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Values as the Pedagogy: Countering Instrumentalism

Terence Lovat

Abstract

The chapter sets out to identify ways in which the dominant pedagogy in the west has been shaped and influenced by instrumentalist imperatives emanating from the high age of logical positivism. It will furthermore expose the harm that has been done to education as a result, limitations on learning that are most apparent with the insights of updated sciences. The chapter will propose a values approach to pedagogy as a way of countering the narrow bounds of instrumentalism with an approach that possesses greater potential to address the whole person and the full range of human development measures, including personal, social, emotional, moral, spiritual and academic learning. The chapter will utilize international research that supports the beneficial claims of values pedagogy, with special reference to data from the Australian Values Education Program.

Keywords: values, values education, pedagogical approaches, curricular approaches, pedagogical leadership, holistic education, Australian education

1. Introduction

Ayer's [1] logical positivism had tried to ground all authentic knowing in the rational or empirically observable and/or measurable. Other than the "truths" contained in mathematics and logic, all other truth or assured knowledge claims were to be restricted to what could be empirically verified according to the so-called "Verification Principle" emanating from an eminent group of European philosophers known as the Vienna Circle [2]. The Verification Principle and its spawning in logical positivism were effectively outgrowths of nineteenth-century thinking resulting largely from conceptions of scientific method and supposedly assured scientific knowing held at the time.

During the nineteenth century and persisting well into the twentieth and even twenty-first centuries, scientific knowledge was believed to rest entirely on empirical methodology and so all human pursuits interested in knowledge were to follow suit. Among the human science disciplines, psychology and sociology developed in this way and, especially granted their influence on education, it was predictable that it would reflect these beliefs as well. Hence, as a highly influential influence, we find Tyler [3] generating a virtual empirical science around assessment regimes which, in the spirit of "teaching to the test," inevitably determined the direction of pedagogy. Bloom and associates [4, 5] built further on such thinking in the form of the taxonomies of educational objectives and their appropriate assessment regimes; these taxonomies drove generations of educational thinking, in turn also influencing the ways in which the principles and practice of pedagogy were enacted in schools. Thus, the foundations for instrumentalism in education were being well

set in place, with associated pedagogical assumptions and practice unrelenting regardless of masses of evidence of the damage that can be done by them to efficacious learning, not to mention that their own foundations in scientific thinking have come under increasing scrutiny. These claims will be substantiated in what follows and the terms of a values pedagogical alternative will be outlined and justified by reference to international research, especially in the data and findings of the Australian Values Education Program.

2. Countering positivism

Wittgenstein [6], in his famous work, *Philosophical Investigations*, refers to "reality" and the "facts" thereof as part of what he calls "language games." The gist is that the locus of human knowing is contained in language rather than empirically verifiable data. It was a subtle yet fundamental under-cutting of the basis of logical positivism and nineteenth century thinking about empiricism as the basis of all knowing. Ferre [7], in this regard, bespeaks a clear Wittgensteinian perspective in declaring that "facts are never given in isolation from the minds that receive them" (p. 761). Ferre implied that the things we call "facts" or verifiable data are really theories in the minds of the subjects who perceive them, and hence are less observable or least of all measurable than in the ways that logical positivists held to be determinative.

Such rejoinders were further reinforced by Lakatos [8] and Kuhn [9] who coined the notions of "touchstone" and "paradigm" respectively to connote the true basis of claims to "know." According to their theories, knowing is not merely a linear conforming of perception and reality, as the logical positivist would have it. It is not objective in the simple observable or measurable sense because it is infused with the subjectivity of the person doing the knowing. Quine [10] went on to show just how subjective were the assertions of those empiricists claiming to be objective: indeed, the Verification Principle itself defied the very rules which formed it in that it belonged to neither category of mathematics and logic nor of the empirically verifiable. Feyerabend [11] launched highly critical attacks on the ways in which education systems had applied logical positivist and/or simple empirical assumptions to curriculum and pedagogy, especially in the ways they had prioritized certain forms of knowledge over others, on the purported basis that they offered surer knowing (read the empirically verifiable knowing of science and technology mainly), while other forms of knowledge were relegated to the margins if not right out of education. See also Apple [12] on "high status knowledge" and the damage that such conceptions have done to the balanced curriculum and holistic learning.

The "certain forms of knowledge" to which Feyerabend refers is further enlightened in Habermas's [13, 14] "ways of knowing" theory. Habermas's explanation for apparently different forms of knowledge derives from his belief that knowing is impelled by a series of "cognitive interests," three interests which are effectively part of the way the human mind works. First, there is an interest in technical control which impels an "empirical-analytic" way of knowing. This is useful knowledge for performing fairly basic tasks of being able to put something together, find a place on a map, operate a machine, or for competence in the fundamentals of literacy and numeracy. Second, the interest in understanding meanings gives rise to an "historical-hermeneutic" way of knowing, the knowing that results largely from engagement, interrelationship and dialogue with others. This is a knowing that wants to get behind basic knowing to interpret what it might mean, for example, to understand the importance of what is being put together, the significance of the place on the map, the ramifications and potential impact of the machine's operations, and the full effects of literacy and numeracy, including their cultural significance and

differences. While empirical-analytic knowing does not require human interaction nor much in the way of imagination, historical-hermeneutic knowing requires both.

Third, there is an interest in being emancipated, a free agent as it were, which issues in a "critical" or "self-reflectivity" way of knowing, the knowledge that comes ultimately from knowing oneself. This is the knowing that causes us to reflect critically on our subject matter, our sources and ultimately ourselves as agents of knowing. Such agency impels us to go to any lengths to be assured that what we know is, as far as is possible, the unfettered truth, free of cultural bias and partial interpretation, including as those might function in ourselves. For Habermas, this way of knowing provides for the only truly assured, totally comprehensive and authentic human knowing. It is a deeply moral knowing in that it drives fearlessly beyond the politically correct or skewed, the safe, and the partisan interested, including as these blind spots play out in oneself. It requires profound forms of human encounter and ultimately of self-knowledge. It also requires much in the way of imagination. Habermasian literature, primary and secondary, is replete with the notion of imagination as a prerequisite for knowing of the fullest kind. Indeed, against both modernism's and especially post-modernism's unimaginative conceptions of the Enlightenment project, he proffers that what they have robbed us of is "... the spontaneous powers of imagination, of self-experience and of emotionality." ([15], p. 13) For Habermas, this is an aberration of what the Enlightenment project was intended to do [16, 17].

In this work, Habermas illustrates well, among other things, the limitations of logical positivism's conception of knowing and all it has led to, the limitations being set essentially around a knowing of basics, a knowing he describes as empirical-analytic, useful for certain basic knowledge and skills but a long way from the full reaches of knowing. It is an especially long way from the more sophisticated knowing related to interpretations and meanings, and the more moral knowing that entails deep human encounters and, finally, a ruthless self-knowing, all of which require deep levels of imagination and emotionality. Seeing it this way helps to understand why Feyerabend was so critical of education that prioritized more basic knowing to the exclusion of holistic knowing.

3. Changing understandings of science

Even as the terms of nineteenth century positivism were being laid, such as bespoken in the Verification Principle, so the critique was underway, a critique that, from Habermas's point of view, has not been taken seriously and from Feyerabend's view, has impacted negatively on education. For Habermas, knowing required a fortified hermeneutic dimension which ultimately could lead to the more sophisticated knowing connoted in being an agent of knowing, in his sense. Habermas [15] is quite explicit that, for him, his thinking here owes much to Husserlian philosophy. Husserl [18] was a nineteenth century empiricist who saw even then the limitations of the narrower assumptions and functioning of a simple understanding of empiricism, ones that emanated from the Verification Principle and became the basis of logical positivism. He described this kind of empiricism as "descriptive science," fundamentally the same conception as to be found in Habermas's empirical-analytic knowing, the knowing of basic facts and figures, purely descriptive knowing.

While a useful foundation for scientific knowing, for Husserl, it lacked the more important and essential human knowing that was the product of what he referred to as "eidetic science," the knowing and understanding of meanings, of different perceptions that can only be unraveled by human beings interacting and by deep forms of reflective learning. Eidetic science was heavily subjective and that was the very thing that was being in a sense forbidden by the obsession with descriptive science,

creating in turn an inherent obstacle to deeper forms of learning. For Husserl, human sciences had to include a human element and yet that was being denied to them by the scientific assumptions of the day. The irony herein was that knowledge of the deeper kind was being blocked in the name of a science purporting to be the means of all knowing. The same irony is reflected in both Habermasian epistemology and Feyerabend's and Apple's reflections on what was ensuing in education. In the name of sound education, sound education was being denied. So what are the assumptions that led to this anomaly and how can they be broken down and re-formed in the interests of truly sound education? Well, the path and history of science itself, the very discipline that is purported to lie at the foundations of the assumptions, are instructive in this regard. The two exemplars by which I choose to make that point are the sciences of astrophysics and neuroscience.

3.1 Astrophysics

For Husserl, truth was best understood as ever elusive, rather than easily grasped in the way of simple empiricism, and so the truth seeker had to proceed with caution. Good science was a humble rather than arrogant methodology around alleged "certainties" that the tenets of descriptive science had led to. Good science was replete with imagination. Husserl's caution about science is interestingly prophetic when one considers the far greater caution detected in much modern science, such as astrophysics, for instance. Against all the alleged certainties premised by earlier empirically bound method, we find find de Grasse Tyson [19] referring to dark energy and dark matter as a "mysterious presence," constituting 96% or so of the known universe, responsible for maintaining it the way it is, yet about which we are "clueless." He describes dark matter as our "frenemy," part friend, part enemy: "We have no clue what it is. It is kind of annoying. But we desperately need it in our calculations to arrive at an accurate description of the universe." (p. 62).

De Grasse Tyson speaks frequently about the need for high levels of cognitive imagination for modern astrophysics to proceed. He underlines this point by reference to Albert Einstein, fairly unarguably the greatest scientist to ever live, yet one not given at all to simple empiricism or to being limited by Husserl's notion of descriptive science. He says of Einstein that he "... hardly ever set foot in the laboratory; he did not test phenomena or use elaborate equipment. He was a theorist who perfected the "thought experiment," in which you engage nature through your imagination" (p. 62). De Grasse Tyson refers to the book, titled, *100 scientists against Einstein* [20] showing how these mainly simple empiricists (Husserl's descriptive scientists) were wrong and Einstein's imaginative methods (Husserl's archetypal eidetic scientist) were ultimately proved correct. As examples of the limitations of their simple empiricism, some of Einstein's critics described as "fantasy" the notion of the so-called "cosmic constant," the central tenet in his theory of relativity. In fact, the "cosmic constant" was finally ratified with a measure of empirical evidence in 1998 [21], something further demonstrated by the famous 2016 gravitational wave detected by the Hadron Collider [22] and to an extent ratified even further by the famous and ground-breaking picture of the black hole in 2019 [23].

Einstein's knowing was finally endorsed by highly sophisticated forms of empiricism but the basis and impulsion of his knowing came not from empirical method but from what I refer to as imaginative method. On the other hand, the reliance on a simple empiricism on the part of the 100 adversarial scientists blinded them, while Einstein's on imagination released him to speculate on realities that were quite beyond empirical verification of the kind most scientists of the day were relying on. In Husserlian terms, it illustrates the reliance for holistic knowing purposes on descriptive and eidetic sciences intersecting and interacting. In Habermasian terms, the 100

scientists' cognitive interest was in control, where Einstein's was in imaginative exploration of the kind that characterizes the true agent of knowing. He wanted to know the truth and to get there he had to go beyond the bounds of controlled knowing. There is a lesson here for all learning ventures, including school-based pedagogy. Over-controlling of the knowledge process in the form of endless measuring of outcomes, accountability and assorted forms of instrumentalism can actually create blind spots and retard knowing of the most important kinds. On the other hand, releasing and nurturing the imagination might well be the most useful thing that schools can do.

3.2 Neuroscience

Updated neuroscience is another science that, in many ways, takes us to the same place. Damasio [24] and Immordino-Yang [25] refer to the enriched cognitive functioning, especially around imagination that ensues when discourse of any kind takes account of emotionality and sociality. In reference specifically to school-based discourse, Damasio and Immordino-Yang [26] have this to say:

> *Modern biology reveals humans to be fundamentally emotional and social creatures. And yet those of us in the field of education often fail to consider that the high-level cognitive skills taught in schools, including reasoning, decision making, and processes related to language, reading, and mathematics, do not function as rational, disembodied systems, somehow influenced by but detached from emotion and the body. (p. 3)*

Narvaez [27–30] builds on these ideas, both as a neuropsychologist and educator, in the ways she positions imagination as the confidence-builder and architect of the mindset essential to what she refers to as "efficacious learning." She ties imagination, emotion and cognition together in suggesting that it is imagination that unlocks the emotions that are needed for sound reasoning. In a word, reasoning is both rational and emotional. The mind thinks both logically and emotionally.

Narvaez focusses much on the ways in which human knowing has worked over the millennia of human existence, a process that in a sense is repeated each time a new life comes into the world. Among her specialities is early childhood education where imagination is the key or, if not stimulated, it is the death of efficacious learning. Yet, in the face of any amount of evidence, including in the different ways in which the scientific base of instrumentalist pedagogy is changing, instrumentalism in pedagogy and education generally seems to be the standard modus operandi of educational systems. The desire for accountability, invariably motivated by political agendas, including of control, rather than inspired by educational theory, drives systems towards the most easily measurable, invariably the basics, Habermas's empirical-analytic knowing, Husserl's descriptive science, Damasio's and Immordino-Yang's disembodied systems. When this drive becomes an obsession, affecting individual schools' reputations, the key performance indicators of school administrators, the political slogans of governments and oppositions, the "be all and end all" of ranking in international testing, then the casualty is imaginative pedagogy and its associated efficacious learning. Let me offer one example of this, an example from Australia.

4. Instrumentalist pedagogy alive and well

NAPLAN (National Assessment Program Literacy and Numeracy) was established by the Australian Government in 2008. It is a national literacy and numeracy testing mechanism administered at four levels across primary and secondary

education. It is mandatory for any school wishing to maintain government registration. Its results are inserted into a software program called "My School" (comprising a large data set about each school's numbers, demographics and, once imported, NAPLAN test results). This import was designed to show which schools were doing well in literacy and numeracy and which were not. It quickly became a ready-reference for parents in their school selection, a serious reputational issue for schools and a crucial KPI (key performance indicator) for school administrators.

NAPLAN had two main stated purposes: first, it was to strengthen literacy and numeracy levels of Australia's young people; second, it was to improve Australia's standing in the OECD international testing mechanism, PISA (Program for International Student Assessment). Evidence suggested, after 10 years, that there was no indication that either objective had been achieved in any substantial way. According to one study that typified the national result, literacy and numeracy levels had not improved, at least according to the limited NAPLAN device itself [31]. Additionally, Australia's standing in PISA was demonstrably worse than before NAPLAN began [32].

At the time of writing, there is a strong push coming from powerful education entities, bureaucracies, teacher unions and teachers themselves that NAPLAN has so skewed the imperatives of education that it constitutes a menace to efficacious learning. Furthermore, research evaluations of the mechanism testify that it has "… a narrow focus on a limited set of skills rather than developing capacity…" The same research identified the following problems:

- *the NAPLAN tests added little to teachers' understanding of students' literacy levels*;

- *the assessment was a poor measure of student achievement*;

- *the tests had little relation to students' lives, or to their future job prospects*;

- *pressure to prepare students for NAPLAN detracted from other learning opportunities*;

- *stress around the inflated importance of the test negatively impacted some students' wellbeing*;

- *pressure to "teach to the test" frustrated many teachers, reducing their sense of professional autonomy [33]*.

Meanwhile, an international testing expert declared NAPLAN to be "bizarre" in its inappropriateness. It is directed at all the wrong kind of learning and actually encourages bad writing [34]. Most recently, the federal government's own national policy and practice entity, the Gonski Institute for Education, called for its "ditching" [35]. In a word, NAPLAN has become synonymous with bad teaching and incompetent, negligent and damaging education. It is not simply that NAPLAN has achieved nothing worthwhile. The more damaging finding from evaluation is that it has become a threat to the business of sound education and has malevolently influenced school-based pedagogy.

NAPLAN created a stressful, needlessly competitive and, in that sense, unsafe environment for learning. Furthermore, it failed to impact positively on the very academic learning that was its principal target. It is a prime example of a pedagogical approach driven by the linear assumptions of logical positivism and ignoring the wisdom to be found in the philosophical and scientific perspectives outlined above. I now wish to summarize briefly the very different effects of a values pedagogy, drawing on evidence principally from the Australian Values Education Program. In

contrast with instrumentalist pedagogy, it emanated in what I describe as imaginative pedagogy, a pedagogy that elicited the imaginative capacities essential to the most effective forms of learning.

5. Findings from the values pedagogy projects

Narvaez [27–29] makes the point that imaginative pedagogy is not always the result of spontaneous impulses. It requires both the safe environment and the guiding hand of craftily planned pedagogy. It is another way of talking about the two-sided coin of values pedagogy, the implicit side being the safe, values-filled learning environment and the explicit being the values-focused pedagogy.

By implicit is meant that the learning environment must be values-filled, characterized by care, trust, respect and encouragement. There is any amount of research that has demonstrated the importance of the values-filled "ambience," as Newmann [36] described it. Newmann's work was in the area of "authentic pedagogy," the pedagogy most associated with teaching that works best. Findings from his research were factor analyzed into five "pedagogical dynamics," five features or characteristics that seemed to sum up the things most obviously associated with teaching that was working, achieving its goals, including academic achievement. The last and most important was the "ambience of care and trust." The ambience of care and trust is the starting point, or *sine qua non*, of values pedagogy. The learning environment must be characterized by care and trust, positive relationships and safety and security [37–39].

The explicit side of the coin is seen in the orientation of the learning discourse being around values, the values inherent in curriculum content, rather than merely the "facts and figures" or most easily measurable features of the content. One of the many misconceptions about values pedagogy is that it means doing something additional to the standard curriculum. In fact, it does not require separation from the curriculum; rather, it determines the direction of the curriculum through *becoming the* pedagogy.

The content of any curriculum area tends to focus on the facts and figures (what Habermas calls the "empirical/analytic") relevant to the area in question. Why? Because that is the most easily measured. When employed judiciously and seen as first step or means to a greater end, this can assist in the foundations of sound pedagogy. On the other hand, when it is seen as the entire step or end in itself, it becomes a malevolent force against sound pedagogy, instead settling for what I am describing as instrumentalist pedagogy. As most teachers know well, the more education that follows this kind of instrumentalism, the more boring it risks becoming, the more skewed in favor of those with retentive memories and the more unfair and potentially damaging it becomes to those many people who learn better in other ways. Additionally, the case being made above by the likes of Habermas and Narvaez is that, important as the facts and figures might be, the less we stimulate the interpretive, critical and imaginative ways of knowing, the more we stifle efficacious learning, and indeed the more we risk atrophying cognitive powers generally. In that sense, instrumentalist forms of pedagogy risk "de-educating" and stifling learning potential, rather than the opposite that is intended.

So, in the values pedagogy work as it functioned in the Australian program, all extant content was derived from the set syllabuses but instead of settling for the standard objectives, largely the easily measurable ones, the values inherent in the content became the focus, thereby stretching rather than limiting the cognitive powers being called on. In other words, instead of simply rolling out the content because it was there in the syllabus and because a measurable outcome for reporting was demanded by the system, lessons were begun with questions like "what value is

in this content? What value for students' important knowledge, vital understanding of the world into which they are moving, crucial skills and competencies for future work, important insights for their wellbeing and the wellbeing of those with whom they will form relationships? What value is it to their future personal and social development? What value is it for the world in general? What vital lessons about humanity and the Cosmos, if any, might be contained in this content?"

Evidence suggests that when these kinds of values questions were stimulating and determining the pedagogical direction, then the easily measurable content knowledge fell out anyway and, in all irony, students were actually more likely to remember the facts and figures at the center of such content knowledge, far beyond the measuring device, because of the contextual stimulation that was being applied. In Habermasian terms, interpretive, critical, self-reflective and imaginative knowing was being impelled. Data from the projects testifying to these claims include the following:

> *The pedagogies engage students in real-life learning, offer opportunity for real practice, provide safe structures for taking risks, and encourage personal reflection and action ([40], p. 9).*

> *(Values pedagogy) ...requires students to scrutinise questions that are difficult to resolve or answer, and focus on listening, thinking, challenging and changing viewpoints within a guided and safe environment ([40], p. 28).*

> *The structured discussion and agreed values that govern the engagement provide safety and support for students as well as an expectation that correction and revision are part of the debating process. It promotes critical thinking and encourages an obligation to respect one's fellow inquirers. It attempts to produce better thinkers and more caring members of society, who accept differences and, at the same time, submit conflicts to reasonable scrutiny ([40], p. 28).*

The justification of such findings against Habermasian theory was summarized in the following way:

> *The frame of reference emanates from Habermas's 'Ways of Knowing' and 'Communicative Action' theories. In a word, it is the one who knows not only empirically analytically and historically hermeneutically, but self-reflectively who is capable of the just and empowering relationships implied in the notion of communicative action. In a sense, one finally comes truly to know when one knows oneself, and authentic knowing of self can only come through action for others, the practical action for change and betterment implied by praxis. Habermas provides the conceptual foundation for a values education that transforms educational practice, its actors in students and teachers, and the role of the school towards holistic social agency, the school that is not merely a disjoined receptacle for isolated academic activity, but one whose purpose is to serve and enrich the lives not only of its immediate inhabitants but of its community. ([39], p. 220)*

In the projects that ran as part of the program, there were what were described as predictable, less predictable and quite unpredictable results. The predictable results were that students' accrual of important *personal and social values* was strengthened and affirmed. These were predictable in the sense that any curriculum intervention inputs a particular discourse, words, phrases, terms and concepts even in the setting up phase. One then will find that discourse coming through in the implementation and assessment phases; it would be a fundamental sign of failure if that were not the case. Hence, the inspirational document, the so-called *National*

Framework for Values Education in Australian Schools [41, 43], contained much explicit values discourse and predictably then there was a lot of similar discourse to be found in the evaluation phase, be it coming from teachers, university researcher participants, parents or the students themselves:

> *Everyone in the classroom exchange, teachers and students alike, became more consciousness of trying to be respectful, trying to do their best, and trying to give others a fair go. We also found that by creating an environment where these values were constantly shaping classroom activity, student learning was improving, teachers and students were happier, and school was calmer. ([42], p. 120)*

Moreover, there were less predictable results in the form of a plethora of discourse about improvements in *student behavior and teacher and student wellbeing*. Such discourse was less predictable in the sense that behavior change and wellbeing were not explicit target outcomes for the projects. Nonetheless, this discourse was commonly to be found at the evaluation phase:

> *… the documented behaviour of students has improved significantly, evidenced in vastly reduced incidents and discipline reports and suspensions. The school is … a "much better place to be". Children are "well behaved", demonstrate improved self-control, relate better to each other and, most significantly, share with teachers a common language of expectations … Other evidence of this change in the social environment of the school is the significant rise in parental satisfaction. ([42], p. 41)*

Then there was the unpredictable category of discourse around academic attention (what we eventually described as academic diligence). There was no discourse whatever in the set up about academic improvement yet it began appearing very early on in the feedback process and then continued as a persistent feature of evaluation. It was initially referred to as a "surprise effect" [44] and impelled much of the searching out of the literature (Habermas, Narvaez, etc.) noted above in order to try and explain it. As they show, be it from a philosophical or neuroscientific perspective, a pedagogy that provides a caring, positive relational and safe learning environment (the implicit side of the coin), along with an approach to content that challenges interpretive, critical, self-reflective and imaginative pedagogy is likely to result in, as Narvaez would put it, the kinds of emotions that make for sound reasoning. In this sense, the surprise is not such a surprise. The surprise is, rather, that we so easily forget such fundamentals.

The issue of the unpredictable academic diligence being enhanced was one that required especial attention when the results were being finally evaluated and all claims were subject to their own testing and measuring in the project titled, *Project to Test and Measure the Impact of Values Education on Student Effects and School Ambience* [45]. The Executive Summary of this project summarizes the findings around academic diligence as an improvement factor in the following paragraph:

> *Thus, there was substantial quantitative and qualitative evidence suggesting that there were observable and measurable improvements in students' academic diligence, including increased attentiveness, a greater capacity to work independently as well as more cooperatively, greater care and effort being invested in schoolwork and students assuming more responsibility for their own learning as well as classroom "chores." ([45], p. 6)*

Full and complete details of how this project functioned methodologically can be found in Lovat and Dally [46].

6. Discussion and application

The great Muslim scholar of the Middle Ages, Abu al-Ghazali had much to say about educational wisdom [47, 48]. Amidst the wisdom are words about the imperative for good learning to be prefaced by the instilling of imagination and the eliciting of wonder. These are the foundations of enduring learning, or what we might refer to as lifelong learning. A pedagogy focused too much on prescriptive teaching and persistent testing will retard progressive learning, while one centered on imagination and wonder can facilitate the desire to continue on the learning path. In many ways, Ghazali was an educational neuroscientist well before his time. His perspective also underlines why it is that values pedagogy contains a potential to lay the foundations for lifelong learning.

Indeed, there is a literature that deals precisely with the connection between values pedagogy and lifelong learning [49], including higher learning. As described, values pedagogy has potential to inflame the cognitive interests that impel those higher forms of learning that are essential to the kinds of critique that an informed populace requires of its citizenry, including the original and innovative thought associated with doctoral learning, as an example drawn from the parameters of higher education [50, 51]. This underlines the importance of such a pedagogy not only for maximizing learning breadth and depth in schools but also for the kind of learning that leads to the highest forms of intellectual achievement such as are crucial to individual wholeness and to a successful, moral and harmonious citizenry.

Ghazali's de facto motto was to ask many questions and allow the answers to come from the learner rather than the teacher. Above all, not to provide answers to questions that had not even been asked by the learner. Yet, of course, much education at all levels does precisely what he advised not to do. This is at the heart of instrumentalist pedagogy and it explains why it can do such damage to learning potential, especially in the long term. It can offer the kind of short term learning required for immediate tasks and satisfying testing requirements but it offers little to lifelong and/or higher learning and, furthermore, can work against it. The effects of such are multiple, ranging from a narrowing of the kinds of critique necessary to overturn age-old prejudices that lead invariably to dysfunctional societies and a fractious world through to a surfeit of doctoral candidates in universities who are less equipped than they should be in independent learning strategies. In this sense, instrumentalist pedagogies are formulas for retarded learning, while values pedagogy has the potential to lay the foundations for progressive learning.

The challenge for educational institutions at all levels is to take heed of the multiplicity of research that underpins the claims being made here. We live in an era that is blessed with the scientific understanding of learning that Ghazali did not possess. Yet, the irony would seem to be that he might well have understood intuitively how efficacious learning should proceed, regardless of the lack of evidence. On the other hand, many modern educational regimes have the evidence before them but ignore it and establish regimes of learning that are actually hostile to efficacious learning. The Australian NAPLAN example above is just one of any number of examples from school and higher education regimes that could be cited of negligent and damaging practice underpinned by an instrumentalist set of assumptions leading to instrumentalist pedagogies and a narrowing of the scope of learning.

Especially as education becomes more of a mass industry and resources become invariably lean, the temptation to establish perfunctory goals at the lowest level of what Habermas calls empirical-analytic knowing becomes particularly coercive. This is especially the case because the output of such knowing is the most easily measured. School and higher education regimes can therefore easily fool themselves, through the record of measurements, into thinking that good outcomes have

been achieved and good learning has been facilitated, where in fact the foundations of lifelong and higher learning have been damaged and retarded. This is a challenge indeed for the modern education setting, wherever and at whatever level. Granted these challenges, research around values pedagogy presents as a viable, inexpensive way forward.

7. Conclusion

The chapter has set out to debunk the kinds of instrumentalist pedagogies that abound in educational systems both for their conceptual weaknesses and failure to keep pace with the very scientific understandings on which they rest and for the demonstrable damage they do to young people's learning potential. It furthermore proposes a values pedagogy as an approach with potential for obverse effects, one that ensures the right environment for learning as well as the kind of intellectual stimulation required for the imagination that spurs the emotions that impel sound reasoning. In a word, instrumentalist pedagogy survives as a tool of political agendas and populist media, whereas values pedagogy rests on the firmest evidence from philosophical and neuroscientific research about how the mind works, the brain functions and how efficacious learning is therefore best effected.

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