Change in Practice:
Achieving cultural shift in teaching and learning through a theory of change

Professor Grahame T Bilbow
Director
The Centre for the Enhancement of Teaching and Learning (CETL)
The University of Hong Kong

_____

Grahame Bilbow has been Director of the Centre for the Enhancement of Teaching and Learning (CETL) at the University of Hong Kong since 2013. Prior to this, he was an Assistant Director of the Higher Education Academy (now AdvanceHE) in the UK, with responsibility for the Arts and Humanities. In recent years, his interests have centered on the quest for quality in teaching and learning in higher education internationally, which he believes is achievable through a process of managed change.

Abstract

The mission of the Centre for the Enhancement of Teaching and Learning (CETL) at the University of Hong Kong (HKU) is, within the context of the University's overarching teaching and learning strategy, to identify, share and embed internationally recognised evidence-informed good practices across HKU's teaching and learning.

Over recent decades, the ways in which CETL has realised this mission have changed considerably. Prior to 2010, CETL realised its mission mainly through an instructional role in relation to its staff development programmes, workshops and seminars, both mandatory and voluntary. Since 2010, however, the work of CETL has encompassed not only *capacity building*, but also *advocacy*, cross-faculty *facilitation* and *rapid response* in times of uncertainty. This redefinition of our role has required us to undertake a far broader range of activities than previously, many of them founded on collaboration and collegiality.

This transformation was triggered by a Hong Kong-wide higher education curriculum reform mandated by the Government in 2009, which resulted in a fundamentally reconfigured undergraduate student learning experience at HKU. It was further facilitated by a widespread desire to transform the teaching and learning culture at HKU.

CETL's process of transitioning to a broader, more engaged and collegial role has been achieved in large measure due to the coherent theory of change we have elaborated, underpinned by a 'results chain' that identifies not only the activities we undertake, but also the outputs, the outcomes and, most importantly, the impact we plan to achieve. Creating this results chain was a collaborative process of working with key stakeholders to identify critical pathways for success, risks and assumptions.

The transition process has also been helped by the decision-making model we have adopted - an adapted version of the "Cynefin and Standard+Case" model (England, 2013), underpinned by a Cynefin Network, typically used for making service management decisions in areas such as public health, law, social work, and IT. CETL's expanded set of roles inevitably throw up a range of distinct decision-making situations, and the "Cynefin and Standard+Case" model allows us to plan situation-specific approaches that are likely to lead to desired outcomes.

The major challenges we have faced to date include learning to become less prescriptive, to be more facilitative and collegial, to build dialogue rather than monologue, and to be cognizant of individual teachers' and faculties' needs and preferences. We have been grappling with these challenges for several years now – a process that has been marked by some successes, some failures and some enduring challenges. In this chapter, our aim is to describe the path of change we have pursued, and to provide a possible roadmap and tools for teaching and learning centres elsewhere which may be experiencing similar challenges.

1. **Background**
   Established in 1912, the University of Hong Kong (HKU) is Hong Kong's longest established university – an English-medium, research-led, comprehensive university, which is currently ranked 25th globally according to the QS World University Rankings. HKU is publicly funded by the Hong Kong Government through the University Grants Committee (UGC).

   A centre for supporting teaching and learning has existed at the University of Hong Kong since 1994. Initially called the Centre for the Advancement of University Teaching (CAUT), its name changed in 2009 to the Centre for the Enhancement of Teaching and Learning (CETL) (see https://www.cetl.hku.hk/). CETL is resourced centrally from the block grant awarded to the University by the UGC, as well as from the UGC's Teaching Development and Language Enhancement Grant (TDLEG).

   The Centre consists of a total of nine academic and academic-related staff, seven administrative/ technical staff, and approximately fifteen research staff and research students, and is located in purpose-built premises on the Centennial Campus of the University on Hong Kong Island. The Centre also contains a small E-learning and Pedagogical Support Unit (EPSU), which provides support for e-learning.

   The Centre is led by a Director, supported by two Assistant Directors, one responsible for academic programmes, and the other responsible for innovation and support. The Centre is overseen by the University's Vice President for Teaching and Learning, who serves as a member of the Senior Management Team (SMT) of the University.

   Broadly speaking, the mission of CETL has, since its inception, been to identify, share and embed internationally recognised, evidence-informed good practices across HKU's teaching and learning. The Centre addresses this mission by undertaking a wide range of activities, including mandatory professional development programmes for all academic staff and research postgraduate students new to the University, whose work includes teaching and learning support, a weekly lunchtime programme of voluntary workshops and seminars, and other events to support staff from across the University's ten faculties, formal and informal interaction with faculties in support of curriculum design, assessment and pedagogy, and a range of scholarly activities, including research and scholarship and organising periodic teaching and learning conferences that attract local and international participation.

   CETL's early contributions
   In the first decade of the new millennium, the Centre's activities were significantly shaped by broad educational reforms taking place in Hong Kong. The two most influential such reforms were the Territory-wide implementation of Outcome-Based Education (OBE) at tertiary level, begun in the early 2000s, and the so-called 3-3-4 educational reform initiated in 2009, which resulted in the lengthening of standard university curricula from three to four years' duration across the higher education sector in Hong Kong.

   a. *Outcome-Based Education*
      In the early part of the decade, the University of Hong Kong, along with all other publicly-funded, degree-awarding institutions in Hong Kong, sought to embed outcomes-based approaches to student learning (OBASL) in all of its academic programmes. In supporting this initiative, CETL was active in preparing academic

programme teams to write learning outcomes, to achieve constructive alignment between outcomes and assessment, and, most recently, to use evidence of student learning to demonstrate students' achievement of programme-level and course-level learning outcomes (see https://www.cetl.hku.hk/obasl/).

b. *3-3-4 Educational Reform*
   Later in the decade, in 2009, the Hong Kong Government introduced the 3-3-4 Educational Reform for lower secondary, senior secondary and tertiary education across the Special Administrative Region (SAR). As a result of this reform, senior secondary schooling was to be cut by a year to three years, and the normal duration of Hong Kong's undergraduate degree programmes was to be increased from three years to four years.

   At HKU, the opportunity was grasped to rebuild the undergraduate curriculum from the ground up, incorporating new components intended to make the curriculum more suited to the demands of the 21st century. These new components included a large interdisciplinary Common Core component, integrated overseas and mainland Chinese experiential learning opportunities (for all undergraduates), greatly expanded online and mobile learning opportunities, and a greater emphasis on students' generic skills and attributes, such as critical and creative thinking, tackling uncertainty, communication skills, leadership and entrepreneurship skills, and so on (see https://tl.hku.hk/flexible-curriculum-structure/ for more details).

   During the curriculum design process, CETL provided a great deal of expert guidance to programme teams who were responsible for rethinking their curricula and integrating the new components in creative ways. A number of faculties found the process of redesigning their curricula somewhat challenging, and CETL was instrumental in providing them with the required expert support.

CETL's more recent contributions
Immediately following the introduction of the new 4-year curriculum in 2012, CETL was called upon to provide pedagogic support for faculties as they implemented their new curricula. Students were coming to the University younger than in previous years, and had a range of different needs. Courses had been redesigned, new components had been introduced, and assumptions about student engagement had changed. All in all, CETL provided a valuable enabling service, listening to teachers, collaborating with them, and helping them to thrive in the changed circumstances.

It was during this time that HKU set to work developing a new teaching and learning strategy, called the '3+1 I's' teaching and learning strategy, which would support the new curriculum and become an integral part of the University's 'Asia's Global University Vision 2016-2025'.

The components of the 3 + 1 I's - *internationalisation*, *innovation* and *interdisciplinarity*, converging on *impact*, were intended to reinforce the principal novel elements of the new 4-year curriculum, and to ensure that the University's teaching and learning practices supported students' development of a range of attributes, alongside disciplinary knowledge, befitting the 21st century - a global outlook, a creative mindset, and a more nuanced, multi-faceted perspective on their studies and the world beyond. It was no coincidence that the launch of the strategy in 2016 coincided with the first graduating cohort of the new 4-year curriculum.

With the launch of the 3+1 I's teaching and learning strategy, CETL was called upon to support the operationalisation of the strategy across the University. This time, too, the support provided by CETL was not so much instructional as facilitative: listening to and collaborating with teachers, and helping them to identify and share ways in which their curricula, assessment and pedagogy embraced internationalisation, innovation and interdisciplinarity, and therefore exercised a significant, positive impact on student learning.

2. Changing the WHAT and HOW of CETL

It is clear from the above description of HKU's academic development over the past two decades that a substantial transition took place roughly midway through that period, precipitated by the task of creating the new 4-year curriculum, which began in 2010.

Prior to this transition, HKU had enthusiastically adopted educational reforms, such as the move towards Outcome-Based Education, in an effort to remain at the forefront of undergraduate education globally; however, the University had tended neither to initiate change nor to systematically embed change at faculty and departmental level. Up to this point, CETL had primarily been called upon to provide standardised training interventions to support the process of reform across faculties – a process that, frankly, had met with varying degrees of success over time.

This situation was to start to change in 2010, however, when the University embarked on a new type of reform process when it began to design the new 4-year curriculum, led by the then Vice President for Teaching and Learning, Professor Amy Tsui Bik May, and subsequently developed the 3+1 I's teaching and learning strategy, under the leadership of her successor, Professor Ian Holliday. Reform was no longer to be reform from above; it was to be a far more distributed and engaged process, based on the involvement of a range of stakeholders from across the University.

As a part of this reform, the WHAT and HOW of CETL were to be revisited. In terms of the WHAT, the Centre was to go beyond simply offering a list of capacity-building *instructional* activities repeated annually, and start to get involved in activities related to *advocacy*, *facilitation*, and *rapid response*, all requiring a close and supportive relationship with faculties. As for the HOW of the Centre, CETL was to become an important vehicle for ensuring that the change process across the University was concerted and harmonious and avoided some of the patchiness and lack of clarity that had previously impeded reform. In short, the Centre would not only change its range of activities; it would also change how it engaged in these activities. Our relationship with faculties would in future become far more collegial, collaborative and facilitative.
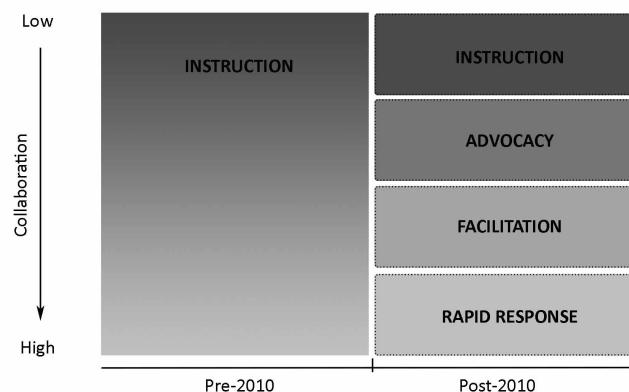

Table 1: Changing CETL roles pre- and post-2010

3. **Towards a Theory of Change**

   CETL's transition to its new expanded set of roles was to be underpinned by a 'theory of change'. Theory of change is a well-established methodology for planning, undertaking and evaluating systemic change in organisations. Being highly sensitive to the context in which complex change is planned, theory of change methodology is suited to the planning of change in not-for-profit, government or educational organisations, such as HKU.

   It is perhaps surprising how many universities have traditionally been more engrossed in describing their activities than in describing their impact. In essence, theory of change methodology involves the reverse. It begins with the specification of desired impact, and then works backwards to planning activities, their outputs and outcomes. This results in what is called a 'results chain' (see Section 5 below), consisting of the following four 'links':

   a. *Activities*

      The repertoire of professional development programmes designed and delivered, the range of seminars, workshops and other events run throughout the year, the regular meetings, both formal and informal, held with faculties, departments and programme teams, the research projects conducted by CETL staff, individually and collaboratively, the conferences organised, and so on.

   b. *Outputs*

      The immediate effects and deliverables of programme and policy activities, including, for example, the number of staff attending CETL programmes, workshops and events, the number of meetings held in collaboration with faculties, the number of scholarly contributions by CETL staff, individually and collaboratively, and so on.

   c. *Outcomes*

      The actual or anticipated effects of programme and policy activities in the short-term and medium-term, including curriculum and assessment changes, changes in teachers' classroom behaviours, changes in local and international understanding of good curriculum, assessment and pedagogic practices, and so on.

   d. *Impact*

      The long-term effects of programme and policy activities, both intended and unintended, direct and indirect, positive and negative. Impact includes "the higher-order effects and broader changes to which an intervention may be contributing" (OECD/DAC Network on Development Evaluation, 2019)

   All theories of change, including our own, start with situational and problem analyses, which take account of the contributions and views of a wide range of inter-connected stakeholders, and they all result in the creation of a results chain involving multiple critical pathways of change that both reflect and challenge prevailing cultural habits. While some of these pathways can be identified and planned relatively straightforwardly, others, especially where change involves sensitive issues and a range of stakeholders, can only be identified and planned more tentatively and may evolve more gradually.

4. **CETL's Decision-making Model**

   As mentioned above, theory of change methodology is highly suited to planning change in complex, not-for-profit organisations, such as universities. Part of the complexity of

such organisations is that the work they undertake is typically not simple and straightforward but requires expert knowledge and the ability to cope with ambiguity and uncertainty. In the process of developing a theory of change in such organisations, it is helpful to adopt a sophisticated, context-sensitive, decision-making model.

According to literature in the area of decision-making, a *Cynefin Network* (from the Welsh for habitat or place of multiple belonging) is a "decision-making framework that recognises the causal differences that exist between system types… and proposes new approaches to decision-making in complex social environments" (Snowden, 2010). This framework identifies four types of situation: simple (or obvious), complicated, complex and chaotic.

Table 2: Cynefin Network. (Senft, B, Rittmeier, F, Fischer, H & Oberthür, S (2019), based on Kurtz & Snowden (2003))

a. *Simple (or 'obvious') decision-making situations*
   A *simple* situation is a decision-making context in which the solutions to problems are known, formulaic and, sometimes, automated. An example of a simple decision-making situation is 'office filing', where fairly simple and straightforward rules regulate decisions. In such simple situations, the response sequence is SENSE-CATEGORISE-RESPOND, where problems are identified and classified into pre-established categories and standardised responses are applied. Generally, it is possible to talk of 'best practice' in simple situations, such as office filing.

b. *Complicated decision-making situations*
   In contrast to a simple situation, a *complicated* situation is one in which the solution to a problem is knowable but requires specialist knowledge to understand. An example of a complicated situation is 'meteorology', where a high degree of knowledge is required in order to respond reliably to weather patterns. In complicated situations, the response sequence is SENSE-ANALYSE-RESPOND, where reference is made to established knowledge in order to analyse a problem prior to responding. Even an expert with considerable knowledge and experience can be wrong-footed, however. So, at best, we can probably only talk about 'good (or wise) practice', rather than best practice, in weather forecasting.

c. *Complex decision-making situations*
   A situation in which the solution to a problem is unknowable, but can be discerned in retrospect, is termed a *complex* situation. Decision-making situations in the area of

genetic research, for example, tend to be complex, and draw upon analyses that may be contested and somewhat unreliable, and may substantially vary from one observer to another. In complex contexts like genetic research, the response sequence is PROBE-SENSE-RESPOND, where exploratory research is essential before a response is possible, but, even then, a response needs to be tentative. The term 'emergent practice' is used to describe practices that arise as exploratory research bears fruit.

d. *Chaotic decision-making situations*

In *chaotic* decision-making situations, it is impossible to identify reliably cause-and-effect relationships, as events occur haphazardly. Examples of chaotic situations are *natural disasters*, where random events occur concurrently and entirely unpredictably. In such situations, the response sequence is ACT-SENSE-RESPOND, whereby 'novel' decision-making practices spring up in response to rapidly changing circumstances, driven by the need to act quickly, and in some cases to save lives.

Research in service management has led to a refined version of the Cynefin Network, referred to as the "Cynefin and Standard+Case" case-based approach, which has been applied primarily in the field of IT Service Management. This approach, according to England (2013), works when traditional approaches "…struggle when it comes to addressing lower volume, unpredictable and sometimes highly complex requests. This is however the current customer service pain point and is where customer service champions excel … through the empowerment of their employees (Kofax: 2012).
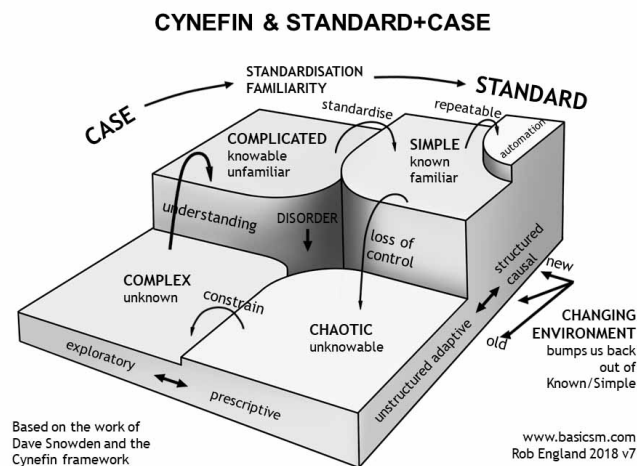

Table 3: The "Cynefin and Standard+Case" approach (England, 2013) ©
Copyright Two Hills Ltd www.twohills.co.nz.
(http://www.basicsm.com/content/cynefin-and-standardcase)

The "Cynefin and Standard+Case" approach is a combination of a standard process-based approach to decision-making, employing the Cynefin Network, and a case management approach, typically used in sectors such as health, social work and law. In such contexts, only a limited number of problems are standard and require formulaic resolution, and even fewer can be handled in an automated fashion. In many cases, situations are so complicated, complex and occasionally chaotic, that responses need to be tailored on a case-by-case basis, using expertise, experience and professional intuition.

The "Cynefin and Standard+Case" model suggests that while standardisation is appropriate for addressing simple situations, it tends to be ill-suited to making decisions in complicated, complex and chaotic situations. In universities such as HKU, which are extremely complex entities, standardized instructional programmes of the type traditionally offered by CETL and other teaching and learning centres around the world, may therefore only serve a limited function in achieving cultural change.

In recognition of this, the Centre's role in recent years has expanded to encompass a far broader range of activities to address problems which vary in their complexity and call for distinct decision-making responses. We have found that the "Cynefin and Standard+Case" approach, which advocates a range of less prescriptive and more exploratory responses in order to make the complex less unfamiliar and more knowable through increased understanding, has helped us to achieve significant progress in the following areas.

a. *Instruction*
   This takes place in a relatively simple decision-making situation requiring a SENSE-CATEGORISE-RESPOND sequence and a high level of standardisation. The mandatory professional development programmes designed by CETL and delivered to new academic staff and graduate teaching assistants across HKU, are examples of how CETL has responded to a simple decision-making situation requiring a standardised response referenced to internationally recognised *best* practice.

b. *Advocacy*
   This takes place in a relatively complicated decision-making situation requiring a SENSE-ANALYSE-RESPOND sequence, bringing specialist knowledge and experience to bear. The advocacy provided by CETL on a broad range of *good* (or wise) curriculum, assessment and pedagogic practices is an example of how CETL has responded to complex decision-making situations that require reliable knowledge supported by scholarly research in the area, some of which is generated by CETL staff themselves through their personal scholarship.

c. *Facilitation*
   This takes place in complex decision-making situations requiring a PROBE-SENSE-RESPOND sequence and an exploratory approach involving dialogue across faculties, departments and programmes, that is sensitive to individual needs, preferences and practices (Bilbow et al, 2017). The cross-faculty surfacing and celebrating of *emergent* practices across the University, are examples of how CETL has used its expertise to respond to the highly complex differences that exist across HKU.

d. *Rapid response*
   This takes place in mercifully rare chaotic decision-making situations requiring an ACT-SENSE-RESPOND sequence to take rapid action to address unforeseen circumstances. CETL's rapid response to the issue of end-of-term assessment during the recent political unrest in Hong Kong, when all classes were cancelled, is an example of CETL's capacity to provide a rapid response and to adapt to uncertain circumstances.

Our adapted version of the "Cynefin and Standard+Case" approach illustrates how CETL's decision-making practices have been applied across the Centre's expanded set of roles since 2010 as part of our theory of change.
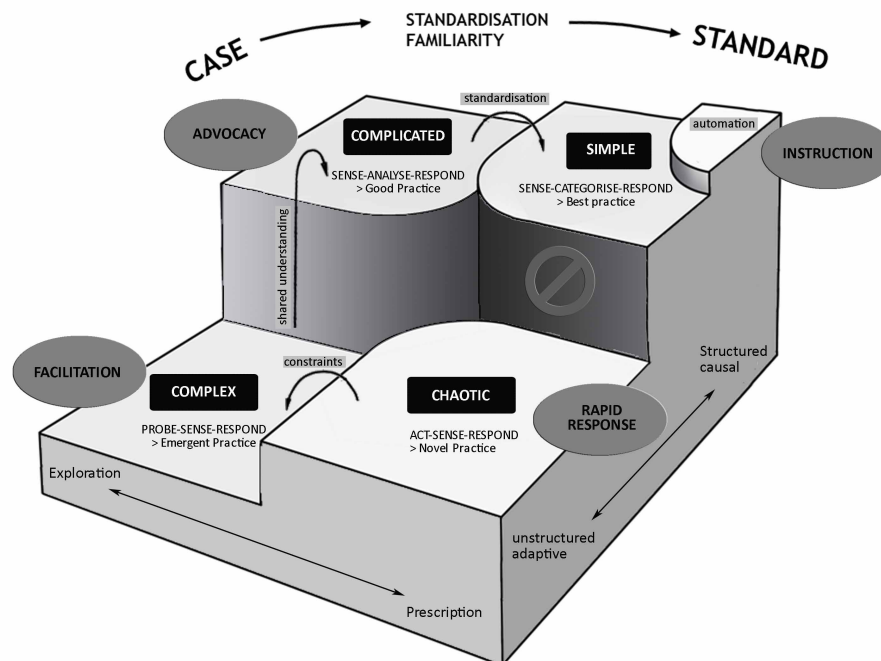
Table 4: CETL decision-making model*, adapted from the "Cynefin and Standard+Case" model proposed by England (2013). © Copyright Two Hills Ltd www.twohills.co.nz. (http://www.basicsm.com/content/cynefin-and-standardcase)

5. CETL's Results Chain and Logframe

As we saw in Section 3, an important part of planning change in CETL involved creating a results chain that identified the activities, outputs, outcomes and intended impact of planned changes. This results chain can also be represented as a 'logframe' - a systematic visual representation of the logical flow of outputs and outcomes that link achievement of activity targets, and the delivery of intended impact. The benefit of a logframe is that it enables planners to establish and communicate changes in the form of a clear development pathway.

CETL's results chain in relation to its *activities*, *outputs*, *outcomes* and *impact* over the past seven years is described below with reference to each of CETLs roles: *instruction*, *advocacy*, *facilitation*, and *rapid response*. The completed logframe appears at the end of this section.

Stage 1: Activities

Relative to its other activities, CETLs *instruction-related activities* have not grown substantially over the past decade. In the past year, CETL has successfully achieved accredited status for its three-programme HKU-AdvanceHE Fellowship Scheme, and all of the Centre's continuing professional development programmes are now linked to AdvanceHE fellowship (Associate Fellowship, Fellowship and Senior Fellowship), and are scaffolded with quality-assured mentoring for those who elect to seek fellowship. The Centre's principal continuing professional development programme, the 3-day full-time Professional Certificate in Teaching and Learning in Higher Education (PCTLHE), is now mandatory, and, consequently, the scale of this operation has grown

_____

*   The stop sign (⊘) at the interface between simple and chaotic situations indicates that, while both simple and chaotic situations benefit from quick responses, the standardised responses adopted in simple situations do not usually prove effective in chaotic situations. Indeed, in such situations, a standardised response may exacerbate a chaotic situation. An example would be the use of a standardised form-filling process to respond in the case of a natural disaster.

considerably. CETL has also designed and launched a new teaching and learning massive open online course (MOOC) for an international audience of teachers new to higher education. Interestingly, this programme has had a measure of washback into the Centre's one-month full-time Certificate in Teaching and Learning in Higher Education (CTLHE) programme for research postgraduate students who serve as graduate teaching assistants (GTAs) at HKU. Finally, although rather less instructional than exploratory, CETL now provides a leadership programme, the 3-day Professional Certificate in Leading Teaching and Learning in Higher Education (PCLTLHE), to help senior academic managers across the university address teaching and learning management issues in their faculties and provide guidance as AdvanceHE mentors.

In contrast to CETL's purely instructional activities, its *advocacy-related activities* have grown considerably over the past six or seven years. For example, the Centre's regular voluntary workshops and seminars for academic staff across faculties (approximately forty events annually) now focus on topics where the University advocates the use of specific good practices in areas of strategic development (eg internationalisation, interdisciplinarity, pedagogic innovation, treating students as partners, embedding research in the undergraduate curriculum and staff mentorship). These workshops draw upon CETL's research, as well as expertise sourced from outside the University. Advocacy is also a key function of the regular international and local teaching and learning conferences organised by CETL (approximately every two years), to which all HKU academic staff are invited to present papers drawing upon their own scholarly activities. A particularly key initiative CETL has been advocating over the past two years is the HKU-AdvanceHE fellowship scheme, as the University sees this as an important element of its staff development planning for the coming decade.

CETL's *facilitation-related activities* have also grown in recent years. Although they inevitably overlap to some extent with advocacy-related activities, especially when they are connected with so-called 'meso' level programme and faculty-level change (see Section 6). The aim of facilitation is to assist individuals and groups of staff in faculties with their own personal development agendas. For example, CETL staff regularly contribute to teaching and learning research projects led by academic staff in a range of faculties, mentor academic staff for AdvanceHE fellowship, and work with academic staff to surface and share their emergent practices through the fifteen or so Join-the-Conversation events conducted annually, so that these practices can be appreciated by others. These emergent practices are often written up as case studies that appear in the Centre's quarterly e-newsletter, *Teaching and Learning Connections* (see https://www.cetl.hku.hk/teaching-learning-cop/issue-02/).

It is important to point out that all of the Centre's advocacy-related and facilitation-related activities are underpinned by a desire not to impose change on faculties, but to work in a collegial and facilitative way with groups of academic staff in faculties to enhance student learning. CETL staff now collaborate with faculties not only through representation on their formal committees; they also contribute to regular less formal discussions in faculties about teaching enhancement, too.

A relatively recent addition to the activities of CETL is a *rapid response activity*. This activity is a consultative process conducted with faculties, which involves brainstorming alternative solutions to quickly emerging teaching and learning problems, and finding viable and rapidly implementable solutions. During the recent

widespread student protests at HKU, for example, all class teaching was suspended, and along with it, proctored end-of-term examinations. A viable and quickly implementable solution was urgently required, and the one that emerged in consultation with faculties took the form of secure online end-of-term assessment, which was developed in the space of four weeks, and delivered to large groups of students – the largest being a group of 900 students in the Faculty of Business & Economics.

Stage 2: Outputs
The outputs of the Centre's *instruction-related activities* include approximately 200 new academic staff annually who receive PCTLHE training and approximately 500 new research postgraduate graduate teaching assistants who receive CTLHE training annually. Each year, around 25 AdvanceHE mentors are also trained. Although of a different nature, the Centre's teaching and learning MOOC attracts about 2500 students from around the world every year (about 11% qualify for certification).

As for the Centre's *advocacy-related activities*, the outputs from the workshops and seminars the Centre conducts throughout the year are approximately 1000 non-unique academic staff from across HKU who have been exposed to good practices in a variety of strategically important areas. CETL staff's research in the form of approximately 20 research papers in high impact factor journals each year supports these events. Although difficult to quantify, the many meetings between CETL staff and groups of academic staff in faculties in relation to teaching and learning, also contribute to the Centre's advocacy-related activities. Finally, the recent successful accreditation of CETL's continuing professional development programmes was an important output that served to reinforce the University's advocacy for an internationally-benchmarked, standards-based framework for recognising and rewarding quality in teaching.

Next, the outputs from CETL's *facilitation-related activities* include the approximately 100 faculty staff who are mentored for, and receive, their AdvanceHE fellowship, as well as the approximately 50 academic staff who serve on panel-led Join-the-Conversation events every year, and the approximately 500 non-unique academic staff who attend them. CETL's joint research activities with staff in other faculties also generate a number of research publications annually, as well as 20-30 articles annually, which appear in CETL's quarterly *Teaching and Learning Connections* e-newsletter. These articles are, in turn, read by approximately 1000 non-unique HKU staff and others internationally.

Lastly, the output from CETL's *rapid response-related activities* in the past year was a viable large-scale secure online assessment alternative to proctored end-of-term examinations, when classes were cancelled during student protests.

Stage 3: Outcomes
The short-term outcome of the Centre's *instruction-related activities* has been a regular flow of new academic staff and research postgraduate graduate teaching assistants who possess threshold teaching and learning competence and basic teaching and learning competence, respectively, and teaching and learning managers with enhanced management skills and skills in mentoring more junior staff. Longer term, we have started to build a critical mass of highly professional, competent and proactive academic staff across HKU whose teaching and learning prowess matches

their research prowess, and a robust HKU-AdvanceHE fellowship scheme which provides staff with a clearer career pathway and the means of promotion.

The short-term outcome of the Centre's *advocacy-related activities* has been growth in a common understanding of good teaching and learning practices across the University, and increased scholarly activity to underpin these good practices, which, in the longer term, has further enhanced the teaching and learning reputation of HKU and CETL.

The short-term outcome of the Centre's *facilitation-related activities* has been an increase in scholarly reflection in faculties, fuelled partly by an interest in AdvanceHE fellowship, greater attendance to emergent practices in faculties brought about through joint scholarly activities with staff in faculties, and regular scholarly sharing. Longer term, we have observed a higher level of pro-active ownership of teaching and learning in faculties and a greater respect for the relevance of CETL in supporting faculties.

Lastly, the short-term outcome of the CETL's *rapid response-related activity* this year was an uninterrupted assessment operation, even in the difficult circumstances faced by the University. The longer-term outcome will be a more robust teaching and learning environment, less prone to disruption by unforeseen circumstances. Interestingly, secure online assessment, which was initially a 'novel' practice for HKU, has since become an 'emergent' practice, and, in time, it may come to be seen as a 'good' (or wise) practice.

Stage 4: Impact
This is the most challenging aspect of the results chain to evidence. However, the qualitative, interview-based evidence we have from a range of stakeholders suggests that much of the impact predicted in our theory of change has been achieved or is in progress.

At the individual level, our combination of instruction, advocacy and facilitation appears to have led to better and more informed teaching practices across HKU. This comment from an academic staff member in the Faculty of Arts suggests that CETL resources and activities that share good practices are found useful in supporting effective teaching: "… we can access valuable online resource repositories about best practices of teaching and learning. One example is the types of assessment in Common Core Courses at HKU. The research findings from CETL have facilitated us as coordinators to strengthen the curriculum of [Course name], a course for year 1 undergraduate students."

Other comments, including this one, also from an academic staff member in the Faculty of Arts, refer to the perceived value of scholarly reflection: "It does come to mind as I am going about my day-to-day work sometimes. So it is a form of noticing things that maybe I haven't noticed before … previously I would just do them from my instinct." Such reflection has also helped the growth of a common language for talking about teaching and learning, as this comment from an academic staff member from the Faculty of Law suggests: "It is the first time and the only time to talk about what we truly feel about teaching and learning."

The HKU-AdvanceHE fellowship scheme also shows encouraging signs of enhancing career pathways and prospects for academic staff and graduate teaching assistants, and providing the opportunity for a teaching community to grow, leading to greater job satisfaction. This comment from an academic staff member in the Faculty of Architecture suggests that staff, especially new staff, appreciate the teaching community that has started to grow at HKU: "I was completely new to the academic world. I knew very little about assessment or internationalisation or any of this stuff. Therefore I think I need to learn from others what all this is about. I like to talk to people who also care about teaching and learning." This other comment from a member of academic staff from the Faculty of Social Sciences illustrates other perceived benefits of the HKU-AdvanceHE fellowship scheme "I just finished the round of PRSD, a performance review on non-academic staff. I used some of the materials from this programme when I did the performance review, so I was more able to mentor my colleagues, giving comments and suggesting specific ways they can improve."

At the institutional level, the evidence we have collected suggests that CETL's combination of instruction, advocacy and facilitation activities has also supported more informed teaching and learning management and better coordination of teaching and learning across the institution, along with more principled decision-making, even in chaotic situations. This comment from an academic staff member from the Faculty of Arts supports this conclusion: "The institution itself doesn't normally train its managers at all, just assumes that they are capable of being given the opportunity to do it. And I think, to some extent, it is a problem. And we seldom have an opportunity or a platform that is so exclusive, just teaching and learning, and nothing else."

Another comment from an academic staff member in the Faculty of Architecture indicates that CETL's support has strengthened their ability to coordinate teaching and learning in a larger context: "Now I am being drawn to a wider department, a bigger teaching unit, the Dean asked me to look at how I take these teaching techniques across the entire Faculty. This is going to be a big challenge. I am very grateful for your support which provided me with different perspectives to ponder over and plan my work strategically."

Finally, there is some evidence to suggest that HKU is now making more productive use of its teaching and learning research project funding, and that this is enhancing the University's reputation in the area of teaching and learning locally and internationally. This may, in turn, be leading to a higher level of respect being shown for teaching and learning across faculties, along with more consistent and principled treatment of teaching activities in comparison with research activities.

As an academic member of staff in the Faculty of Science put it: "I think the community for research is pretty well established…it is systematic. But really, there has not been enough for teaching. I think more opportunities to have more discussions about teaching will be better. Perhaps you can have information sharing. I just … think research develops very fast but teaching does not change so much."

Table 5: CETL logframe for change

	INSTRUCTION Simple SENSE-CATEGORISE-RESPOND	ADVOCACY Complicated SENSE-ANALYSE-RESPOND	FACILITATION Complex PROBE-SENSE-RESPOND	RAPID RESPONSE Chaotic ACT-SENSE-RESPOND
ACTIVITIES	3-day FT PCTLHE introductory programme for new academic staff One-month FT CLTLHE programme for RPg GTAs 3-day FT PCLTLHE leadership programme for academic managers Training for HKU-AdvanceHE mentors CETL T&L MOOC programme	Theme-led workshops & seminars CETL research & scholarship Stewardship of the HKU-AdvanceHE Fellowship Scheme CETL-organised T&L conferences CETL participation in faculty committees CETL involvement in Teaching Award mentorship and selection Feedback/ discussion on student learning experience feedback	Identifying/ sharing emergent practices (JTCs) Regular collaborative T&L e-newsletters Mentoring AdvanceHE fellow applicants Joint pedagogic research with faculties	Cross-faculty brainstorming
OUTPUTS	Approx. 200 new academic staff trained annually Approx. 500 new RPg GTAs trained annually Approx. 25 academic managers trained annually Approx. 25 AdvanceHE fellowship mentors trained annually Approx. 2500 international teachers exposed to good practice annually	~1000 non-unique academic staff exposed to good practices in six key areas 3 CPD programme-Scheme accredited by AdvanceHE ~20 T&L research papers published annually CETL staff participation in T&L committees in all 10 faculties ~15 HKU TAs awarded annually T&L feedback/discussions held in all 10 faculties	~15 cross-faculty panel-led sharing sessions held annually on emergent practices ~100 staff mentored for and receive AdvanceHE fellowship ~20 CETL T&L research projects annually and joint publications	Viable responses to the need for rapid action, eg a viable secure online assessment alternative to proctored end-of-term examinations when classes were cancelled during student protests
OUTCOMES (Short-term)	Threshold teaching and learning competence among new staff Basic T&L competence among RPg GTAs Critical mass of effective academic managers across HKU Adequate supply of AdvanceHE fellowship mentors	Common understanding of good T&L practices across the University Greater respect for the relevance of CETL in faculty processes	Joint scholarly activities with staff in faculties Increased scholarly reflection in faculties Greater attendance at emergent practices in faculties	Continued teaching and learning, even in difficult circumstances
OUTCOMES (Long-term)	Critical mass of competent, open-minded and proactive teaching staff across HKU A robust and sustainable HKU-AdvanceHE Fellowship Scheme	Enhanced international esteem for T&L at HKU achieved through scholarly activity High level of pro-active ownership of T&L issues in faculties	Symbiotic collaborative relationship between CETL and faculties, based on mutual respect	A robust teaching and learning environment less prone to disruption
IMPACT (Individual)	Better, more informed teaching practices (including cutting edge practices). Greater opportunities to conduct T&L research and share emergent practices. Improved and more scaffolded career pathway and prospects (even for GTAs). Enhanced promotion opportunities. Greater sense of teaching and learning community. Greater job satisfaction.			
IMPACT (Institutional)	Enhanced student learning. Better and more informed coordination of T&L across the institution and more principled decision-making, even in chaotic situations. More informed T&L management. More communication pathways and better sharing of T&L practices. More consistent and principled treatment of T&L in comparison with research. Better T&L funding opportunities and better use of T&L funding. Enhanced T&L reputation locally and internationally.			

Table 5: CETL logframe for change

GLOSSARY

AdvanceHE: Former Higher Education Academy UK (HEA)
FT: Full-time/ PT: Part-time
GTA: Graduate Teaching Assistant
JTC: Join-the-Conversation event
MOOC: Massive Open Online Course
RPg: Research postgraduate student
PCLTLHE: Professional Certificate in Leading Teaching and Learning in Higher Education
PCTLHE: Professional Certificate in Teaching and Learning in Higher Education
PCTLHE: Certificate in Teaching and Learning in Higher Education
T&L: Teaching and Learning
TA: Teaching Award

6. Conclusion

Trowler, Fanghanel and Wareham (2005) identify and discuss the three levels of engagement in change in higher education. The first is the micro level reflective practitioner, who has the potential to be a lone change agent. The second is the macro level institution, a learning organisation in which change 'stems from alterations in organisational routines, practices and values' (p. 427). The third is the intermediate or meso level, which refers to social practices at departmental or sub-departmental level. It is this level, which, according to Trowler et al, is particularly essential for diffusion of innovations and culture changes, and which is missing in many teaching and learning enhancement initiatives in higher education. As Trowler et al (2005) state, the meso level is where 'changes actually take place' (p.435).

Analysis of the impact of the change process that CETL has undergone over the past six or seven years reveals that a number of enhancements have come about, partly as a result of the theory of change that has been planned and implemented, especially at the meso level. First, there has been encouraging growth in a quality-oriented, teaching and learning community of practice encompassing pockets of academics in most, if not all, faculties. Within faculties, communication about teaching and learning in these groups has been enhanced, and there is now far greater bottom-up sharing of emerging teaching and learning practices, which have resulted in some enhanced teaching practices and led to enhanced student learning. Secondly, there is now far better teaching and learning coordination at an institutional, strategic level, accompanied by more committed teaching and learning management at faculty level. Again, this has been an impressive achievement; however, it is not universal. Thirdly, with the help of the HKU-AdvanceHE fellowship scheme, progress has been made in creating improved teaching career pathways and promotion prospects, especially for academic-related teaching staff. Finally, HKU's reputation for high quality teaching and learning has been enhanced, as the new teaching and learning culture has become more established; this, in turn, has resulted in the emergence of a healthier and more balanced view regarding the respective roles of teaching and research at the University.

The challenges that have arisen during this process of change have been many, and not all of them have been successfully resolved. First, not all faculties have embraced change to the same extent. In response, we have recognised the value of working in collaboration with faculties and respecting faculty priorities and practices, again especially at the meso level (eg with programme and course teams). This has necessitated an understanding of the value of dialogue rather than monologue. Secondly, faculties tend to develop at their own pace, so we have come to appreciate that change inevitably takes time, and recognise that the speed of change varies from one context to another, and from one person to another. Thirdly, we have realized that in the past CETL occasionally fell into the trap of not listening to academics in faculties, but instead preached to them. Therefore, we have learnt to be less prescriptive in our views about 'best' practice and now fully recognise the value of identifying, surfacing and celebrating locally-emerging 'good' practices at the meso level. Lastly, while we understand that teaching and learning enhancement requires leadership, we have also come to realise the importance of developing collegial and productive relationships with faculties, and identifying those groups of reflective academics who acknowledge the need for change and are willing to take action to achieve it, and then to advocate it to others. As we look to the future, there is far more we can and should accomplish with these groups at the meso level within the University.

References

Bilbow, G.T., Hounsell, D. & Zou, T. Fostering Dialogue about Practices. In: Stensaker, B., Bilbow, G.T., Breslow, L. & Van Der Vaart, R., eds. (2017). *Strengthening Teaching and Learning in Research-Intensive Universities.* Palgrave Macmillan

Blackwell, R. & Blackmore, P., eds. (2003). *Towards Strategic Staff Development in Higher Education*. Maidenhead: Open UP.

Boud, D. & Brew, A. (2013) Reconceptualising academic work as professional practice: Implications for academic development. *International Journal of Academic Development*, 18(3), 208-221.

Bucklow, C. & Clark, P. (2003). A new approach to professionalising teaching and accrediting training: The institute for learning and teaching in higher education, Chapter 7 In Blackwell, R. and Blackmore, P. (eds.). *Towards Strategic Staff Development in Higher Education* (Chapter 7, pp. 67-79). London: SRHE.

England, R. (2013). Standard + Case and Cynefin. http://www.basicsm.com/content/cynefin-and-standardcase © Copyright Two Hills Ltd www.twohills.co.nz.

Gosling, D. (2009) Educational development in the UK: A complex and contradictory reality. *International Journal of Academic Development*, 14(1), 5-18.

Hounsell, D. (2011). *Graduates for the 21st Century: Integrating the Enhancement Themes*. Institutional Activities. Glasgow: QAA Scotland.

Kofax (2012). *Using Case Management to Empower Employees and transform Customer Service*, Kofax, www.kofax.com

Kurtz, C.F. & Snowden, D.J. (2003). The New Dynamics of Strategy in a complex and complicated world. *IBM Systems Journal*, 42(3), 462-483

Land, R. & Gordon, G.,eds (2013). *Enhancing Quality in Higher Education: International Perspectives*. London: Routledge.

OECD/DAC Network on Development Evaluation (2019). *Better Criteria for Better Evaluation.* http://www.oecd.org/dac/evaluation/

Ramirez, F. O., & Christensen, T. (2013). The formalization of the university: Rules, roots, and routes. *Higher Education*, 65(6), 695-708.

Rogers, P. (2014). *Theory of Change, Methodological Briefs: Impact Evaluation 2*, UNICEF Office of Research, Florence.

Senft, B., Rittmeier, F., Fischer, H. & Oberthür, S. (2019). *A Value-Centered Approach for Unique and Novel Software Applications*. Springer Link: https://link.springer.com/chapter/10.1007/978-3-030-23535-2_27

Shattock, M. (2014). *International Trends in University Governance: Autonomy, Self-government and the Distribution of Authority*. New York: Routledge.

Snowden, D.J. (2010). *The Cynefin Framework*. https://www.youtube.com/watch?time_continue=101&v=N7oz366X0-8&feature=emb_title

Stensaker, B., Bilbow, G.T., Breslow, L. & Van Der Vaart, R., eds. (2017). *Strengthening Teaching and Learning in Research-Intensive Universities*. Palgrave Macmillan

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