Hitting the Sweet Spot in the Next Normal: Innovative Response to Disruptive Change

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Abstract

The tertiary education sector's emergency remote teaching response to the COVID-19 pandemic was swift and committed. The rollout from March 2020 of EdTech to complement the extant technology platforms was rapid, but hitting the sweet spot, the nexus of teachers, students and EdTech was not uniformly attained. Interrogating the particularities of this elusive target rests on three premises: thorough and durable comprehension of knowledge beyond facts remains the goal; the post-pandemic future is different from that normal preceding it, and compensating for the lived existence of much of not most of the student body is a point of weakness. The role of tertiary education institutions is elevated to prominence in the next normal. For, if teaching is to be mechanical and learning indifferent, the pandemic will have taught us nothing. Deep learning, the goal of instruction, requires prioritisation and deliberate and considered methodisation. This, in turn, requires confronting a multiplicity of issues: the methods of teaching and assessment that prompt superficial and short-term memorisation, the shortcomings of quality assurance systems, the scant connection there appears to be between taught curricula and consequent learning outcomes, and the desires of the labour market which for younger graduates especially, remains tantalisingly out of reach. If education is to be societally relevant, it must find the balance between achieving redress aligned to ideological principles and transformation mapped to the requirements of the labour market.

Keywords: instrumental learning; next normal; post-COVID education; learning and performance; societal relevance; graduate under-employment

Introduction

The immediate horror of the COVID-19 pandemic that beset us early in 2020 has faded. While the disease remains ever present, it is no longer a public health emergency and

UNISA university of south africa PRESS
Progressio
Volume 45 | 2024 | #13690 | 14 pages
https://doi.org/10.25159/2663-5895/13690
ISSN 2663-5895 (Online), ISSN 0256-8853 (Print)

"this trend has allowed most countries to return to life as we knew it before COVID-19" (Ghebreyesus, 2023, online). Yet even though the lived horrors of the pandemic lie behind us, we should not forego the opportunity the disruption introduced: to reset the way we go about business, work, play, and education. In the business of education work, anecdotal evidence abounds (evidenced by information-sharing sessions, workshops, and symposiums) that EdTech not only facilitates reaching students virtually but also demonstrates the promise of reaching more students effectively. It would be remiss of us to reach students indifferently, for there is an opportunity to rewrite the "how to teach" playbook.

However, the empirical evidence contrasting pre-COVID-19 education performance with post-COVID-19 performance has yet to manifest extensively. There is even some empirical evidence that discounts the promise of digitally intermediated teaching and learning practice, contradicting the favourable evidence that digital intermediation can improve both engagement and performance (see, for example, Sappaile et al., 2023). Could this be a function of student disenchantment with digitally enabled teaching and learning? Or is it a reflection of indifferent teaching having moved from the front of the classroom to behind the teacher's computer?

Revealed by Richard Skemp in 1976 and reported by him to be the substance of a conversation he had enjoyed with a fellow mathematics teacher some years before, a distinction can be drawn between instrumental teaching and relational teaching. Awareness of the distinction and the foundations thereof offers insight into the void between some learners' comprehensive, deep learning and the shallow—and instrumental—comprehension of others. Premising that knowledge extending to the cognitive complexity of conceptual and procedural understanding aligns with the pedagogical goals of tertiary education, this article seeks to elaborate, as an opinion piece, on that relationship in a post-pandemic tertiary education context.

A second premise is the requisite post-pandemic response the education fraternity must invoke, the momentum of which may be thought of as having slowed, if not stalled. As reflected by consulting firm McKinsey:

> For some organizations, near-term survival is the only agenda item. Others are peering through the fog of uncertainty, thinking about how to position themselves once the crisis has passed and things return to normal. The question is, 'What will normal look like?' While no one can say how long the crisis will last, what we find on the other side will not look like the normal of recent years. (Davis 2009, cited by Sneader and Singhal 2020)

While Sir Ian Davis was reflecting on the aftermath of the global economic meltdown of 2008, his musings are no less relevant to the post-pandemic next normal. The question is, will teaching and learning in this next normal reflect the lessons hard won during the lockdown years, or will the great return be to pre-pandemic business as usual?

A third premise emerges from the response the tertiary education sector was compelled to make as institutions were shuttered in March 2020. More particularly, the compensation compelled by the strictures is bleakly evidenced by the deficit of adequate digital technology (including bandwidth) in, usually, first-generation students' homes. While the sector responded with emergency remote teaching, scaffolded with online learning management systems and the near-overnight ubiquity of the Zoom platform, some institutions were obliged to print study guides—personally delivered by instructors to their predominantly rural student body, homestead by homestead.

This appreciation reveals the necessary accommodation of the existence of South African students (certainly here in KwaZulu-Natal). The accommodation is especially so in rural universities and those institutions where transformation has been front of mind and where first-generation students form the greater part of the student body. The revelation this inspires is whether curriculums and teaching have been adequately aligned to the needs of the student body and, ultimately, the needs of the labour market. Tewari and Ilesanmi (2020) criticise the misalignment of curricula and study programmes with the skills set and prior knowledge with which students enter higher education. Their argument compellingly illustrates that the haste with which the tertiary sector has sought to redress the apartheid-era shortcomings of access and output has impelled a concomitant decline in the quality of education delivered and received.

Archer comments on the transformation of the tertiary education sector and observes that "Elevating a second-order function like redress above what have historically been the defining features of a university for more than a thousand years has probable destructive consequences overlooked by academic and administrative insiders and policymakers" (2017 online). For Engelbrecht (2022 online), "the impersonal nature of tertiary education generally—and particularly so since the pandemic advent—accentuates marginalisation of vulnerable youth and impinges on effective learning and a favourable learning experience".

This article accordingly seeks, as conceptual reframing, to unpack the intersections of instructors, students and, specifically, EdTech technology. This, to the end of placing in stark relief the principal enigmas of the articulation gaps between student entrants and university classrooms and graduates and the labour market. If this were to be achieved, then subsequent empirical research that draws only elementary relationships between pre-COVID and post-COVID student performance would be correctly shunned in favour of holistic appraisal. Holistic appraisal is, for this article, as well as the observational research for which it paves the way, an account of the role of relational teaching in the nurturing of deep learning.

Problematisation

The problem is therefore asserted as a function of indifferent teaching, further distancing students (and weak students in particular) from the goal of knowledge attainment that

makes graduate-level employment a credible prospect and a flourishing life an achievable goal. A second-order problem is also illuminated: the potential of EdTech is diminished when it is only adopted and never embraced by teachers and students. The consequence is a compromised student-teacher interface with low-grade mechanical teaching and dutiful but indifferent learning, neither of which contributes to human capital development. If there is a solution to be offered, it is proposed as awareness of the points of origin of learning and teaching compromise, accompanied by an objective-driven return to the principles of cognition, cognisant of the constraints of the South African higher education context.

Whereas instrumentalists may be considered to coerce a *renting* of knowledge *just long enough for a test* (Spencer 2023), relationists facilitate knowledge *ownership*—learning sustained both for life and lifelong learning. The upset of the 2020 pandemic was a constructive disruption. One serves to disrupt the mechanics of instrumental knowledge coercion in the cause, ultimately, of student progression. Retreating to the refuge of our home offices with, for each of us, our particular mix of alarm, bravado, and uncomprehending anxiety about how (best) to conduct our classes, we wrestled with online instruction and education.

How wonderful! With each societal unravelling our species has endured. In the current *decum millennium*, anthropologists point out how we have alternately faded away and resurged. Do we find ourselves struggling, still? We appear not to have overcome the tensions inspired by first retreating and then reluctantly returning to our workplaces. A return marked perhaps by incomplete mechanistic reasoning, although this might only become evident in the fullness of time. Notwithstanding, the hiatus has inspired, at least for some, a return to basics. Basics with a rich foundation in the last century as educators, philosophers, and psychologists coalesced our comprehension of cognition, knowledge, and instruction.

The pandemic brought sharp focus to technology (more accurately, EdTech) and its rapid adoption, although it might be said that embracing EdTech is distinct from technology adoption. Where adoption represents a means to an end, embracement is an enthusiastic leverage of the opportunity digital technology provides to ease the attainment of facts, concepts, techniques and reflexivity. Utilising EdTech and doing so with exuberance introduces two new frontiers to the familiar intersection of the teacher-student interface. An interface of teachers and EdTech, and students and EdTech. Where all three ‘protagonists’ can be intersected, the resulting *Teacher-Student-Edtech* overlap represents a sweet spot.

This conceptualisation, this *bridge*—seeks to frame the basics of good teaching in the modern South African higher education context. It is informed by the experience of ‘working from home’, a half-century of instructional experience, and a century-plus of fundamentals tucked securely away in the knowledge commons that the artifice of publishing-for-survival has obscured with layer upon layer of hyper-focused

empiricism. That the goal of unassailable generalisation has prompted this acute focus is inarguable. That the emphasis on deep-dive into the subject matter might well camouflage the subject essence is inescapable. That we might refute the need to revisit the fundamentals is unforgivable.

Learning as the Target of Instruction

For Nussbaum (2009, 2000), human development is a cornerstone of a flourishing life, a life where one can act on one's environment with emphasis and effect. Gluchman agrees: "knowledge and critical thinking both liberate and strengthen the human capacity for decision making and acting" (2018, 330). Acting out manifests in graduate employment, noting, of course, that far too many graduates endure the indignity of under-employment, a reality glossed over by employment statistics. Employability, however, is a function not just of Gluchman's *knowledge* but of *competence* (both in the graduate's personal life and that which is offered to the employer as a value proposition), *self-awareness* and *understanding* (Griesel and Parker 2008; Yorke and Knight 2006, italicised emphasis has been added). The sort of understanding one might expect to gain from an education emphasising deep learning and not coverage teaching, the instructional fall-back Wiggins and McTighe (2005, 3) refer to as "teach, test, and hope for the best". Simply stated, an education is undertaken to develop employability. An education is crafted by the delivering institution as an exercise in enhancing human performance.

Nevertheless, performance can be distinguished from learning. Indeed, "improvements in performance can fail to yield significant learning" (Soderstrom and Bjork 2015, 176). Refreshed as a research interest area by Bjork in the 1990s, latent learning is understood as learning that has taken place but which is unapparent in the absence of a stimulus or reinforcement requiring the latent learning's reveal or utilisation. Assessments are devised in the classroom to prompt learning's reveal. The research originated in the late 1920s, and Soderstrom and Bjork illustrate the pioneering work of Blodgett (1929) and Tolman and Honzik (1930) and the pursuit in the decades following by Postman and Tuma (1954) and Stephenson (1954). In 1992, Robert Bjork and Elizabeth Bjork highlighted that "the distinction between learning and performance is indexed by *storage strength* and *retrieval strength*, respectively" (Soderstrom and Bjork 2015, 191, emphasis in the original).

The connections between storage and retrieval are (or, at least, it is intended that they be) practised in elementary and secondary education. Students' cognitive parameters are not amended but with remediation, when they reach higher education. Nevertheless, while university remediation programmes and extended programme curricula are frequently brought to bear, the effectiveness of remediation is contested (Archer 2017). The pandemic period's continuous assessment regimens, however, drew performance opportunity ever closer to instruction, and Bjork emphasises that mass practice with retrial can allude to performance if measured proximately to the point of instruction.

> The fact that conditions of learning that make performance improve rapidly often fail to support long-term retention and transfer, whereas conditions that create challenges (i.e., difficulties) and slow the rate of apparent learning often optimize long-term retention and transfer, means that learners—and teachers—are vulnerable to mis-assessing whether learning has or has not occurred. Thus, to the extent that we interpret current performance as a valid measure of learning we become susceptible not only to mis-judging whether learning has or has not occurred, but also to preferring poorer conditions of learning over better conditions of learning. (Bjork and Bjork 2020, 3)

The matter is consolidated by Soderstrom and Bjork thus:

> "Both survey and experimental research in metacognition have revealed that learners often mistakenly conflate short-term performance with long-term learning, ostensibly thinking, 'If it's helping me now, it will help me later.' The extant survey literature on beliefs about learning suggests that students, by and large, endorse and use strategies that may confer short-term performance gains but do not foster long-term learning" (2015, 191).

It is worthwhile reflecting that instructors may fall victim to this student epistemological framing—after all, few instructors join academe to remediate students, and *if you can't beat 'em, why not join 'em* by engaging methods of teaching and performance trials that prompt superficial and short-term memorisation? Indeed, it may be that the temptation is too much to resist. Where students have, and especially so in public schools, successfully (such as it may be) navigated the trials of 12 years of formative education, largely set to a pattern-repeat of superficial learning, there is little incentive to 'learn hard'. Where instructor merit is measured by a student-evaluation-of-teaching instrument, there is little teaching reward for disregarding the misinformed wishes of the student body.

Accordingly, what a terrible implication is conveyed by Druckman and Bjork when they reveal that "illusions of knowing, comprehending, or remembering occur, and that illusion can be as compelling a basis for action as a real measure of knowing, comprehending, or remembering" (1994, 58–59). For, if the enhanced human potential Nussbaum seeks is but a sham—an illusion of knowledge and of enhanced human potential dressed up in a degree certificate—then there is a great disservice being perpetrated on students, graduates, and the nation.

Of course, one might be inclined to rally a fallback position in the form of quality assurance (QA), a "system that includes planning, policies, systems, strategies, and resources used by the institution to satisfy itself that its quality requirements and standards are being set, met, and periodically reviewed" (Council on Higher Education 2021, 15).

A concern, however, is that QA systems are, in practice, a tenuous defence against perfunctory instruction and, hence, superficial learning. The quality control (QC)

regulated by QA systems can, unfortunately, be simply a means to an end—with constrained attention to pedagogical detail. Commenting on the nobility of the no-student-left-behind campaign (NSLB) of the pandemic period, Samuel muses whether "the NSLB could have infiltrated into the higher education system a preoccupation with keeping the system afloat without an opportunity to examine robustly enough the quality and purpose of pedagogical interactivity" (2022, 121). Ruefully, it might be said there just does not seem to be sufficient safeguard built into a system that is obliged to honour state-sought progression and throughput in return for subsidy.

In this vein, Archer asks rhetorically whether there are, or will be, "a sufficient number of individual lecturers interested in pursuing … the growing support for the scholarship of teaching and learning of students underprepared by academic criteria" (2017, online). The point is that there are distinct practices by which ostensible learning can be demonstrated through couched assessment whilst revering the predicates of QA. The pernicious impact of this workaround is felt in declines in institutional popularity, graduate underemployment, and declining postgraduate uptake of South African graduates by international institutions (a criterion Archer puts forward of what we might think of as 'good education').

Few would contest that learning should incrementally developing students' and then graduates' value proposition. This value proposition is understood here as labour market preparedness—an economic contribution—acknowledging the perspectives that rail against the notion of a flourishing life having to be characterised by employment. Nevertheless, valuable learning requires attentive curriculum and instruction (Johnson, Uline, and Perez 2019), sensitive to the need for students to master performance standards. Instead of declaring 'I taught it', one might ask 'did they learn it?'. That is a function of objective-driven lesson planning and understanding of the interplay of curriculum and comprehension beyond content.

Skemp (1976) identifies a conundrum: What to do when a student wishing to understand instrumentally receives instruction from a teacher who wishes them to understand relationally. As Skemp has it, this does not cause short-term problems "for the pupils, though it will be frustrating to the teacher. The pupils just won't want to know all the careful groundwork he gives in preparation for whatever is to be learnt next, nor his careful explanations. All they want is some kind of rule for getting the answer. As soon as this is reached, they latch on to it and ignore the rest" (1976, 4). However, there is so little contextual understanding that it is likely that students will not enjoy any prospect of materially useful understanding of the ostensibly learned knowledge in any practical circumstance.

Therein lies an effective challenge for the instructor. This prompts a question: Are the lecturers employed by South Africa's universities to instruct and publish sufficiently skilled and incentivised to teach effectively? Or is there a scarce incentive to devote more than the employer's teaching workload framework lecture preparation allowance

to curriculum planning, development, materials preparation, maintenance of learning resources, and favourable learning conditions? Further, can the instructor body be anticipated to be uniformly enthused? Or, more likely, acutely aware of the opportunity cost of great teaching to career development recognising publication counts? Finally, can the instructor complement be expected to embrace EdTech or adopt it as a repository of publisher PowerPoints, a course outline, and, during the pandemic, test banks?

Interrogating the Promise of EdTech

Weller (2018, 36) illustrates the rich history of EdTech ranging from "1998, when the web had reached a level of mainstream awareness", adding that the following decade was characterised by e-Learning, setting the framework for "technology, standards, and approaches—a period that represents, in some respects, the golden age of e-learning" (2018, 37). Tracing the history of EdTech's evolution, Weller introduces the birth of the now-ubiquitous learning management system (LMS) as a phenomenon dating back to roughly 2004. Foretelling our current experience, he observes that "the quality of these [LMS] solutions was variable, often relying on the enthusiasm of one particular devotee" (Weller 2018, 39). LMSs were to benefit from several innovations, primarily Web 2.0 from about 2008, enabling user content development and upload (Weller 2018; Sclater 2008) and elevated connectivism. Weller illustratively cites Siemens and Downes (2005): "Siemens defined connectivism as 'the integration of principles explored by chaos, network, and complexity and self-organization theories. Learning is a process that occurs within nebulous environments of shifting core elements—not entirely under the control of the individual" (Weller 2018, 41). The foundation of Siemens' internet-native learning theory is that learning in an open, networked environment does not have to endure the confines of conventional education practice. The rationale was to underpin the emergence and early development of MOOCs, although Weller remarks that the adoption by the tertiary education sector of this technology-imposed standardisation is at odds with the free-wheeling open standards of the original application.

Weller also points out that the development of EdTech has not been an undertaking in the cause of education, but the inverse: "Sometimes these [education technologies] come with strong accompanying educational frameworks, but other times they are a technology seeking an application" (2018, 47). Rodriguez-Segura concurs, echoing the original promise of Siemens and Downes connectivism: "I find that EdTech interventions centred around self-led learning and improvements to instruction are the most effective forms of EdTech at raising learning outcomes" (2021, 171). In his review of research related to EdTech in developing countries, Rodriguez-Segura also identified access to technology and technology-enabled behavioural interventions as themes. Access is awkwardly accepted as a South African socio-economic actuality, and the behavioural interventions to which the author refers largely represent the use of technology to coerce teacher accountability—such as attending class and delivering lessons—a bleak commentary on the state of education in some geographies.

However, EdTech represents the promise of scale throughout the world, but perhaps most importantly, in developing countries, and it is clearly here to stay. Instructors are, after all, habituated to utilising their institution's LMS, even if only as a materials repository. This is, however, but one of the functions an LMS provides. Most essential, and as emphasised by Rodriquez-Segura, is the reach enabled by the asynchronous nature of what can be curated as a personalised student learning repository—akin to the 'mass customisation' with which we were familiarised a quarter of a century ago (see Gilmore and Pine 1997, for example). Self-led learning is now available 24/7/365, and the challenge for educators is how to harness the LMS platform and related technologies to build authentic learning experiences (Herrington and Kervin 2007; Donahoe et al. 2019), exploiting the experience of the developed world for whom the EdTech journey commenced decades ago. To do so—to build authentic learning experiences with authenticity—is to realise the ideological goal of South African education.

Moving to Conclusion: Whither the University?

As Gray suggests, "Decolonisation might be said to fundamentally challenge progressive social justice. This means making a long-term commitment to experimenting with novel forms of curricular coherence and inventing new approaches to teaching and learning" (2017, 94). Samuel urges disruptive pedagogy: "A pedagogy of disruption is argued to be an alternative approach to the complacent pedagogy of comfort. Within comfortable pedagogical spaces, students are protected from exploring new directions. Instead, the personal obstacles to their success are foregrounded, and routine expediency and habituated orientations become acceptable" (2022, 118).

These exhortations are inspiring, but are our pedagogical spaces necessarily discomforting? Is there what Bjork and Bjork (2011) refer to as a level of desirable difficulty? An incorporated difficulty deliberately established by the instructor to obligate learner attention and focus? Alternatively, do we remain on the safe side (but 'wrong' side) of Archer's tipping point:

> A tipping point is likely once larger and larger cohorts of inexperienced staff and under-prepared students enter existing universities, particularly those that aspire to be research universities on the international pattern. These institutions would then change their practice and culture in directions probably negative for the emergence of the highest quality talents and skills. (Archer 2017, online)

Dhunpath et al. observe a "push for generic graduate attributes … indeed a reflection of the neo-liberal push and vocationalisation of higher education to fulfil the needs of the workplace" (2021, 130). Samuel simultaneously observes that even though the higher education sector was required in 2020 to flex most dramatically under trying circumstances to very rapidly meet the parameters of an imposed dispensation, "many of the research studies conducted during this pandemic period of the last two years (2020-2022) … demonstrated a compelling commitment to student-centredness at various levels in the higher education system" (2022, 120). Stirring words—and if this

student-centred education was, in fact, meeting the needs of the workplace, we could bask in the reflected glow of a most favourable aftermath of policy and process.

It is concerning, then, that Statistics South Africa (Maluleke 2019) paints a depressing picture of graduate employment. Selecting pre-pandemic quarterly labour force statistics to compensate for the decline in employment brought about by the pandemic, we learn that 31% of young (sub-24 years of age) graduates were unemployed in Quarter One of 2019 (12.9% for the age group 25 to 34 years of age). "Education is also proving to be a non-guarantor of employment, with graduates affected by poor employment prospects", remarked Meyer and Mncayi (2021, 2). They illustrate that an increased supply of graduates has not been absorbed by a lacklustre labour market and suggest that the informal and 'gig' employment to which young unemployed graduates sometimes resort is unlikely to lift them out of poverty.

According to Miller, massification, marketisation, and bureaucratisation have ultimately led to an "exponential increase in instrumentally-based knowledge over the last few decades … marginalising in both strategic and specific policy oriented discussions … the very notion of epistemically significant knowledge" (2019, online). Miller acknowledges the evolution of traditional universities—but rues the decline of institutional purpose in the "shift from elite institutions to institutions of mass higher education (the so-called 'massification of higher education')" (2019, online).

Observing that universities continuously evolve to make education societally relevant, Etzkowitz, Ranga and Dzisah contend "The highly specialized curricula of the Industrial Society no longer fully meet the needs of an emerging Knowledge Society that requires citizens with entrepreneurial and inter-cultural capabilities to innovate and respond to change in an increasingly inter-connected world" (2012, 143). These authors point out paradigmatic change has always besieged universities and advocate a *Novum Trivium*, a contemporary version of "the medieval *Trivium* of grammar, rhetoric and dialectics (logic), the essential elements of education for all" (2012, 146). This would give rise to "an undergraduate curriculum for the Entrepreneurial University and may be an initial step in the transition to an entrepreneurial academic paradigm, by better aligning the university's teaching, research and socio-economic development missions" (2012, 146).

Archer (2017a) rails against a notion of this sort, distinguishing first-order (teaching and research) from second-order priorities of universities (such as redress and reformism, for example).

> In the long run, if it should turn out that South Africa's universities make the transition successfully to the new set of functions demanded by government and by many others, that outcome will be gratifying but also surprising. No one wants South African higher education to fail because new and unique burdens are being placed on the existing institutions. But equally no one can tell whether the universities will endure the imposed changes without failing to meet as well their first-order or systemic functions in society, polity and economy. (Archer 2017a, 1)

Archer does, however, admit:

> The right game is the long-term one of building up the institutional capacity both within and outside universities (1) to formulate ideas that are judged relevant to change by university peers in the wider world; (2) to collect and analyse evidence with a bearing on change; and (3) to assess the effects of such changes that are made. (Archer 2017b, 4).

Citing the pragmatist-in-chief John Dewey, Kuah and Tan (2021, online) shy away from university education confined to classrooms, lessons, and text prescriptions and proffer a middle ground. Dewey's pragmatism is appealing—especially to a pragmatist:

> John Dewey, deemed the modern father of experiential education, spoke of the paucity of traditional education in Experience and Education (1938). Its imposition from above, external discipline, learning from texts and teachers, rote learning of skills, preparation for a remote future, and static aims and materials, all fail in preparing the young for future responsibilities, but instead inculcate "docility, receptivity and obedience." Instead, he offered a progressive education based on his view that the social nature of mankind means that education is in itself a social process. As such, when education is treated as "intelligently directed development of the possibilities inherent in ordinary experience" — its potentialities are vast.

Even if the views of the role of the university vis-à-vis Archer's first and second-order priorities are disputed, there is no contradictory opinion on the primacy of education as a means to the end of directing our species' evolution. Dewey's perspective spotlights that were we to debase purposeful, deep learning in the expedient shadows of lacklustre instruction and engineered progression, we would knowingly contradict the vast potentiality of education.

If we are to avoid that fate, then we must reintroduce authentic pedagogy, cultivate a sincere and contextually-attuned epistemology, productively embrace EdTech, and seamlessly shift between instructivism and constructivism as our students find their adult feet.

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