

## Learning Development's Role in Supporting Academic Synergies through Co-evolution of Teaching Excellence and Practice

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**Abstract:** This report from the field discusses a new approach taken to the co-evolution of teaching excellence and evidence-based practice in the context of learning development in a Technological University in Ireland. It explores supporting faculty in their exploration of pedagogic inquiry and teaching excellence and how this can co-evolve to generate synergies in academic productivity (the core activity sets of the faculty). A key part of this learning development work is understanding how integrating inquiry and teaching can drive excellence and pedagogic innovation in practice.

**Keywords:** co-evolution, pedagogic inquiry, scholarship, teaching excellence.

### Introduction

A new initiative introduced to the role of learning development is discussed, which involves supporting faculty to seek evidence-based approaches to achieve excellence in their teaching practice. A key question is how to gather the right types of evidence to demonstrate teaching excellence. A co-evolutionary strategy for exploring the evidence base for teaching excellence within the context of a new Technological University in Ireland is discussed. Studies on synergies focus on the process rather than the outputs. The theoretical approach underpinning this work is based on theories of 'co-evolution' (Volberda & Lewin, 2003; Volberda, 2005), and a model is proposed that can recognise and capture the interactions and complex underlying processes in exploring teaching excellence and the integration of conscious continuous inquiry of practice, processes, and activities in teaching and learning.

The aim of this work was to conduct a literature review on the research-teaching nexus, how the issues were being problematised, and consideration of how the synergies' theoretical lens was appropriate. The argument is that progressing pedagogic inquiry and teaching excellence can co-evolve within a learning development framework. Through appropriate inquiry designs, an evidence base can emerge from teaching practice. From this, the potential for co-evolutionary change is explored (how it informs teaching and programme development plans, how it influences T & L policy). Consideration is needed on how this data can be used to inform curriculum development going forward since the Technological University has unique access across the higher education sector in Ireland with organisations — with a focus on the contemporary skills issues if it is to retain its position as truly practice led/informed. The study of concepts and practice of excellence in relation to teaching and ensuring a quality student learning experience have evolved a model of co-evolutionary strategy for exploring the evidence base for teaching excellence. It involves conscious continuous



inquiry and teaching integration, retrospective learning and analysis, emerging phenomena during teaching, and collaborating with others to provide a strong evidence base on teaching.

A recent body of work on teaching excellence by Kahn & Anderson (2019) has put a renewed lens on the challenges around the concept and focused on understanding teaching excellence through sharing practice-based case studies. This current work has been informed by their advice to think about taking a different approach to understanding excellence: *What might it look like in our practice? Who might we collaborate with in developing teaching excellence – our peers, our students, or a whole university approach? How can we encourage our colleagues and their students to explore the concept of teaching excellence with us?* In a learning development role in a new Technological University, supporting faculty to plan and undertake structured inquiry into their teaching includes stages of increasing evidence on teaching excellence through empirical studies, having a clear vision of excellence followed through with actions, that is underpinned by shared values and common grounds for intellectual commitment. This all takes place to support academics in becoming better teachers and pedagogic inquirers within the limitations of a system with workload models, time pressures, student diversity, and publication challenges.

Part of the repertoire for someone working in the role of leading learning development in a university is the power of using case studies as exemplars of good practice, as they capture the pedagogic interventions from practice that might be lost otherwise. Integral to the choice of cases to promote is how they reflect the values of learning development such as inclusivity, authenticity, reflection, learner-centredness, scholarship and collaboration.

## **Context**

Ireland's first Technological University in Dublin came into existence in January 2019, merging three higher education institutions that have been in existence for decades: research-active teachers are integral for its future success. The range of work involved in supporting teaching and inquiry are not mutually exclusive, and is undertaken by Heads of Learning Development, in conjunction with a range of professional services. Universities are where research and teaching meet, and scholarship is necessary to underwrite taught programmes. However, Schmidt (2019) argues that converting, *en masse*, academics into teaching-only roles that break the link between higher education and research results in a segregation of teaching and research workforces. He posits that many of the next generation of students will be taught entirely by people who may be great educators but are divorced from the creation of new knowledge; as that generation become the teachers of their successors, university teaching will become even more disconnected from the leading edge of knowledge.

In Ireland, the Modernisation of Higher Education report (McAleese, 2013) recommends that every institution should develop and implement a strategy for the support and on-going improvement of the quality of teaching and learning, devoting the necessary level of human and financial resources to the task, and integrating this priority into its overall mission, giving teaching due parity with research. This is particularly pertinent for the new Technological University in the consideration of questions such as, *Where is Teaching and learning as part of the institutional profile? What strategies or benchmarks are used for enhancing the quality of teaching in the university? How do we incorporate these into the university profile and mission, to make it clear to staff and students that the institution is affirming the importance of teaching and developing its quality?*

One of the measures included within the Technological University's strategic plan is the promotion of excellence in teaching and learning to underpin a high quality student experience, curriculum design, and professional development of faculty. There is an opportunity as well as perhaps a challenge to develop a new and unique dynamic, entrepreneurial and innovative environment that can support high quality teaching and a distinctive learning experience for students. An effective working balance between inquiry, teaching and industry engagement will be key as will a clear understanding about how this will operate, and each relate to one another. This will necessitate clarity around standards, processes and practices.

Technological universities will discover how dependent they are on being a nexus of teaching and research, with the interconnection between teaching, research and scholarship being inviolable.

Ross and Collier in Supiano (2019) highlight the paradoxical views that exist about the teaching-research nexus, with commentators adamant that the title "university" be reserved for institutions active in research, despite widespread scepticism that research activity enhances teaching quality. Helfand (2019) argues that academics, who value research over everything else, whose data of their own is precious to them, completely ignore all data related to teaching. As the teaching-research nexus has persisted for decades and is unlikely to be resolved "any time soon", it is important to continue to explore its academic synergies.

By exploring the concept and practice of teaching excellence and pedagogic inquiry through the lens of co-evolution, the aims of this report were to:

- Understand how academics create research from their daily practice/teaching experience so that they can concurrently build a scholarship and a teaching profile (by focussing on synergies in the co-evolutionary process).
- Develop an academic synergies model for exploring excellence within teaching as an evidence-based practice.

### **Character of the Learning Innovation: Theories of Co-evolution**

Co-evolution refers to the simultaneous evolution of entities and their environments, whether these entities be organisms or organisations (Baum & Singh, 1994). This report draws on theories of co-evolution existing within various fields such as sociology and biology (Thompson, 2005; Gomulkiewicz et al, 2007) and combines this with the synergy construct from the strategic management literature (e.g., Shaver, 2006). There are three criteria for co-evolution to happen (Thompson, 2005; Gomulkiewicz et al, 2007): the existence of co-evolutionary hot and cold spots; selection mosaics; and trait remixing. This work considers what this could look like in an educational context — specifically in an exploration of the dynamism of co-evolution between teaching excellence and evidence-based pedagogic inquiry.

The literature in education and management relies on other theories to explain co-evolutionary phenomenon such as organisational learning perspectives (Koza & Lewin, 1998) or complexity theory (Mckelvie, 1999) but theories do exist across other fields. In sociology and economics, scholars such as Noorgard (2006) envisage a co-evolutionary world as a patchwork quilt of cultures with real possibilities towards harmony between individuals and their environment. This is as opposed to the modernist perspective that is deterministic in nature emphasising continuous development and

improvement but disrespecting the complexity and uncertainty within the journey. Table 1 provides an overview of what the literature is saying about synergies in this context.

**Table 1: Literature synopsis on synergies**

Scholars recognise the necessity to create synergy between research and teaching in university structure and culture (Griffioen & De Jong, 2015; Jenkins & Healey, 2005).
McLean & Barker (2004) refer to the 'enduring myth' of a symbiotic relationship between teaching and research. Brennan et al (2019) argue that teaching and research are often organised and managed as separate activities, underscoring their duality in the modern university.
However as Groningen et al (2017) report, awards and career progression are often research based.
Does a research teaching nexus exist as a 'whipping tool' for institutional level and policy strategizing? Or is there evidence of synergies in research output drawn from teaching?
Problem in education literature is that studies on synergies create even more tension because they focus on process rather than productivity (Sedow, 2000).
The business strategy literature offers a frame for examining the dynamics of synergies:
Emphasis is on similarity (e.g., Chatterjee, 1986; Homberg & Bucerius, 2005; Seth, 1990) and complementarity (Kim & Finkelstien, 2009; Milgrom & Roberts, 1995)
Perceived inter-relatedness and autonomy (Zaheer et al, 2011)

Others have substantiated the criteria for co-evolution (Thompson, 2005; Gomulkiewicz et al, 2007) as firstly the presence of 'hot' and 'cold' spots. These represent times when the fitness of both groups is affected by the distribution of traits in the other (hot spot) or not (cold spots). Many examples exist in criticisms of government policy and responses to public needs (Cerna, 2013). Similarly, university-industry engagement has been accused of being poor because their motivations are not aligned (Perkmann et al, 2013); firms are concerned with their customers and their industry-level activities, while universities are concerned with teaching and theorising and not focussing on practical business needs. At times, however, both do become 'hot spots', for example developing successful industry-based apprenticeship programmes or the adaption of a useful tool for industry such as the business model canvas that is widely utilised by new business start-ups (Bocken & Snihur, 2020).

In a hot spot, options for trait remixing exist which is the second criteria for co-evolution. An example is between a university research office and the school/department, where individuals may have different influences — some perhaps considering more efficient ways of inquiry, others seeking out major funding or focusing on staying 'small' but active in their inquiry activities. This is what Gomulkiewicz et al (2007) refer to as 'selection mosaics'. The outcome of this 'hot spot' interaction with 'selection mosaics' leads to the third criteria of co-evolution — 'trait remixing' — which reflects the co-evolutionary changes.

The interactions of groups in their environment or ecosystem explains which selective forces are affecting the evolution of each group contributing to 'fitness' (Norgaard, 2006). Co-evolution is not an evolutionary approach towards an end vision of 'excellence' that is so often the focus of education and management thinking. Rather, it is the interaction of groups with others that ensures fitness of the system as a whole. Although the outcome may not be certain, the emphasis is on managing the interactions with people and process and in this regard, the role of Heads of Learning Development in pedagogic inquiry and teaching as facilitators and managers of co-evolution is a critical position towards fitness within an institutional environment. Kernohan (2018) states that enhancement needs

time, permission, and support. It is argued here that a synergistic approach to the facilitation and management of this co-evolutionary process should drive strategy, without concern of where the end goal is because the system will be fitter with careful attention to the interactions and the process.

## Impact on Development

### Synergies in Co-evolution of Teaching Excellence and Inquiry

So what is teaching excellence? This question has garnered significant debate over a number of years. Skelton (2009, p. 107) reported that ‘excellence has become a meaningless concept’. Excellent teachers remain contested and interpretative terms, feeding into the issues of knowledge co-creation and the social constructivist nature of teaching and learning. What is an excellent teacher and from whose perspective?

Ross and Collier (2019) make a point about “not yet-ness”, in relation to excellence — getting there and being comfortable with that status, realising that the goalposts are ever-changing. This is a state that is arrived at with time and associated effort; knowing what worked with a class last week will work with the same class this week, or knowing what to try out and experiment with so as to keep student progress moving. The learning environment is constantly evolving, as is the student profile and discipline fields, and all necessitate the teacher to evolve, too. Grove (2018) argues that finding the right way to recognise teaching excellence has become something of an obsession in recent years. Land & Gordon (2015, p. 23) suggest a framing tool for teaching excellence initiatives at school/departmental level which can be useful for planning initiatives (Table 2).

**Table 2: To support learning development planning**

How are institutional policy decisions articulated with faculty policy formulation? How effective are these articulations in the promotion of teaching excellence
How would innovative work relating to teaching excellence be reported to the main university committees?
What mechanisms are in place to monitor the development and progress of teaching excellence at faculty/departmental level?
How are faculty/departmental strategies for teaching excellence aligned with strategies for research excellence?
How is teaching excellence visible in strategic documents and implementation plans for the faculty or individual schools and departments?
In what ways has research into teaching been supported within the faculty/department in the last five years?
Are there any systematic ways of modelling expert/excellent practice within programmes and modules?
How are programme teams helped to develop and embed excellent practice within a new programme?
How is teaching excellence monitored and evaluated within undergraduate and postgraduate teaching within the faculty/department?
What methods of dissemination and what resources have been used to raise faculty awareness of teaching excellence within the school/departments?
Are teaching and learning modules integrated into doctoral programmes?
What might be the incentives or disincentives faculty/department level for pursuing teaching excellence?
Are professional development planning or faculty review schemes used in any way to foster teaching excellence?

Another useful example for the Technological University is the Curtin Teaching Excellence criteria (Tucker et al, 2014) which provide a single set of measures to underpin all relevant reward and recognition processes, so that teaching excellence is clear and consistent with the university’s strategic

goals. The teaching excellence criteria are designed to assist individual faculty, particularly new and early career staff, in clarifying expectations, as well as providing guidelines to assist in the process of supporting academics and establishing guidelines for promotion and awards.

The Scholarship of Teaching and Learning for Curtin is systematic inquiry, critique, research and development in teaching, learning and the broader educational context which advances and publicly provides educational benefit to students, faculty and the higher education sector. The scholarship of teaching and learning underpins the teaching excellence criteria and involves a distinct set of attributes: planning and designing learning activities and courses; teaching and supporting student learning; assessment and giving feedback to students; developing effective learning environments, student support and guidance; integration of scholarship, inquiry and professional activities with teaching and in support of student learning; evaluation of practice and continuing professional learning; professional and personal effectiveness.

In the Technological University, a reputation for research-informed teaching, small classes, good support for student diversity, career planning, and strong links with industry has steadily built up over time. Central to the learning development support of this work in the years ahead will be leading on the progression of teaching excellence and in supporting faculty to plan for and collect evidence of their continually developing practice. This includes offering professional development opportunities on the inquiry-based impact of teaching excellence.

Figure 1 shows a snapshot of teaching and learning professional development (PD) on offer to faculty in one of the colleges in the Technological University, highlighting the potential for synergies between teaching excellence and evidence-gathering.

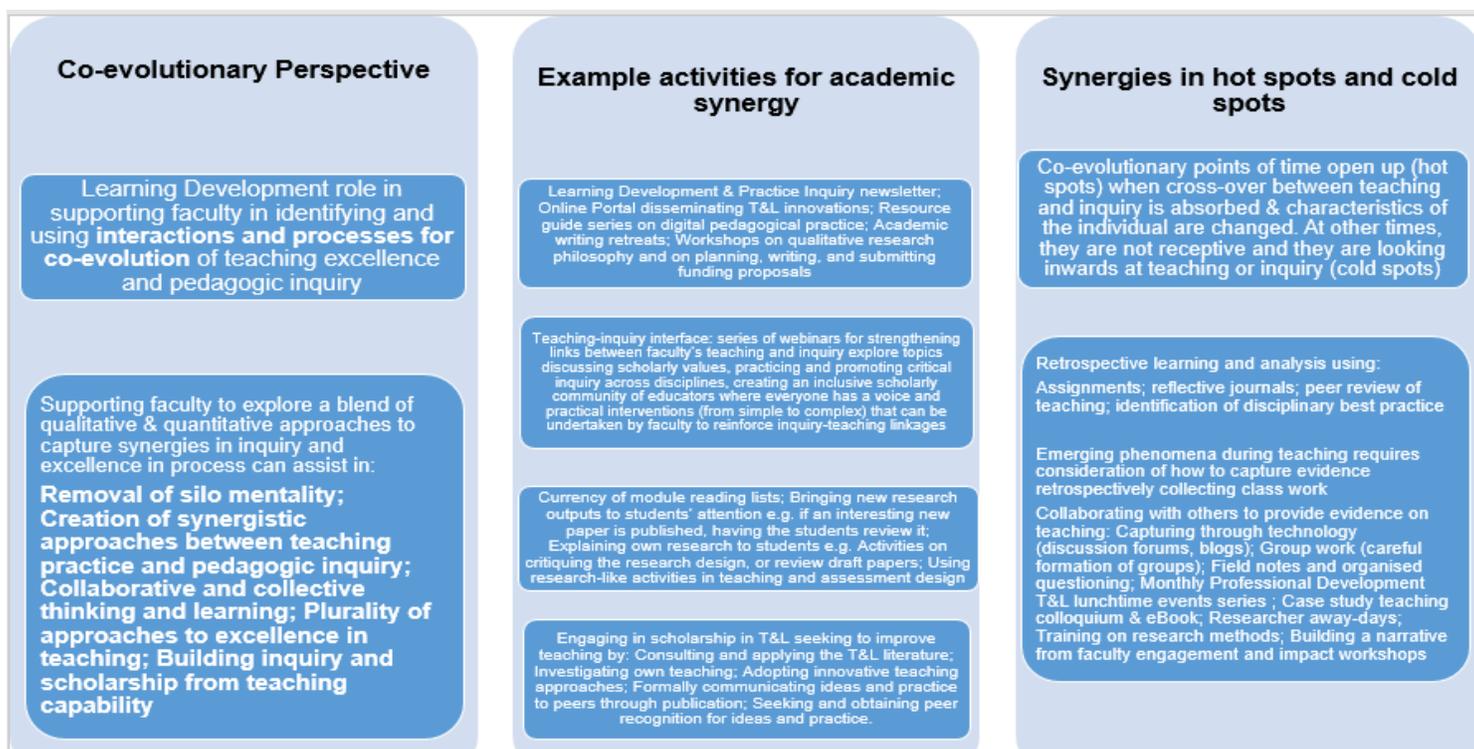


Figure 1: Sequencing PD opportunities within a co-evolutionary perspective

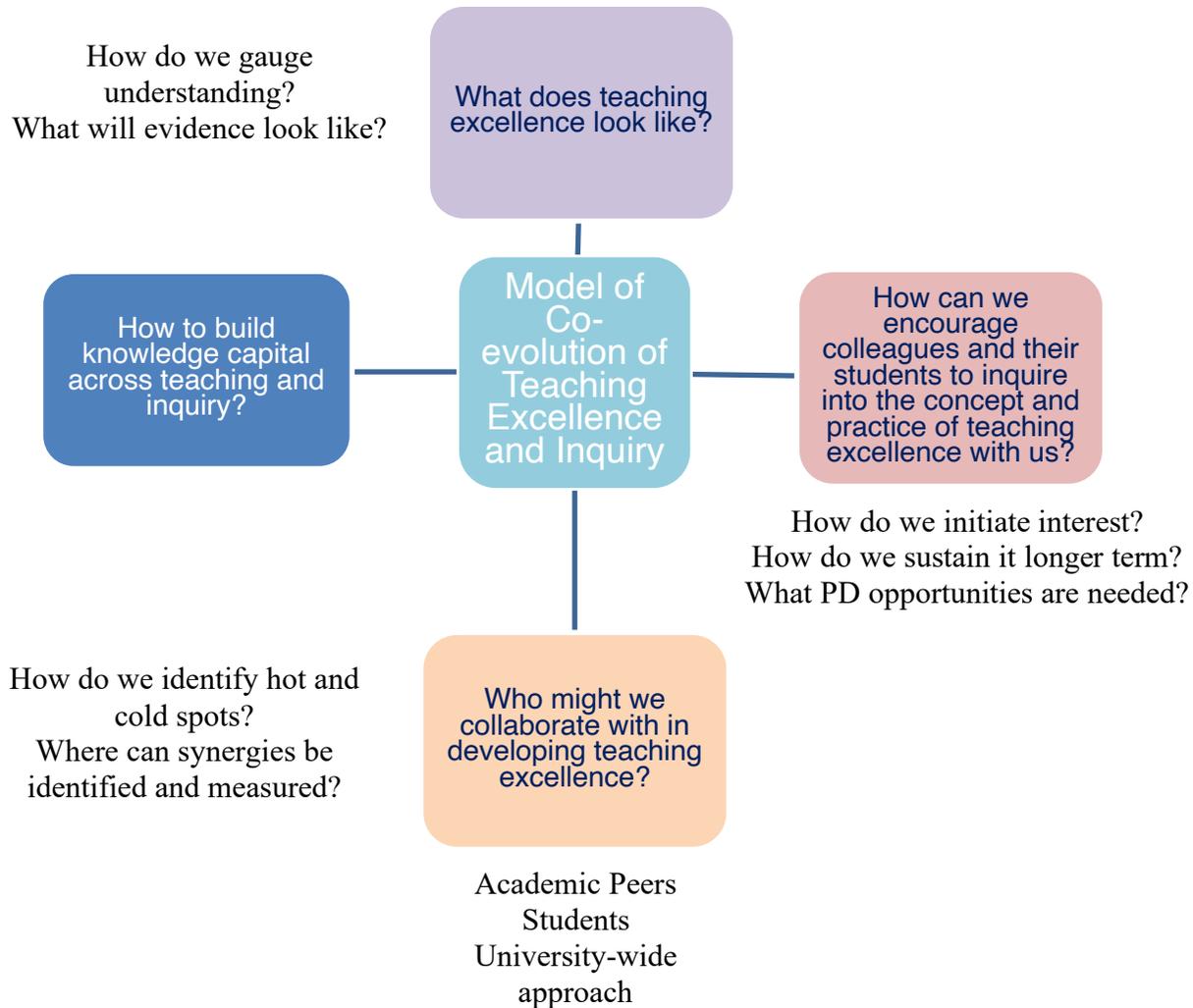
Co-evolution is concerned with the logic of understanding how individuals, groups and environments influence each other. Studies consider the influence of the macro on the meso environment (Paniccia & Baiocco, 2018) but also on peer-to-peer groups' influence. Co-evolution does not have to be about just relationship interactions but can also include stories or rituals between and across groups.

Emphasising co-evolution means a focus on the process rather than outcomes. It is important to highlight that innovation does not equate to excellence — it just reflects the influences on education that lead to evolution, and arguably is seen as a mechanism to facilitate a process towards excellence. Teaching and learning development can benefit in a number of ways when academics draw directly on the inquiry process and its outputs:

- Curriculum which draws on current research stays fresh and dynamic, and students can see how learning about a subject in the abstract is connected to real time development of the subject, and of the aspects of the world that it is concerned with.
- Curriculum which draws on the teacher's own inquiry gives the teacher an added incentive to engage with the students and gives the students a sense of connection with the inquiry process and with the dynamic nature of their discipline.
- Curriculum which allows students to engage in inquiry processes engages them more actively in their learning and in the subject. It supports important notions such as active learning, students as partners and students as co-creators of the curriculum. It plays an important role in developing a range of important graduate attributes, both professional and personal, helping to build student confidence, ability to communicate effectively, and sense of an academic and specialist self.

Figure 2 introduces an evolving model for capturing the co-evolutionary approach to pedagogic inquiry and teaching excellence. The study of concepts and the practice of excellence in relation to teaching and ensuring a quality student learning experience have evolved this model of co-evolutionary strategy for exploring the evidence base for teaching excellence. It involves conscious continuous inquiry and teaching integration, retrospective learning and analysis, emerging phenomena during teaching, and collaborating with others to provide a strong evidence base on teaching. Ashwin (2018) argues that while popular discourse and policy tend to focus on the inspirational individual teachers and researchers who change the world, in reality these changes are much more the result of collective and communal endeavours.

In building a model for co-evolving synergies, the criteria for co-evolution are defined as the points where synergies can be recognised/measured. Co-evolutionary interactions mainly explain the nature of relationships in terms of the complex processes and not the outcome.



**Figure 2: Towards a model for co-evolution of pedagogic inquiry and teaching excellence**

The overarching aim of the model is to focus on process rather than outcome and build academic synergies into the process. In adopting a co-evolutionary model, synergies can be achieved in the hot spots, and in the cold spots from knowledge absorption. Co-evolutionary aspects in the model imply:

- There are both hot and cold spots: the former being when individuals are receptive to absorbing outside influences and the latter when individuals are looking inwards.
- The receptiveness to outside influences changes the characteristics of the individual/group but the dynamic nature of moving between hot and cold spots means that the outcome is not deterministic. Moreover, the complex process rather than the system is important (this is where the need for continuous innovation emerges).

The reasons why it is more important to work on the process rather than the system, even if outcomes cannot be determined and may be negative are:

- The environment is uncertain and trying to achieve fixed outcomes is risky.

- Processes are reflected in activities and synergies can be integrated into activities so excellence and productivity can be better controlled in the process.
- There is more participant control of the process than the outcome (motivating influence).

In terms of the role of learning development, it is important to not try to influence and control the system because there are too many uncertainties in that; instead focus on the processes/activities that you can control. We are trying to help academics manage their careers, to become better at inquiry and excellent teaching within the limitations of a system (with workload models, time pressures, student diversity and publication challenges, among others). This institutional culture is also viewed as an 'educational gains indicator' (Gibbs, 2012). The Technological University emphasises the importance of the provision of career-focused education through quality teaching and learning to create a distinctive, high quality, experiential student experience. There is a reputation for inquiry-based practice, classes with a good teacher-student ratio, support for student diversity, career planning, and strong links with industry.

## Conclusion and Plans for Future Work

Over the last ten years, universities have made more of a conscious shift away from what were viewed as individual 'pet' projects to ones of more strategic benefit. This is in part echoing an observable shift in learning development from one of addressing 'ineffective teaching practices' to one which encourages engagement of faculty with disciplinary inquiry and scholarship in teaching and learning (Hutchings et al, 2011) that can be used to inform institutional teaching practice as well as lead to publication. In a new Technological University, with its intended research targets, formal recognition of scholarship of teaching in its own right could add a further dimension of academic professional activity. This recognition could involve not only the effective application of co-evolution theory to enhance quality of practice but also the contribution to new knowledge. To encourage faculty to engage in more inquiry to support teaching excellence and ultimately enhance the quality of student learning will necessitate appropriate, timely professional development opportunities alongside formal recognition and incentives. This process of co-evolution of teaching and inquiry, supported by learning development, can be adopted by others, as it is collaborative, measurable and scalable. John Cotton Dana eloquently summarises its essence: "Who dares teach must never cease to learn". Further research is planned to explore how co-evolution can impact the continuum from early career academics to more experienced faculty, as well as institutional integration of teaching and inquiry and opportunities for measuring success.

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