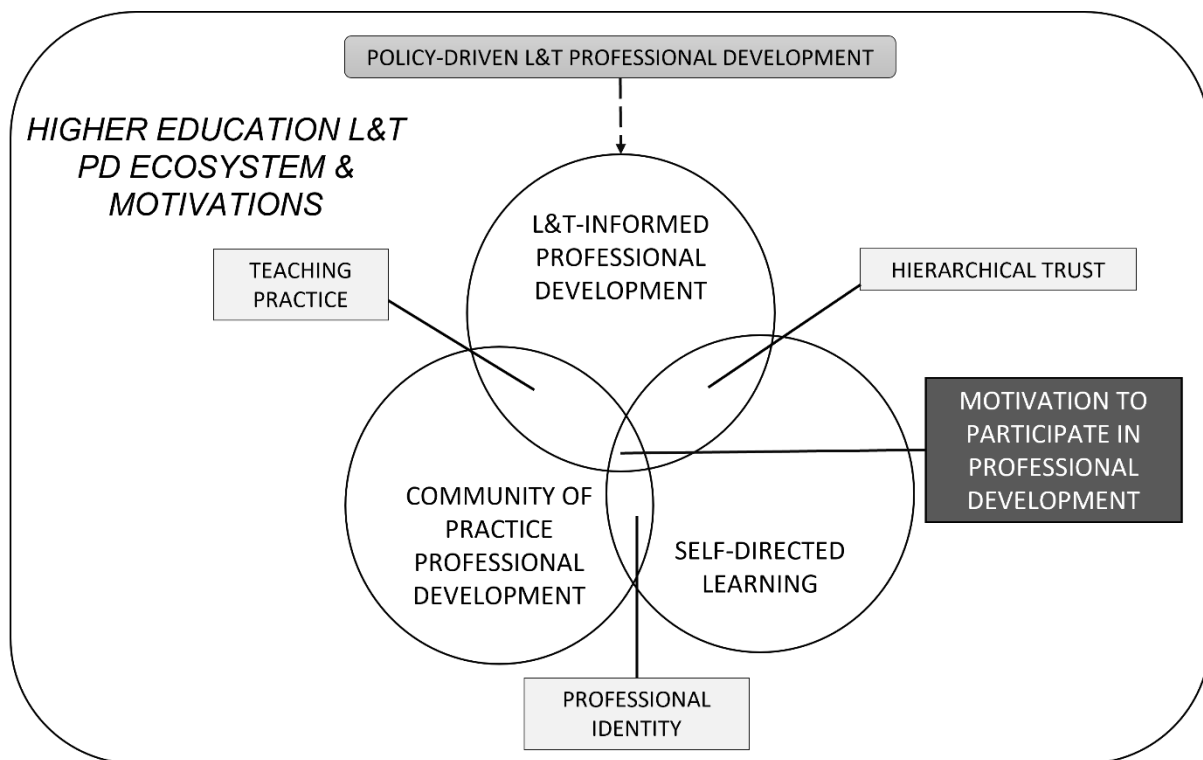


Figure 6.1 Modified Venn diagram of typological clusters (Herbert & van der Laan, n.d.)

### 6.3.2. Future needs

The findings helped identify future needs of academics that may address resistance to PD based on their perceptions. The results from the semi-structured interviews, and then the survey, showed that there is a need for those who design and implement learning and teaching professional development to understand the change environment and academic disciplinary context within which professional development occurs. As Kálmán et al. (2020) found in a similar study, L&T PD should be seen as a professional activity that forms part of the academic's identity if uptake of PD is to be successful.

The modified conceptual framework strategically positions 'Hierarchical Trust' as an important consideration when designing and implementing 'L&T-informed PD'. While 'Self-directed Learning' was seen as having a positive correlation with 'Hierarchical Trust', the proactive nature of this type of development activity draws from activities within the 'CoP PD'. The modified conceptual framework of L&T PD in the Australian university landscape as offered in Paper Three is presented in Figure 6.2.

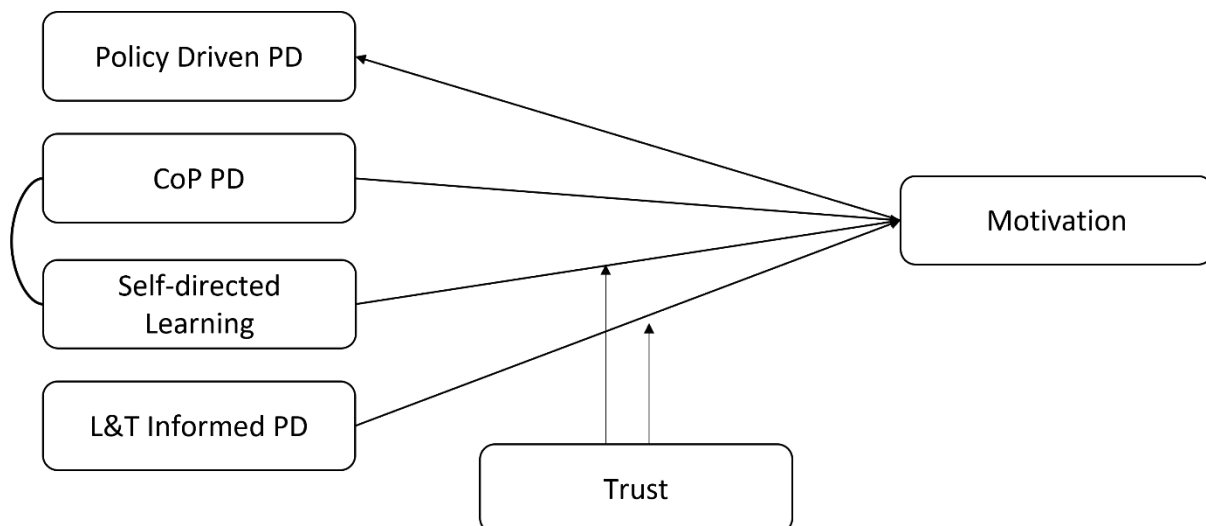


Figure 6.2 Modified conceptual framework of L&T PD in Australian Universities (Herbert & van der Laan, n.d.)

#### 6.4. Limitation of the study: future research opportunities

The findings and resulting publications of the study, make an original contribution to research on L&T PD uptake within Australian universities. That being a holistic picture of L&T PD landscape in the Australian university context, which includes both metropolitan-based and regional-based academic voices. This holistic picture of L&T PD is accompanied by a typology of L&T PD which can be used as a tool to help design and develop current and future PD activities. To contextualise the contributions and provide direction for future research, the limitations of the research are highlighted next.

The limitation of the research includes the sampling of participants in both the semi-structure interviews and survey, researcher's consideration of methodology, and the silence on the issues of specific technological advances, specifically Generative-AI, was expected.

The research study provides a snapshot in time, therefore the participants in the semi-structured interviews and survey, were responding within particular economic, political and social contexts. Hence, the conclusions from this research are confined to making statements about this particular timeframe (2019 to 2022). It was also the intention of the study to include the under-represented voices of academics who teach in Australian regional universities. The sample size was small which may reduce the generalisability and representativeness of the study. However, the sample includes academics from the nine Australian regional universities, and



thus represents a broad selection of academic participants compared to the more metropolitan-based studies. The final typology and modified conceptual framework draw from this target sample. It would be useful to therefore test the final typology and modified conceptual frameworks with participants across the metropolitan-based universities.

As mentioned in earlier chapters, the choice to frame this research study within the pragmatic paradigm and with an exploratory sequential mixed method design was intentional. The study explored the factors that motivate academics to participate in L&T PD. Therefore, PCA was deemed appropriate to find the factorial structure of the typology and to help explain the variance in academics' motivations. The findings therefore are an initial evaluation; therefore, causality was not confirmed. The confirmation of the underlying factorial structure is the next step for the findings in this study.

Finally, in 2023, Artificial Intelligence (AI) development took a leap that immediately impacted on academic's teaching practice and universities mission of public good. Generative-AI and its ability to complete assessment tasks designed to gauge a student's grasp of skills and knowledge that should prepare them for work and employability has opened up a new area of capability-building for academics who teach in HE. Literature and studies on this new reality are still emerging and will need to be considered to develop the L&T PD typology further.

## **6.5. Conclusion**

The findings of this Thesis primarily contribute to the improvement of L&T practices in HE through the identification of PD types.

It is not proposed that a definitive conclusion is presented, however, important points are raised about L&T PD types and uptake. For the purposes of this study, an accurate picture of past studies was needed to shape future efforts, which lent itself to the development of a typology as a tool to support capability-building efforts. As this study progressed, new challenges needed to be considered at each phase of the research, in particular the impact of COVID-19 on teaching practices and capabilities during the height of the pandemic and post-pandemic.

Furthermore, the results of the research show that understanding professional culture of the teaching environment is complex and cannot be easily addressed. The typology development through the work-based project and this Thesis can be used

as a diagnostic tool which can help in understanding the PD needs of teaching academics by their PD cluster type.

Focusing on capability-building, as suggested by Lester (2014), can leverage both discipline knowledge and tacit knowledge. That is, knowing your limitations and skill level while having the ability to reflect and use judgement to see ways to overcome the limitations and learn new skills. Changing work practices, in this case L&T PD practices, is a good space to build teaching academic capabilities (Boud and Brew, 2013; McCowan et al., 2022). The final typology necessarily embodied types of capability-building activities that were evidenced to impact on academics' motivation to participate in L&T PD.

L&T PD sits within the literature of academic development. That is L&T PD is professional development that is clearly focused on supporting academics in their teaching endeavours (Sutherland, 2018). It is through this lens that the research study found the connection between L&T PD and the career development in HE for teaching academics.

#### **6.5.1. *Implications for practice***

In considering these findings and addressing the reasons for academics' perceived motivation for and resistance to uptake of L&T PD, the typology provided in this dissertation is not a tool to be used on its own but rather as a part of a toolkit which allows for spaces in which processes of L&T PD can thrive in. Bringing together all stakeholders who feel empowered to acknowledge, appreciate and learn from each other's perceptions. The typology frames subtle shifts in L&T capabilities, where capabilities enhance the sense of agency and change the worldviews of academics, and their respective institutions, that they may further recognise where capability-building is needed. The final typology, accompanied by a modified conceptual framework is proposed as an initial tool, a starting point, to assist with uptake and implementation of L&T PD.

The evolving nature of HE teaching in the face of new opportunities and challenges calls for an exploration of strategies that are being employed to facilitate L&T PD in the sector. The unabated speed of technological advancement and the emergence of new realities, such as COVID-19 and Generative-AI, presents new work and life realities every day. It is therefore vital for HE institutions to provide opportunities for capability-building in these interesting times.

Quality teaching is predicated on transformative changes in the ways that teaching is delivered (McCowan et al., 2022). The perceived needs of both academics and their respective institutions are in constant flux owing to economic, political, and social changes that impact on the role of HE within society. The context of academics teaching in HE has changed dramatically with the emergence of new realities, opportunities, and challenges. The findings from the research opens opportunities for relevant and strategic L&T PD activities that academics could effectively function in.

## **6.6. Personal reflection**

I began this journey, like most doctoral candidates, with an idea. Looking through my personal research journal, it was clear that I was beginning my research with some strong assumptions. Unsurprisingly, as an insider-researcher I had a long and varied relationship with the profession and sector I was investigating. The problem I sought to investigate was also a personal one. As an academic developer, I faced the challenges of many in my role, that being the implementation of pedagogical change within academics' teaching practices. It is clear now that uptake remains strongly related to the academic's own perceptions of their needs and the needs of their students. Academics professional practice and professional identity as an expert in their disciplines are also key considerations. Academics acknowledge their role in the university's mission to deliver on the public good. They accept that their role as teachers must evolve and develop against the backdrop of new realities. While I had some assumptions that these were all valid points, the research study provided me with evidence and solutions that could better cater to the transformative change that academics are seeking in their teaching practice.

Over time my ideas changed, but the dynamic and complex relationship between academics' teaching practice and L&T PD remains. Initially, this doctoral journey was an opportunity to learn about my own professional identity as an academic developer. While I discovered my practices were not new, I also found that those who worked in the same profession had very distinct and unique experiences in the same space.

As described by Hulme (2022), my PhD experience allowed me to be a research apprentice, training myself in various research methodologies such as the scoping literature review and EFA. Modelling an evidence-based practice through the collection and analysis of data in an ethical and scientific way. The research

generated new knowledge and transformed my ideas of academics' motivation to participate in PD. That new knowledge not only impacts on my learning journey, but it also provides some answers to the research problem based on my job role and current work. Furthermore, it adds to the literature on L&T PD. This is the triple dividend that work-based research offers (Fergusson et al., 2020).

The main purpose and practical importance of completing research that is work-based and include a work-based project contributes to the triple dividend return. That is, the author of this Thesis builds her own skills and knowledge as a lifelong learner in her profession and industry; which in turn benefits the community of academics who teach in universities; which then benefits students who are preparing to participate in unfolding and new realities.

Finally, the dissertation, as training or apprenticeship for research, presented me with opportunities to meet the experts in my field. I like to think of it as meeting your heroes. One of my favourite experiences was when I published the first journal article linked to my dissertation. One such hero and academic 'giant' in the field and sector is Assoc Prof Kathryn Sutherland (Victoria University of Wellington). I crossed paths with her in a conference. I proudly showed her my journal article and explained how her research had impacted on my work and study. To my delight, she continued our conversation through emails and continued to encourage my research. In fact, she has even recommended my articles and research to her PhD students who are just beginning their journeys in the same space. The ever-increasing circle of the impact of this dissertation, sometimes invisible, will continue to grow even after I have submitted my exegesis.

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# APPENDIX A: Participant information sheet (PIS) semi-structured interviews and consent forms



University of Southern Queensland

## Participant Information for USQ Research Project Interview

### Project Details

Title of Project: **Developing a typology for designing appropriate learning and teaching professional development strategies for a regional Australian university**

Human Research Ethics Approval Number: **H20REA161**

### Research Team Contact Details

#### Principal Investigator Details

Mrs Katherine Herbert



#### Supervisor Details

A/Prof Luke van der Laan



Prof Patrick Danaher



### Description

This project is being undertaken as part of the Doctor of Professional Studies.

The purpose of this project is to develop a typology for designing appropriate learning and teaching Professional Development (PD) strategies for a regional Australian university. This study is thereby designed to contribute to the growing research on PD of academics who teach in HE. It will not only look to build on the community of practice related to PD for teaching academics, but it also aims to inform the practice of academic developers, specifically those situated in regional Australian universities.

The research team requests your assistance because you have been identified as an academic staff who is currently teaching at Charles Sturt University; or you are a Charles Sturt University staff member with an academic development role.

### Participation

Your participation will involve participation in a one-to-one interview that will take approximately 30 minutes to 1 hour of your time.

The interview will be undertaken by password protected ZOOM call at a date and time that is convenient to you.

Questions will include: How long have you been in your teaching and/or academic development role? What types of learning and teaching professional development activities have you engaged with?

The interview will be audio recorded. If you do not wish for recording to occur, please advise the researcher.

Your participation in this project is entirely voluntary. If you do not wish to take part, you are not obliged to. If you decide to take part and later change your mind, you are free to withdraw from the project at any stage. You may also request that any data collected about you be withdrawn and confidentially destroyed. If you do wish to withdraw from this project or withdraw data collected about you, please contact the Research Team (contact details at the top of this form).

Your decision whether you take part, do not take part, or to take part and then withdraw, will in no way impact your current or future relationship with the University of Southern Queensland or Charles Sturt University.

#### **Expected Benefits**

It is expected that this project will directly benefit you as a teaching academic or academic developer for a regional Australian university. The resulting typology will be a practical tool that is contextualized and can support the pursuit of professional development practice in learning and teaching.

#### **Risks**

In participating in the interview, there are minimal risks such as being exposed to social risk due to your expressions of opinion. The research will not conduct interviews where your views could become known to others.

The transcription of this qualitative semi-structured interview will be coded with identifying data removed. Transcribed files will be stored in a password-protected database. You will be able to withdraw your participation at any time in the interview, up until the data has been analysed.

#### **Privacy and Confidentiality**

All comments and responses will be treated confidentially unless required by law.

You will be

- a. provided with a copy of the transcription of their interview to confirm its accuracy;
- b. provided with an invitation at the time of the interview to contact the researcher for the outcomes of the study (as this is a thesis by publication, you will be sent published articles upon request).

The audio recordings will be transcribed by an independent third party.

The transcribed data and audio data files (if applicable) will be stored on the researcher's laptop using password-protection for increased security and backed up to a dedicated external hard drive. The computer and hard drive will have restricted access and be locked in a cabinet when not in use.

After interview audio collection and transcription, the transcribed data and audio data files (if applicable) will be transferred from password protected computer to a dedicated external hard drive. The hard drive will be secured in a lockable cabinet.

The transcribed data and audio data files (if applicable) will be transferred from password protected computer to a password protected and encrypted hard drive. The hard drive will be kept in a locked safe at the researcher's premises for the requisite period (according to USQ guidelines) of 15 years.



It is not anticipated that the raw data will be made available in the future. The data relates to interviews and survey responses that are organisation-specific, may change and have utility only to this research, as it is practice-based and investigates only current practice. It's likely that conditions in the organisation may change and that the data will not accurately represent a future state.

Any data collected as a part of this project will be stored securely as per University of Southern Queensland's [Research Data Management policy](#).

#### **Consent to Participate**

We would like to ask you to sign a written consent form (enclosed) to confirm your agreement to participate in this project. Please return your signed consent form to a member of the Research Team prior to participating in your interview.

#### **Questions or Further Information about the Project**

Please refer to the Research Team Contact Details at the top of the form to have any questions answered or to request further information about this project.

#### **Concerns or Complaints Regarding the Conduct of the Project**

If you have any concerns or complaints about the ethical conduct of the project, you may contact the University of Southern Queensland Manager of Research Integrity and Ethics on +61 7 4631 1839 or email [researchintegrity@usq.edu.au](mailto:researchintegrity@usq.edu.au). The Manager of Research Integrity and Ethics is not connected with the research project and can facilitate a resolution to your concern in an unbiased manner.

**Thank you for taking the time to help with this research project. Please keep this sheet for your information.**



## Consent Form for USQ Research Project Interview

### Project Details

Title of Project: **Developing a typology for designing appropriate learning and teaching professional development strategies for a regional Australian university**

Human Research Ethics Approval Number: **H20REA161**

### Research Team Contact Details

#### Principal Investigator Details

Mrs Katherine Herbert



#### Supervisor Details

A/Prof Luke van der Laan



Prof Patrick Danaher



### Statement of Consent

By signing below, you are indicating that you:

- Have read and understood the information document regarding this project. ☐ Yes / ☐ No
- Have had any questions answered to your satisfaction. ☐ Yes / ☐ No
- Understand that if you have any additional questions you can contact the research team. ☐ Yes / ☐ No
- Understand that the interview will be audio recorded ☐ Yes / ☐ No
  - Understand that you can participate in the interview without being audio/ video recorded. ☐ Yes / ☐ No
  - If you **do not want** to be audio/ video recorded during the interview, please initial here:
- Are over 18 years of age. ☐ Yes / ☐ No
- Agree to participate in the project. ☐ Yes / ☐ No

Participant Name

Participant Signature

Date

**Please return this sheet to a Research Team member prior to undertaking the interview.**

## APPENDIX B: Semi-structure interview protocol

### DEVELOPING A TYPOLOGY FOR DESIGNING APPROPRIATE LEARNING AND TEACHING PROFESSIONAL DEVELOPMENT STRATEGIES FOR A REGIONAL UNIVERSITY

#### QUALITATIVE RESEARCH: INTERVIEW PROTOCOL

##### INTRODUCTION

- Outline of the study
- Assurance of anonymity and confidentiality
- Explain feedback procedures
- Ask respondent if he/she has any questions about the purpose or conduct of the interview before commencing.
- Ask permission to record the interview
- Indicate: *Should you have any concern about the conduct of this research project, please contact the USQ Ethics Officer, Office of Research & Higher Degrees, University of Southern Queensland, West Street, Toowoomba QLD 4350, Telephone +61 7 4631 2690, email [ethics@usq.edu.au](mailto:ethics@usq.edu.au)*

##### STUDY SUMMARY

My research focuses on the perceptions of teaching academics and academic developers of learning and teaching PD in Australian universities, with particular interest in understanding the experiences of those in a regional Australian university. My research does not aim to evaluate your individual practice but rather I hope that I will be able to learn about teaching academic professional practice that contributes to university capability building.

The purpose of this project is to develop a typology for designing appropriate learning and teaching Professional Development (PD) strategies for a regional Australian university. This study is thereby designed to contribute to the growing research on PD of academics who teach in HE. It will not only look to build on the community of practice related to PD for teaching academics, but it also aims to inform the practice of academic developers, specifically those situated in regional Australian universities.

## QUESTIONS

### Participant background

1. How long have you been in your present position? At CSU?
2. Briefly describe your role...

### Perceptions

1. What is the strategy at CSU for implementing learning and teaching PD activities?
2. What resources are available to you for improving learning and teaching?
3. What motivates you to get involved with learning and teaching PD activities?
4. How frequently do you attend learning and teaching PD?
5. There are reports that informal, peer to peer conversations contribute to learning and teaching improvement; tell me about your personal experiences of learning from colleagues and peers.
6. Briefly, do you agree with any of the following statements describing the current approach to L&T PD? If so, which ones and why?
  - a. Rapid/reactive - mostly technology-focused
  - b. Top-down pressure for survival / Based on L&T KPIs / Driven by directives and policies, regulations drawn
  - c. Focus on cost-effectiveness rather than quality learning and teaching development activities/ A disconnect between quality L&T PD and compliance requirements both internally and externally
  - d. Punitive/surveillance measures / PD is forced on academics
  - e. L&T development is focused on standardization, modularisation and does not understand the need of disciplines or courses or subjects
  - f. Exhausted academics



## APPENDIX C: PIS and consent form



University of Southern Queensland

### Participant Information for USQ Research Project Questionnaire

#### Project Details

Title of Project: **Developing a typology for designing appropriate learning and teaching professional development strategies for a regional Australian university**

Human Research Ethics Approval Number: **H20REA161**

#### Research Team Contact Details

##### Principal Investigator Details

Mrs Katherine Herbert



##### Supervisor Details

A/Prof Luke van der Laan



Prof Patrick Danaher



#### Description

This project is being undertaken as part of the Doctor of Professional Studies.

The purpose of this project is to develop a typology for designing appropriate learning and teaching Professional Development (PD) strategies for a regional Australian university. This study is therefore designed to contribute to the growing research on the PD of academics who teach in HE. It not only looks to build on the community of practice related to PD for teaching academics, but also aims to inform the practice of academic developers, specifically those situated in regional Australian universities.

The research team requests your assistance because you have been identified as an academic staff member who is currently teaching at a regional Australian university.

#### Participation

Your participation will involve completion of an online questionnaire that will take approximately 10 minutes of your time.

Questions will include: Please indicate if you agree or disagree with the following statements around learning and teaching professional development practice in regional Australian universities.

Your participation in this project is entirely voluntary. If you do not wish to take part, you are not obliged to do so. If you decide to take part and later change your mind, you are free to withdraw from

Page 1 of 2

the project at any stage. However, you will be unable to withdraw data collected about yourself once data analysis or data de-identification has occurred. If you do wish to withdraw from this project or to withdraw data collected about you, please contact the Research Team (contact details at the top of this form).

Your decision to take part, not to take part, or to take part and then withdraw, will in no way impact on your current or future relationship with the University of Southern Queensland.

#### **Expected Benefits**

It is expected that this project will directly benefit you as a teaching academic or academic developer for a regional Australian university. The resulting typology will be a practical tool that is contextualized and can support the pursuit of professional development practice in learning and teaching.

#### **Risks**

In participating in the questionnaire, there are no anticipated risks beyond normal day-to-day living.

#### **Privacy and Confidentiality**

All comments and responses will be treated confidentially unless required otherwise by law.

The names of individual persons are not required in any of the responses.

It is not anticipated that the raw data will be made available in the future. The data relate to interviews and survey responses that are organisation-specific, may change and have utility only in this research, as it is practice-based and investigates only current practice. It is likely that conditions in the organisation may change and that the data will not accurately represent a future state of that organisation.

Any data collected as a part of this project will be stored securely as per the University of Southern Queensland's [Research Data Management policy](#).

#### **Consent to Participate**

Clicking on the "Submit" button at the conclusion of the questionnaire is accepted as an indication of your consent to participate in this project.

#### **Questions or Further Information about the Project**

Please refer to the Research Team Contact Details at the top of the form to have any questions answered or to request further information about this project.

#### **Concerns or Complaints Regarding the Conduct of the Project**

If you have any concerns or complaints about the ethical conduct of the project, you may contact the University of Southern Queensland Manager of Research Integrity and Ethics on +61 7 4631 1839 or email [researchintegrity@usq.edu.au](mailto:researchintegrity@usq.edu.au). The Manager of Research Integrity and Ethics is not connected with the research project and can facilitate a resolution to your concern in an unbiased manner.

**Thank you for taking the time to help with this research project. Please keep this sheet for your information.**

## APPENDIX D: Survey question inventory

Regional Universities: Teaching academics' learning and teaching professional development motivations and professional identity

### Specifications

10 minute survey

Mix of genders

Distribution across RUN

### Notes

Black font is the only text visible to participants

S/R = single response only

M/R = allow as many responses as required

### Introduction

Thank you for agreeing to participate in this online survey. As part of this research, we would like to understand what motivates you to engage with various types of Learning and Teaching (L&T) Professional Development (PD) activities, based on your past experiences. Your responses to this survey will remain anonymous and we, therefore, urge you to provide responses that truly capture your perception and opinions. The survey should take only around 10 minutes to complete.

Before participating in this survey please read the Participant Information Sheet (PIS). You can download a copy by **clicking here**.

By continuing to participate in this survey you consent to the following:

- I have read, understood and kept a copy of the Participant Information Sheet (PIS) for the above research project.
- I realise that this research will be carried out as described in the PIS.
- Any questions I have about this research and my participation in it have been answered to my satisfaction.
- I agree to participate in the above research.
- I give consent for data to be used in a confidential manner as described in the PIS.
- I understand that I am free to request further information at any stage.
- I acknowledge that my participation in the research is entirely voluntary.
- I understand I am not obliged to participate and am free to withdraw from the project at any stage, but that I will be unable to withdraw data collected about myself after data analysis or the deidentification process.

If you do not wish to take part in this research, please close this browser window immediately.  
Thank you.

I declare that I have read the information in this consent form, understand it and agree to it.

O Yes

O No

Yes: Continue to Part A of survey

No: Terminate the survey



## Part A: Demographics

The following questions are designed to collect demographic information.

A1. Please indicate which of the following age groups apply to you? *Please choose one only*

	S/R	
18 to 25	<input type="radio"/> O <sub>2</sub>	
26 to 35	<input type="radio"/> O <sub>3</sub>	
36 to 45	<input type="radio"/> O <sub>4</sub>	
46 to 55	<input type="radio"/> O <sub>5</sub>	
56 to 65	<input type="radio"/> O <sub>6</sub>	
66 or above	<input type="radio"/> O <sub>7</sub>	

A2. Which of the following best describes your current gender identity? *Please choose one only*

	S/R	
Male	<input type="radio"/> O <sub>1</sub>	
Female	<input type="radio"/> O <sub>2</sub>	
Non-Binary or other	<input type="radio"/> O <sub>3</sub>	
Do not wish to answer	<input type="radio"/> O <sub>98</sub>	

A3. Which of the following universities do you currently teach at? *Please choose all relevant options*

	M/R	
Charles Sturt University	<input type="radio"/> O <sub>1</sub>	
CQ University	<input type="radio"/> O <sub>2</sub>	
Federation University	<input type="radio"/> O <sub>3</sub>	
Southern Cross University	<input type="radio"/> O <sub>4</sub>	
University of New England	<input type="radio"/> O <sub>5</sub>	
University of Southern Queensland	<input type="radio"/> O <sub>6</sub>	
University of the Sunshine Coast	<input type="radio"/> O <sub>7</sub>	
Charles Darwin University	<input type="radio"/> O <sub>8</sub>	
James Cook University	<input type="radio"/> O <sub>9</sub>	

A4. Which of the following statements best describes your current and main role at your university? *Please choose one only*

	S/R	
I have teaching and research duties.	<input type="radio"/> O <sub>1</sub>	
I have teaching duties only.	<input type="radio"/> O <sub>2</sub>	
I have teaching duties, research, and academic development duties.	<input type="radio"/> O <sub>3</sub>	
I have academic development duties only.	<input type="radio"/> O <sub>100</sub>	

A5. Which of the following statements best describes your main (substantive) employment at your university? *Please choose one only*

	S/R	
Full-time permanent	<input type="radio"/> O <sub>1</sub>	
Full-time fixed term	<input type="radio"/> O <sub>2</sub>	
Part-time permanent	<input type="radio"/> O <sub>3</sub>	
Part-time fixed term	<input type="radio"/> O <sub>4</sub>	

Casual contract	<input type="radio"/> O <sub>5</sub>	
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A6. Since March 2020, when COVID-19 began impacting society, which of the following statements best describe your teaching delivery? *Please choose only one.*

	S/R	
I teach on campus and online.	<input type="radio"/> O <sub>1</sub>	
I teach on campus/in-class only.	<input type="radio"/> O <sub>2</sub>	
I teach online classes only.	<input type="radio"/> O <sub>3</sub>	
I do not teach.	<input type="radio"/> O <sub>100</sub>	

A7. Where do you currently live? *Please choose one only*

	S/R	
Sydney	<input type="radio"/> O <sub>1</sub>	
Rest of NSW	<input type="radio"/> O <sub>2</sub>	
ACT	<input type="radio"/> O <sub>3</sub>	
Melbourne	<input type="radio"/> O <sub>4</sub>	
Rest of VIC	<input type="radio"/> O <sub>5</sub>	
Brisbane	<input type="radio"/> O <sub>6</sub>	
Rest of QLD	<input type="radio"/> O <sub>7</sub>	
Adelaide	<input type="radio"/> O <sub>8</sub>	
Rest of SA	<input type="radio"/> O <sub>9</sub>	
Darwin	<input type="radio"/> O <sub>10</sub>	
Rest of NT	<input type="radio"/> O <sub>11</sub>	
Perth	<input type="radio"/> O <sub>12</sub>	
Rest of WA	<input type="radio"/> O <sub>13</sub>	
Hobart	<input type="radio"/> O <sub>14</sub>	
Rest of TAS	<input type="radio"/> O <sub>15</sub>	
I do not live in Australia (Please specify)	<input type="radio"/> O <sub>100</sub>	

## Part B: Motivations

This section is designed to understand what motivates you to engage with Learning and Teaching (L&T) Professional Development (PD) activities. Please keep in mind that these statements are only about improving your teaching practice. While some of these statements may appear similar, there are subtle differences in the wording. Please read each statement carefully, and then indicate how strongly you disagree or agree with each statement, considering your own experiences with L&T PD activities. 1 being 'Strongly disagree' and 7 being 'Strongly agree'. Please note that the results from this research will remain anonymous.

### Legend

<b>1-8</b>	<b>CoP PD activities</b>
<b>9-16</b>	<b>L&amp;T-informed PD activities</b>
<b>17-23</b>	<b>Policy-driven PD activities</b>

B		Strongl y disagre e						Strongl y agree
B								
1	I can apply pedagogical research to my own teaching practice.	O <sub>1</sub>	O <sub>2</sub>	O <sub>3</sub>	O <sub>4</sub>	O <sub>5</sub>	O <sub>6</sub>	O <sub>7</sub>
2	I develop my teaching practice and strategies based on student feedback.	O <sub>1</sub>	O <sub>2</sub>	O <sub>3</sub>	O <sub>4</sub>	O <sub>5</sub>	O <sub>6</sub>	O <sub>7</sub>
3	I observe the way that my colleagues teach the subjects that I also teach.	O <sub>1</sub>	O <sub>2</sub>	O <sub>3</sub>	O <sub>4</sub>	O <sub>5</sub>	O <sub>6</sub>	O <sub>7</sub>
4	I observe the way that colleagues in my discipline/unit/department teach in their subjects.	O <sub>1</sub>	O <sub>2</sub>	O <sub>3</sub>	O <sub>4</sub>	O <sub>5</sub>	O <sub>6</sub>	O <sub>7</sub>
5	I discuss teaching strategies informally with colleagues who teach the same subjects that I do.	O <sub>1</sub>	O <sub>2</sub>	O <sub>3</sub>	O <sub>4</sub>	O <sub>5</sub>	O <sub>6</sub>	O <sub>7</sub>
6	I discuss teaching strategies informally with colleagues in my discipline/unit/department.	O <sub>1</sub>	O <sub>2</sub>	O <sub>3</sub>	O <sub>4</sub>	O <sub>5</sub>	O <sub>6</sub>	O <sub>7</sub>
7	I implement new or improved teaching strategies based on the successful implementation by colleagues who teach the same subjects that I do.	O <sub>1</sub>	O <sub>2</sub>	O <sub>3</sub>	O <sub>4</sub>	O <sub>5</sub>	O <sub>6</sub>	O <sub>7</sub>
8	I implement new or improved teaching strategies based on the successful implementation by colleagues in my discipline/unit/department.	O <sub>1</sub>	O <sub>2</sub>	O <sub>3</sub>	O <sub>4</sub>	O <sub>5</sub>	O <sub>6</sub>	O <sub>7</sub>
9	I seek out pedagogical literature to support my teaching practice.	O <sub>1</sub>	O <sub>2</sub>	O <sub>3</sub>	O <sub>4</sub>	O <sub>5</sub>	O <sub>6</sub>	O <sub>7</sub>
10	I seek out academic developer/ educational designer/ learning designer support to improve and develop my teaching practice.	O <sub>1</sub>	O <sub>2</sub>	O <sub>3</sub>	O <sub>4</sub>	O <sub>5</sub>	O <sub>6</sub>	O <sub>7</sub>
11	Academic developer/ educational designer/ learning designer support is essential to my teaching preparation and delivery.	O <sub>1</sub>	O <sub>2</sub>	O <sub>3</sub>	O <sub>4</sub>	O <sub>5</sub>	O <sub>6</sub>	O <sub>7</sub>
12	I attend scheduled PD (online or face-to-face) sessions run by the Academic Development Unit (ADU).	O <sub>1</sub>	O <sub>2</sub>	O <sub>3</sub>	O <sub>4</sub>	O <sub>5</sub>	O <sub>6</sub>	O <sub>7</sub>

13	I attend scheduled PD (online or face-to-face) based on the relevance to my teaching delivery needs.	O <sub>1</sub>	O <sub>2</sub>	O <sub>3</sub>	O <sub>4</sub>	O <sub>5</sub>	O <sub>6</sub>	O <sub>7</sub>
14	Learning and teaching PD activities are rapid and reactive.	O <sub>1</sub>	O <sub>2</sub>	O <sub>3</sub>	O <sub>4</sub>	O <sub>5</sub>	O <sub>6</sub>	O <sub>7</sub>
15	Learning and teaching PD activities are mostly technology-focused.	O <sub>1</sub>	O <sub>2</sub>	O <sub>3</sub>	O <sub>4</sub>	O <sub>5</sub>	O <sub>6</sub>	O <sub>7</sub>
16	Learning and teaching PD activities do not recognise my discipline's or students' contexts.	O <sub>1</sub>	O <sub>2</sub>	O <sub>3</sub>	O <sub>4</sub>	O <sub>5</sub>	O <sub>6</sub>	O <sub>7</sub>
17	Participating in learning and teaching PD activities is compliance-driven.	O <sub>1</sub>	O <sub>2</sub>	O <sub>3</sub>	O <sub>4</sub>	O <sub>5</sub>	O <sub>6</sub>	O <sub>7</sub>
18	Participating in learning and teaching PD activities is part of my performance management expectations.	O <sub>1</sub>	O <sub>2</sub>	O <sub>3</sub>	O <sub>4</sub>	O <sub>5</sub>	O <sub>6</sub>	O <sub>7</sub>
19	I can see a direct link between learning and teaching PD activities and my academic role.	O <sub>1</sub>	O <sub>2</sub>	O <sub>3</sub>	O <sub>4</sub>	O <sub>5</sub>	O <sub>6</sub>	O <sub>7</sub>
20	I found the compulsory program on teaching in Higher Education (HE) offered by the institution very helpful.	O <sub>1</sub>	O <sub>2</sub>	O <sub>3</sub>	O <sub>4</sub>	O <sub>5</sub>	O <sub>6</sub>	O <sub>7</sub>
21	There are learning and teaching PD opportunities and resources available when I need them the most.	O <sub>1</sub>	O <sub>2</sub>	O <sub>3</sub>	O <sub>4</sub>	O <sub>5</sub>	O <sub>6</sub>	O <sub>7</sub>
22	The learning and teaching PD strategies are developed in consultation with the academics who teach.	O <sub>1</sub>	O <sub>2</sub>	O <sub>3</sub>	O <sub>4</sub>	O <sub>5</sub>	O <sub>6</sub>	O <sub>7</sub>
23	Learning and teaching PD activities are simply a tick-the-box activity.	O <sub>1</sub>	O <sub>2</sub>	O <sub>3</sub>	O <sub>4</sub>	O <sub>5</sub>	O <sub>6</sub>	O <sub>7</sub>

### Part C: Academic identity and satisfaction

This section assesses how you feel about your academic role. 1 being 'Strongly disagree' and 7 being 'Strongly agree'. Please note that the results from this research will remain anonymous.

#### Legend

<b>1-5</b>	<b>Professional practice</b>
<b>6-10</b>	<b>Hierarchical trust</b>
<b>11-14</b>	<b>Perception of the role of Academic Developers/Educational Designers/Learning Designers</b>

C		Strongly disagree						Strongly agree
1	Teaching is as important as research in professional practice.	O <sub>1</sub>	O <sub>2</sub>	O <sub>3</sub>	O <sub>4</sub>	O <sub>5</sub>	O <sub>6</sub>	O <sub>7</sub>
2	I am confident in my teaching practice and delivery.	O <sub>1</sub>	O <sub>2</sub>	O <sub>3</sub>	O <sub>4</sub>	O <sub>5</sub>	O <sub>6</sub>	O <sub>7</sub>
3	I feel ownership of the subjects that I design and teach.	O <sub>1</sub>	O <sub>2</sub>	O <sub>3</sub>	O <sub>4</sub>	O <sub>5</sub>	O <sub>6</sub>	O <sub>7</sub>
4	We will stop being a university if we do not teach well.	O <sub>1</sub>	O <sub>2</sub>	O <sub>3</sub>	O <sub>4</sub>	O <sub>5</sub>	O <sub>6</sub>	O <sub>7</sub>
5	We will stop being a university if we do not research well.	O <sub>1</sub>	O <sub>2</sub>	O <sub>3</sub>	O <sub>4</sub>	O <sub>5</sub>	O <sub>6</sub>	O <sub>7</sub>
6	The development of my academic career is supported by my institution.	O <sub>1</sub>	O <sub>2</sub>	O <sub>3</sub>	O <sub>4</sub>	O <sub>5</sub>	O <sub>6</sub>	O <sub>7</sub>

7	The leaders in my institution support the development of my teaching skills.	O <sub>1</sub>	O <sub>2</sub>	O <sub>3</sub>	O <sub>4</sub>	O <sub>5</sub>	O <sub>6</sub>	O <sub>7</sub>
8	The leaders in my institution support the development of my research skills.	O <sub>1</sub>	O <sub>2</sub>	O <sub>3</sub>	O <sub>4</sub>	O <sub>5</sub>	O <sub>6</sub>	O <sub>7</sub>
9	I feel like my feedback on PD activities are being heard by the leaders in my institution.	O <sub>1</sub>	O <sub>2</sub>	O <sub>3</sub>	O <sub>4</sub>	O <sub>5</sub>	O <sub>6</sub>	O <sub>7</sub>
10	I feel like my opinions and suggestions on teaching strategies are being heard by the leaders in my institution.	O <sub>1</sub>	O <sub>2</sub>	O <sub>3</sub>	O <sub>4</sub>	O <sub>5</sub>	O <sub>6</sub>	O <sub>7</sub>
11	I will implement a change in my teaching strategy only after talking to an Academic Developer (AD)/Educational Designer (ED)/Learning Designer (LD).	O <sub>1</sub>	O <sub>2</sub>	O <sub>3</sub>	O <sub>4</sub>	O <sub>5</sub>	O <sub>6</sub>	O <sub>7</sub>
12	I rely on AD/ED/LD to keep me updated on the educational and teaching technology used at my university.	O <sub>1</sub>	O <sub>2</sub>	O <sub>3</sub>	O <sub>4</sub>	O <sub>5</sub>	O <sub>6</sub>	O <sub>7</sub>
13	I often seek out feedback on my teaching delivery from an AD/ED/LD.	O <sub>1</sub>	O <sub>2</sub>	O <sub>3</sub>	O <sub>4</sub>	O <sub>5</sub>	O <sub>6</sub>	O <sub>7</sub>
14	I am confident that those who facilitate or lead internal L&T PD sessions/workshops at my university are experts in learning and teaching.	O <sub>1</sub>	O <sub>2</sub>	O <sub>3</sub>	O <sub>4</sub>	O <sub>5</sub>	O <sub>6</sub>	O <sub>7</sub>

#### Part D: Teaching quality measurement


This section asks how you feel about your institution's measurement of teaching quality and L&T practice expectations. 1 being 'Strongly disagree' and 7 being 'Strongly agree'. Please note that the results from this research will remain anonymous.



#### Legend

1-2	Teaching quality
3-4	L&T practice

D		Strongl y disagree						Strongl y agree
1	Measurement of teaching quality is driven by executive management.	O <sub>1</sub>	O <sub>2</sub>	O <sub>3</sub>	O <sub>4</sub>	O <sub>5</sub>	O <sub>6</sub>	O <sub>7</sub>
2	The one-size fits all teaching quality model does not enable discipline-based nuances.	O <sub>1</sub>	O <sub>2</sub>	O <sub>3</sub>	O <sub>4</sub>	O <sub>5</sub>	O <sub>6</sub>	O <sub>7</sub>
3	Rapidly changing L&T practice expectations increase my resistance to engage with L&T PD.	O <sub>1</sub>	O <sub>2</sub>	O <sub>3</sub>	O <sub>4</sub>	O <sub>5</sub>	O <sub>6</sub>	O <sub>7</sub>
4	L&T practice expectations do not take on board individual teaching experiences.	O <sub>1</sub>	O <sub>2</sub>	O <sub>3</sub>	O <sub>4</sub>	O <sub>5</sub>	O <sub>6</sub>	O <sub>7</sub>
5	L&T practice expectations are determined by compliance to government regulations and policies.	O <sub>1</sub>	O <sub>2</sub>	O <sub>3</sub>	O <sub>4</sub>	O <sub>5</sub>	O <sub>6</sub>	O <sub>7</sub>


# APPENDIX E: Paper Three AOM submission details



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 Hi, Katherine

My Articles


SUBMIT NEW MANUSCRIPT

SUBMISSION	TITLE	JOURNAL	STATUS	CHARGES
 233980233	Demystifying academic learning and teaching...	Journal of Further and Higher Education	With Journal Administrator	


 SUBMISSION 

 18 September 2023


Submission Created

 18 September 2023

Submission Incomplete

 18 September 2023

Manuscript Submitted

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CONTACT