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THE PEDAGOGIC PALETTE: PERSONALISING PEDAGOGIC PRACTICE

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Russell Crawford

INTRODUCTION

This article is a practice-based educational work that is theory-informed and presented in two broad sections. The first establishes the pedagogic epistemology underpinning the second section, where a novel framework is outlined for the reader. Since 2018, higher education has moved largely towards a wellbeing-focused, outcomes-based approach to learning, teaching, and assessment. This approach built upon existing trends and truly crystalised just prior to the pandemic as a driver in higher education (Henning et al., 2018). Whilst the logic and global events underpinning this movement may be inferred from the previous work and the historic change of perspective post-2019, it almost chronically fails to account for a truism that hides at the very centre of modern higher education practice and that pre-dates global events by a significant margin: "Educational theory is a theory of conduct" (Chambliss, 1987a).

This truism, deceptively simple at first, becomes more meaningful through repetition because it highlights a sector trend. Superficial delivery style(s) are being considered 'educational theory' over actual pedagogic theory-informed practice, irrespective of the global focus du jour (Chambliss, 1987b). Even as recently as 2011, there is literature to support this notion that the 'how-to' aspects of learning and teaching may be more prevalent than the deeper pedagogic underpinnings of disciplinary educational practices (Geirsdóttir, 2011).

This practice-based article, and the novel framework outlined within, explore and offer a position on the timelessness of true educational theory as a way for educators to understand their discipline, frame and re-frame their expertise, and impart 'learning.' To accomplish this feat, it is necessary to work from two key assumptions:

- **Assumption 1** – That the educator has several educational theories they either knowingly or unknowingly apply in their routine practice (in other words, their pedagogic comfort zone).
- **Assumption 2** – That there will often be educational settings or goals that require more than those comfortable routine practices (by analogy: every problem looks like a nail if the only tool you have is a hammer).

Accepting these assumptions acts as the groundwork for embracing the latter part of the truism, that of a "theory of conduct" distinct from delivery style(s). A theory of conduct in this context means the conduct of the educational practitioner (facilitation as pedagogy). It encompasses their curation of any number of relevant pedagogic theories and practices to suit the needs of the learning, and is linked with work outlining flexible pedagogies (Ryan & Tilbury, 2013).

This theory is a simple idea but increasingly complex and challenging in implementation for contemporary higher education, with such diverse sets of practitioners all educating in their own way. Adding to this complexity is a described subset of educational practitioners sometimes termed 'pracademics,' defined as discipline practitioners (rather than higher education specialists), industry contributors, well-meaning amateurs, and everything in

between (Powell et al., 2018). This variable range of practices brings with it an added dimension of critical thinking on what the 'student experience' actually feels like for recipients on the ground (Dickinson et al., 2022).

Many higher education providers attempt to enforce probationary requirements and/or academic development offers to ensure teaching staff have a suitable higher education qualification. However, the reality is that the higher education sector is resource-limited (principally in time, but also in cost), and the appealing intrinsic value that industry experts often promise inevitably pulls in the opposite direction (Nurunnabi et al., 2019). Some providers opt instead for teaching-only contracts to ensure a backstop of highly-qualified pedagogic practitioners directing the learning. This means that industry experts can be brought in, pitch their specialism, and leave. Learning consolidation and comprehension is then picked up by the professional teachers to great beneficial impact. However, this combination can be expensive to offer (Okolie et al., 2020). Other providers opt for a more 'research-informed teaching' approach that attempts to link the practitioner's own research interests with their teaching practice for authenticity. This approach can work, to a degree, provided these two aspects are aligned and consistent (Dickinson et al., 2022). The model struggles when niche research interests and the wider curriculum are too far apart. Arguably, the entire undergraduate student experience, barring perhaps the final year, is not well served by this model in practice, as it still does not fundamentally ensure that professional educators are the interface points for learning, a pedagogical position that is supported by the recent literature but still open to interpretation.

Taking the central premise outlined in the earlier two assumptions and the above position, and reframing challenges as opportunities, there is an argument for enhanced pedagogic literacy as a basic competency to augment the wider educational experience for students. The work presented here offers a potential solution that is practical and highly flexible. Enter then, the Pedagogic Palette, a scaffolded tool for educators that gives structure and outline for how they might apply a flexible set of complementary evidence-informed educational practices (in other words, their theory of conduct). The intent of the palette is to allow the practitioner to efficiently select, define, and apply their personalised learning and teaching approach on the ground. It permits risk-taking by combining the familiar with the new. Educators can thereby reap the benefits of the wealth of pedagogic literature underpinning each facet of the palette without necessarily having to take the time to be an expert in each of them (Mynott & Zimmatore, 2022).

This author specifically designed the pedagogic palette based on an action research approach to curating observations or reports of interdisciplinary educational practices and presented it to be applicable in a discipline-agnostic way. The pedagogic palette presents a curated selection of pedagogic theories and approaches that the educator can self-select, self-define with, or even sample from to inform their own learning and teaching decisions in class and curricula.

With over 50 basic (one-to-one) combinations possible (potentially several hundred combinations, growing exponentially, if applying more than two palette theories), the pedagogic palette attempts to allow educators of any ilk to self-select, develop, test, and apply established educational theory through their own practice. It is intended to set the stage for consistent educational scholarship (Felten, 2013). By promoting evaluation by the educator who looks to apply the tool in their own practice, the pedagogic palette offers a diverse but defined range of praxis (in other words, the way in which learning, skills and theory are enacted) that can be used alone or in combinations to engage, assess, and challenge learners to scaffold their learning.

THE PEDAGOGIC PALETTE UP CLOSE

The pedagogic palette consists of eight pedagogic styles and seven broad pedagogic approaches, adopting a curated selection of evidence-informed educational theories and practices as follows.

Figure 1. The Pedagogic Palette (R. Crawford).

Eight styles	Seven approaches
Challenge-based Learning	Design Thinking
Problem-based Learning	Connectivism
Gamification / Playful Learning	Contextualism
Interprofessional Learning	Constructive Alignment
Workplace-based Learning	Threshold Conceptual Learning
Affirmative Appreciative Enquiry	Situated Learning (social) Pedagogies
Action Learning	5-Step Blended Model
The Creativity and Innovation Effectiveness Profile	

Figure 2. Summary of the styles and approaches that comprise the pedagogic palette.

The following subsections offer context and additional detail to expand upon the individual elements of the pedagogic palette and aid the practitioner looking to apply the palette in understanding where and how these elements apply. Many combinations of styles and approaches are possible, with many being complementary (for example, design thinking and gamification for learning). Rather than risk limiting the combinations by outlining too many here, the power in the palette is, in the author's view, through the educator experimenting themselves in the context of their own teaching.

The eight palette pedagogic styles

Challenge-based and problem-based learning: Pedagogy and practice

Challenge-based Learning (CBL) is an active, student-directed approach to learning and teaching. It is grounded in self-directed learning theory and closely linked to Problem-based (PBL) modes of learning practice (Wood, 2003). CBL and PBL are grounded in an adult learning theory epistemology, meaning that certain assumptions can be made around intrinsic and extrinsic learner motivation when engaging with either pedagogy. This grounding also gives the educator the chance to create a session template that any discipline can then adopt and adapt to their own contexts whilst being assured that the session structure is both sound and efficient in terms of pedagogy, and impactful in its approach (Colliver, 2000). The distinction between CBL and PBL comes, unsurprisingly, in the issue these similar styles are intended to explore. PBL uses a real or simulated problem to help small groups self-select the learning they need to address that problem and, in doing so, grow and consolidate both knowledge and skills. CBL changes the focus towards addressing the issue with a greater scope and a wider perspective. Both approaches essentially use the same highly structured pedagogic application to achieve their learning outcomes (Gallagher & Savage, 2023).

Gamification or playful learning

Gamification in the higher educational context has been shown to be a valuable and impactful tool. Engaging and developing learning through game-based methods has been successful in supporting small group learning, linked to concepts of andragogy in the literature (Caponetto et al., 2014). The pedagogic literature also demonstrates that play enhances a broad and useful range of skills such as communication, logistics management, interpersonal relationships, and team building (Hamari et al., 2014). The modes of implementation and styles of play are diverse, stretching across physical and digital media (Sailer & Homner, 2020). The take-home message of this approach, justifying its inclusion in the palette, is that it is inherently creative, with imagination the only limit to the application of playful learning. It leads to practitioners using their own creativity when deciding how to apply gamification to support learning. Within this pedagogy there are several fundamental questions that adopting this approach entails, with the most immediate always being the nature of the play – is it collaborative, competitive, or a hybrid? From this first decision, the gamification shapes its impact on learners and offers educators a valuable and versatile tool to apply.

Interprofessional learning

Interprofessional learning emerged as a pedagogic practice from the health and legal professions. It can, however, be applied in many educational contexts where there are multiple disciplines and professionals interacting in a team, industry, or real-world context. For the educator, it makes for an attractive option that has a strong assessment rationale for learning. The interdisciplinary nature of the pedagogy is key to that rationale (Curran et al., 2010). This pedagogic style is therefore a reliable and proven go-to for educators who are looking to link assessment with professional identity and practice.

Workplace-based learning

Linked tightly to the communities of practice and experiential learning pedagogic literature bases, workplace-based learning (WBL) in essence connects learning to and within the workplace. It has a strong element of social learning at its core, and links well with contextual learning philosophy (Scholtz, 2020). This style of learning is participative in nature, and gains its value from being applied in real-world (not simulated) environments in which productivity, established social norms, and hierarchies are experienced (Nikolova et al., 2014). Building on this contextualist pedagogic view of WBL, there is an authenticity to the work that both drives learning and places it at risk. As learners enter these environments, they (and their learning) become part of that living culture and a shared 'work' experience; however, if the educator is mindful of these risks and their curriculum design has mitigation built in for them, learners can gain a great deal of positive impact from WBL (Rhodes & Shiel, 2007).

One thing to note with WBL is that there are relatively few excellent examples of assessment related to this style of pedagogy currently in the sector (Scholtz, 2020). This might arguably be a caution, but it also represents an opportunity for pedagogues to lead the way in defining what rigorous and valid assessment looks like in the workplace environment.

Affirmative appreciative enquiry

At its core, affirmative appreciative enquiry (AAE) is a pedagogic style that can be applied to complex organisations, structures, or individuals. AAE works from the base assumption that there are observable peak performances (in knowledge, skill, productivity, impact, and so on) that may be used to identify contributory factors to positive performances for improvement planning. Pedagogues can then engage in intentional collective analysis to causatively link peak with action (Cram, 2010). Therefore, AAE is a pedagogic tool that the educator adopts or adapts when looking to explore positive practices in a systematic, evidence-informed way. A good way to think about AAE in this context is by having the educator start by asking "how to think like a(n) {insert discipline here}" and then designing their learning accordingly. AAE lends itself well to educational scholarly evaluation of 'what works,' and offers a useful and rigorous tool to articulate disciplinary teaching practices in a causative manner (Bushe, 2007).

Action learning

Action learning offers a well-defined systematic approach to introducing innovation or change and then evaluating its effectiveness from the point of view of the individual (Pedler & Burgoyne, 2008). Action learning is best applied when the educator seeks to focus inwardly on their own educational practice, being a highly reflective pedagogic approach (Rimanoczy, 2007). It is both a way of producing knowledge about learning and a powerful way of improving reflection on learning. Helpfully, most educators either knowingly or unknowingly engage in a wide range of action learning methodologies in learning how to be educators. Its inclusion in the pedagogic palette is intended to raise awareness of action learning as a specific pedagogic style, so that the educator may bolster their nascent practices though engagement with the wider literature to ensure rigour and that their evaluations are valid (Pedler, 2011).

The creativity and innovation effectiveness profile

In essence, this pedagogic style provides a framework of granular guidance on how to assess and approach 'creativity' across seven domains which the educator can map to their learning outcomes and their assessment criteria (Warner, 2002). Reviewing the seven domains of creative consciousness – levels of curiosity; pattern-breaking skills; idea-nurturing ability; willingness to experiment and take risks; courage; resilience, and energetic persistence – it is not difficult to see why this style was included in the pedagogic palette. These domains are discipline-agnostic and offer a useful framework to inform creation of learning outcomes as well as to define assessment modes or innovative ways of assessing learning (Warner, 2002).

The seven palette pedagogic approaches

Design thinking

Design thinking is a well-described educational/industrial concept that articulates the application of human-centred educational techniques to solve problems in creative and often innovative ways (Razzouk & Shute, 2012). Design thinking examples can be found through its application by leading international brands (think Apple, Samsung, or Sony). As a pedagogic approach, design thinking is deep, iterative and seeks to understand the user (or, in educational terms, the learner). It seeks to challenge assumptions while defining and redefining problems to identify solution-centric strategies (Dorst, 2011). Design thinking is a potentially powerful approach to educational thinking and working.

Connectivism

The pedagogy of connectivism is about exploring and forming meaningful connections between people, both in-person and digitally (Goldie, 2016). The reason it persists as a useful pedagogic approach is down to its evergreen positioning that avoids being time-linked to specific technologies, but instead presents itself as a useful way to cope with information overload and complexity (Downes, 2019). In the teaching and learning context, our learning environments (from virtual learning environments (VLEs) to physical libraries) are all equally regarded as 'learning networks' in this approach, which aids the educator in growing and developing their practice in connected ways. This makes a connectivist approach a highly adaptable, contemporary, and innovative pedagogic way to articulate education (Downes, 2022).

Contextualism

Predicated on the idea that the learning method is at least as important as the content, contextualism as a pedagogic approach can be considered learning in situ, meaning the learning best takes place in the environment in which that learning is to be applied or recalled (Hudson & Whisler, 2008). As an illustrative working example of this approach, Godden and Baddeley showed that scuba divers were able to recall a memorised list better under water if they learned the list under water, rather than on dry land, and vice versa (cited in Murre, 2021). In educational disciplinary terms, the contextualist approach presents the educator in a myriad of educational arenas with a novel pedagogic space to define their disciplinary contextual learning, from performance to skill competencies, in a way designed to improve the positive benefits of learning.

Constructive alignment

One of several core pedagogies in the palette, constructive alignment essentially starts with learning outcomes and positions teaching and assessment to service those outcomes, an approach sometimes summarised as "test what you teach" (Biggs, 1996). The learning outcome therefore ends up driving the learning activity, typically through suitably descriptive verbs aimed at quantifying achievement of the outcome (for instance, "explain the concept of …"). A constructive alignment approach means that learning is constructed through activities the learners perform, thereby making learning about what is done. By extension, assessment is about how well the students have achieved their intended outcomes. Outcomes can be assessed in any suitable mode so long as it allows for demonstration of knowledge or skills gains (Biggs and Tang, 2010). Constructive alignment is most impactful when packaged alongside a pedagogic taxonomy (for example, Bloom's taxonomy or SOLO (Anderson et al., 2001)) which helps the educator map levels of understanding built into their learning outcomes and aids them in creation of assessment criteria and rubrics that are directly measuring success in that context.

Threshold conceptual learning

One of the most fundamental and famous contemporary pedagogic approaches, threshold concepts are transformative by nature and can be thought of as key milestones on a learning journey, denoting progress but also change as the learner passes each milestone. Meyer and Land (2003, p. 412) suggest that "a threshold concept can be considered as akin to a portal, opening up a new and previously inaccessible way of thinking about something. It represents a transformed way of understanding, or interpreting, or viewing something without which the learner cannot progress." One common analogy to illustrate threshold concepts is learning to ride a bicycle: once you know how to ride, you cannot un-know that learning which makes it, therefore, transformative. The art of an educator taking this pedagogic approach is located in understanding the thresholds in their educational design, and building the learning from there (Barradell, 2013).

Situated learning pedagogies

A situated learning pedagogic approach can be used to explain an individual's acquisition of learning skills and asks for consideration of where learning takes place through exploring the relationships between people (O'Brien & Battista, 2020). This pedagogic approach involves the learner themselves making connections with prior knowledge by authentic, informal, and often unintended contextual learning. This usually involves students taking part in collaborative activities and being challenged to use critical thinking and practical abilities. The approach is founded on a belief that what people learn and do is situated within their role as a member of a learning community and encompasses the communities of practice pedagogy (Lave & Wenger, 1991).

Five-step blended model

The five-step blended model is not a pedagogy *per se*, but rather an approach to structuring learning activities (typically online activities) in a cyclical and reflective way, which is then carefully supplemented by a curated suite of digital resources (Laurrillard, 1994). As a pedagogic approach, this model offers the less experienced pedagogue a simple scaffolded approach to session design that drives learning along prescribed pathways. For educators with more experience, the model offers a starting point from which the educator can adapt the steps to suit the learning to maximise a positive learning experience (Heinze & Procter, 2004).

INNOVATION THROUGH PRACTITIONER CHOICE

With the pedagogic palette outlined above, the main reason for its conception comes to the fore. The educator is able to select bespoke combinations of pedagogic style and approach, akin to selecting complementary colours on a colour wheel, based on their educational context and/or need. In this way, the educator engaging with the palette creates a highly personalised disciplinary learning experience that is inherently evidence-informed. The added benefit of the educator exploring different combinations that could occur across dimensions of practice (Figure 3) is the opportunity for evaluation and scholarship to follow their choice as new innovative applications of reliable pedagogic forms are selected, created, and shared (Clegg, 2009).

As a worked example, Figure 3 presents combinations from the pedagogic palette at three levels of consideration:

- Micro level – for Individual sessions.
- Meso level – at Module or Course level.
- Macro level – at Departmental or Disciplinary level.

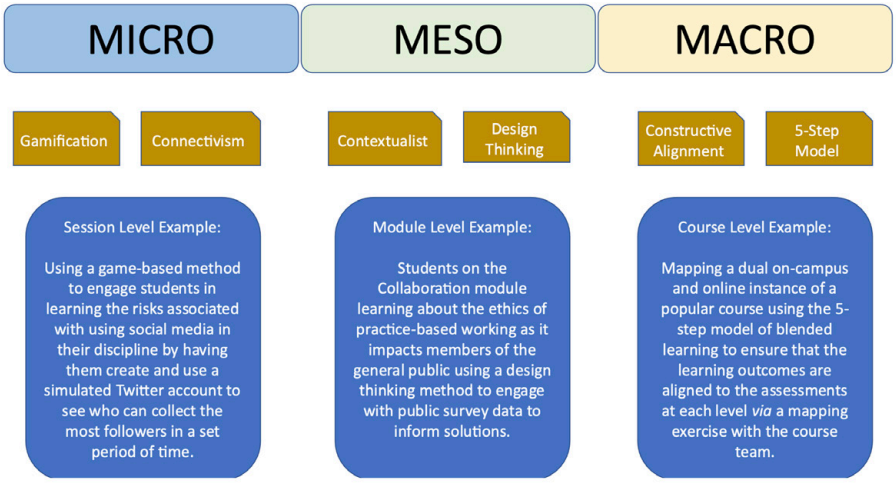

Figure 3. Worked example of prospective pedagogic palette combinations at three different levels.

As can be seen by these three different example combinations, 'colours' from the Pedagogic Palette (the gold boxes) can be selected for use at the micro, meso, or macro levels to drive educational practices by adapting and applying aspects to achieve the highest quality of practice and, by extension, student experience. Educators are therefore free to diagnose, experiment, and refine their own combinations from the palette to scaffold and tailor learning as they build curricula.

The intention is that as practitioner confidence and familiarity grows through application, so too would their ambition to combine and refine more and more. Often starting with just two 'colours' from the pedagogic palette, successive design decisions can progressively add a third or fourth to the combination allowing the educator to create a highly personalised and unique mixture conferring subtlety and educational thinking, and becoming a useful way to carefully curate designed learning experiences. With the pedagogic palette as a scaffold, and with growing experience born from its application, the reflexive practitioner or educator creates their own unique educational narrative that the palette helps them articulate for their learners, underpinning both evaluation and scholarship.

Russell Crawford is Professor of Education and Director of Learning and Teaching at Falmouth University. Russ has an active interest in gamification for learning and many years of academic development experience in implementing high impact pedagogies. His own teaching and research background covers various health contexts, both UG and PG. Russ is a Senior Fellow of Advance HE. He won the Times Higher Education (THE) "Most Innovative Teacher of the Year" in 2017 and was awarded his National Teaching Fellowship in 2018.
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