

Breaking out from the Straitjacket

An Appreciation of the Art of Teaching in a Business Classroom within a Scientifically-Based Teaching Environment

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Abstract

Teachers might develop a wonderful feeling that many young people have understood a lesson and have not just enjoyed the experience but done so in a way that has created some 'thing' special for all of those involved ('thing' is highlighted in this instance as it is a tangible event taking place and not any attempt to represent it). Some teachers describe this as a buzz; in other words, like nature itself, as something education. The paper argues that scientific enframing not only puts a straitjacket on teachers within the UK, it also makes it difficult for them to develop and appreciate the 'art of teaching'. unquestionably unique that justifies their commitment to their teaching and their students. No matter how much we know about botany and genes, every flower is unique and blooms because it blooms. As Angelus Silesius indicates within his poetry

"The rose is without why; it blooms because it blooms,

It pays no attention to itself, ask not whether it is seen."

(Heidegger, 1991)

The United Kingdom education system has existed under the hammer of transformation, with a National Curriculum (1988), a rigorous inspection regime (Woodward, 2001) and countless changes in curriculum and associated assessments (QCA, 2004), as well as a substantive apparatus that makes many assumptions about how teachers should operate within the classroom.

The primary concern of this paper is to question how the 'scientific framing' of teaching through competences and other measures of accountability has influenced the work of teachers within the context of business

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Introduction

Working within the UK education system seems sometimes like being a small fragment in an endlessly 'moving kaleidoscope' in an environment of uncertain pictures against a background of projects, initiatives and visions (DfES, 2004) set against our own professional need to make teaching special not just for ourselves, but also for our own students. Although it seems at times that the purpose of the kaleidoscope is to develop a sense of coherence, our enquiry uncovers that many of those within this system feel a palpable dissonance between the aims of those at the chalk-face and their decision-makers who, in making decisions, help to straitjacket the art of teaching. The result is a monotonic diet of hard-core education focused upon performance targets, goals and value added strategies alongside a rigorous inspection regime designed to homogenise the process of learning (Needham, 2004). The underlying assumption behind all of this activity is that *they* are doing education a favour!

This research follows not just upon our evolving discussion with practitioners over a number of years (Needham, 2003) but also through drawing out practitioner-focused themes from philosophical interpretations. For example, Lawrence Stenhouse (1980) considered "that the exercise of skills in service of meaning is an acceptable definition of the practise of an art". He justified his view by discussing how practitioners develop their practise in and through their own practise. For example, in 1983 he concluded:

"The most satisfying aspect of the humanities project, MAN: a course of study and the race project, from my point of view is that they have each produces virtuoso and highly intelligent teaching. This in turn has transformed teachers' images of themselves. They have become powerful people because of their confidence in their art." (Stenhouse, 1983)

Stenhouse's emphasised that as teachers are at the beck of call of policymakers and the curriculum, their teaching has evolved through the way they took control of their own teaching using hidden abilities to make teaching in itself special. In other



words, when they broke away from just doing the job and delivering the targets and objects, they had the freedom to question and think about the interrelationship of themselves with their students.

Our consideration of philosophical interpretations of the art of teaching draws upon what many would consider some surprising sources. Our analysis of the literature led us to focus not upon Stenhouse's work but into a wider exploration of the work of Vygotsky (1968,1978) with that of Schon (1984,1987).

Trying to examine the dynamics of classroom practice within the role of a teacher is a complex challenge (Hopkins and Reynolds, 2001), and there are good reasons why educational research or policy will never provide a formula. For example, teachers might develop a wonderful feeling that many young people have understood a lesson and have not just enjoyed an experience but done so in a way that has created some *thing* special for all of those involved (*thing* is highlighted in this instance as it is a tangible event taking place and not any attempt to represent it). Some teachers describe this as a *buzz* that justifies their commitment to their teaching and their students. We could at this stage describe many of the eclectic range of techniques and tactics well known to researchers that seem to make teaching special, but these fail to take account of the individual qualities of teachers and the complex interrelationships with their students as human beings. This is because the techniques and forms of advice would then become formulaic, to create what Haraway (2003) call a 'cyborg manifesto', where students are simply learning recipients rather than human beings. Where, for example, do we read about teachers' love and passion for teaching and their students; the literature at this point does not highlight such relationships. Education research is, however, littered with examples of situations where a classroom strategy that has worked for one teacher or one group of students has not worked for the teacher of another group (Leat and Linn, 2003).

Vygotsky and Schön's interpretation of the art of practice goes back to Plato's Republic (1988) and his thinking about the nature of ideas. Plato viewed an idea as the outward face of a complex surface interconnecting the thing in itself, thinking and the good. In everyday terms we could describe how teachers develop an *idea* within a context that has an impact upon young people making the classroom unique in its very context. However, in doing so we are simply going back to the notion of theory and a logical and rational scientific picture of teaching. Perhaps the best way to describe the uniqueness of an idea in the sense promulgated by Plato of a flower coming into bloom. No matter how much we know about scientific representations of the natural world in botany and genetics, every flower is unique: as the thing in itself transcends any such

renderings As Angelus Silesius indicates within his poetry

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Every rose blooms because it does as it comes to stand in its own ground and is different in its own unique way to any other rose, just as human beings have such potential. A central element in Schön's work was his appreciation of the art of professional forms of practice. Schön viewed all professions such as law, medicine, engineering and architecture as having claims to matters of social importance. At a time of technological rationality and in post-war Britain Schön realised that there was a distinct gap between technological forms of rationality and what people as artisans do in practice. Here also lies one of Vygotsky's obvious sources of intellectual passion; the development of philosophical methods of enquiry based upon one of his early papers called the Psychology of Art.

The purpose of this research is to use Heidegger's philosophical questioning of the notion of *Being* and its interrelationship with technological enframing (1977) to raise some key questions within the context of the more cybernetic, or production line, forms of education systems (Foucault, 1977; O'Neill, 1995). Our particular focus is upon the degree to which teachers of business education within the UK have either the freedom or opportunity to break out from the straitjacket of technological enframing.

Although small-scale, this research is evolving and builds upon our previous work (Needham, 2004). The aims of our research are to:

- understand technological enframing
- identify where and how technological enframing unfolds within the UK education system
- identify the extent to which technological enframing influences the everyday work of the teacher
- consider if it is possible to stand outside the process of technological enframing within the context of a piece of small-scale research (standing outside philosophy in the sense of metaphysics as someone who has spent his whole life asking about the question of 'being, Heidegger, 1927)
- explore what is the art of teaching
- identify where the art of teaching has the potential to appear within a business classroom
- find out if teachers within a business classroom can breakout of the straitjacket of technological enframing.

Technological Enframing

Within the UK the teaching environment has changed considerably since the early 1980s. It was in the middle of Thatcher's reign that the National Curriculum (2004) eventually came to pass, but it signified more than just a change of focus. It was followed by a rigorous inspection regime in its wake, by frequent changes in syllabuses imposed from the centre, a largely unquestioned fanaticism with school improvement (Hopkins, 2001) as well as the rationalization of teacher training by a competence based framework. Our previous research used teacher diaries that identified that practitioners feel disenfranchised and distanced from professional decision-taking within their own sector (Stewart, 1967). Given the emphasis we have placed within this paper upon the art of teaching, a key issue which we wanted to address was whether changes to the teaching environment have made it more difficult for teachers to work as artisans in recent years. In other words has the elusive butterfly of art finally or inevitably been pinned down to provide a static form of representation, such as homogeneity in the classroom identified as calculable forms of practise? Our argument is that herein lies a vicious circle in which the calculable form of practice is considered to be good (Heidegger, 1962, 1977, MacIntyre, 1984), but if we stand outside the circle *how rich is the diet of what is done in the name of education* for the wider development of our students?

So, within the context of such forms of scientific rationalization, what do we mean by technological enframing? Martin Heidegger's (1977) work showed that by standing outside our own representations and interpretations of the world existentially, we can view everything we see as 'technology in its essence'. For example, in a classroom setting this could be the pace of a lesson, its structure, the timings, the way in which students record their work and so on. Each of these elements serves to create its own picture or representation of the world of the classroom and what is done in practice; the danger of this is not just that it misses entirely the spontaneous interplay of human beings in such an environment but more importantly human beings emerge as standing reserve (Heidegger, 1977) or simply available for use. Technology within the context of his interpretation is about the power of reason. Thus 'technology in its essence' is a narrowly focused way of viewing the world (enframing/gestell) which blocks out other ways of 'revealing' or the truth within a classroom setting. In the context of philosophical questioning interpretations of the classroom are set within a technological frame (Needham, 2003/4). This technological frame casts human beings as objects and subjects available for use for a required purpose, and in doing so, forgets about our own sense of being.

For example, if we observe somebody's practise within a classroom, the act of what is done within the classroom might include objectives, targets, goals, planning mechanisms against a rationalised process-driven curriculum which are the objects and the teacher who, in this instance, is the subject. The process of 'technology' has provided the respondent with a rationale, and also a narrowly focused way of viewing the world (enframing/gestell) of the classroom in terms of a picture that blocks out other ways of 'revealing' the world. This technological frame casts human beings and their environs as objects and subjects available for use for a required purpose (Needham, 2004).

As we look at the context in which this paper is written, the philosophical element of the study also relates to the issue whereby truth is blocked out when analysing teachers as cyborgs. By adopting a pre-philosophical framing of truth, or as the Ancient Greeks would say, *aletheia*, as 'unconcealment' of the presence of beings (Heidegger 1962) we hope to see a situation from itself in itself. In other words, by standing outside the pictures that are created, a key element of our enquiry is to uncover the interplay of human beings within particular environmental settings such as a classroom

Teaching Business Education within the UK

Business studies as an academic subject evolved as a post 16 area little more than 20 years ago. From the outset it was clear that business studies encapsulated and brought together many different areas within an organisation such as human resource management, finance and marketing, against the vagaries of the business environment. Business education has gone through a steep learning curve since its inception. Whereas initially it was a new curriculum subject introduced by different schools in different ways, now although not a National Curriculum subject, it has become mainstream and at the heart of curriculum planning for many headteachers for pre-16 and post-16 qualifications. Business education came into the system at the start of what have been huge changes in UK schools, from Local Management of Schools (LMS), rigorous inspection regimes and forms of accountability centring upon performance and examinations, constant changes in the curriculum and school league tables. The huge expectations that these changes reflect the technologically enframing of business education.

If we were to analyse the motives of teacher trainers we may well find that they would want to contribute to the development of reflective practitioners (Schön, 1984), who would want to experiment with their own pedagogies identifying the order in and through which they explore their own practice possibly leading to classroom/action

research and learning in the hope that they feel that they are making a difference within the classroom. The problem in the UK is that from the moment that students enter training they are hit by a framework that makes assumptions about *how they should operate within the classroom*. For example, the UK Teacher Training Agency (TTA) sets out a series of competences deemed necessary for student-teachers to accomplish before becoming ready at the end of their training to become Newly Qualified Teachers, or NQTs as they are known. As their careers start within the UK system, and NQTs work within their first post, the whole mechanism of technological enframing takes over. With exam results and targets at the forefront the environment in which teachers operate, this influences the time they spend upon particular tasks, the value they add to examination grades, the pedagogies they use and the planning and preparation they undertake. So, for example, the business studies post 16 teacher knows that he or she might be teaching market positioning during the last week of October, but has to stick to the bare facts because the following week another topic has to be ready for delivery. In other words, the environment in which business studies is taught and in which skills and learning are delivered has been transformed into one based upon calculation and predictability.

Based upon a group of business studies teachers keeping reflective diaries, our previous research (Needham, 2003) revealed that teachers felt constrained by the technologically enframed apparatus of education. For example, they felt that :

- syllabuses and their requirements were limiting their ability to 'teach', with one series of examinations followed by another twelve weeks later
- the limitations of school timetables and administrative requirements detracted focus away from the classroom
- that schools had limited financial budgets
- it was difficult and frustrating to gain more in-service training and industrial updating relevant to the curriculum
- the total focus of their institution was upon examination grades, school league tables, value added measures and other quantifiable measures or outcomes designed to influence stakeholders.
- Our research also identified a link between these limiting factors and some of the more immediate issues that impacted upon classroom practice in a way that
- hindered their work. Teachers referred to:
- the lack of recognition for the hard work they put in
- more 'bollockings' than praise (!)
- lack of free time in school
- rounds of inspection (Ofsted, peer observations and other modes of accountability)

- administrative responsibilities including menial tasks such as photocopying
- meetings, presentations, top-down styles of management and their impact upon motivation.

Donald Schön

Donald Schön attempted to characterize the gap between the technological or rational view of professional work and the reality of practice in terms of knowledge-in-action and reflection-in-action. According to Schön:

"there are actions, recognitions and judgments which we know how to

carry out spontaneously but we do not have to think about them prior to

their performance"

Schön also makes the point that we are unaware of how to do these things, but simply do them. He makes the point that it is very difficult to describe the knowing that our actions might reveal. For example, assuming we have the know-how to ride a push bike it is extremely difficult to describe how to ride a bike well to someone who has not ridden before.

By using this concept of knowledge-in-action Schön attempted to build upon Gilbert Ryle's (1949) notion of 'knowing-how'. As Ryle has put it:

"what distinguishes sensible from silly operations is not their parentage but their procedure, and this holds no less for intellectual than for practical performances. 'Intelligent' cannot be defined in terms of 'intellectual' or 'knowing how' in terms of 'knowing that'; 'thinking what I am doing' does not connote 'thinking what to do and doing it'. When I something intelligently...I am doing one thing and not two. My performance has a special procedure or manner, not special antecedence."

In philosophical terms Schön draws our attention to the 'swamps' of everyday practice which he contrasts with the high-ground of technical rationality where the former relies upon the know how of the professional.

Common sense would suggest that when riding a bike we have to continually have to make changes to what we are doing during the course of a journey. For example, avoiding a dog that runs across a road, dealing with a car passes too closely or making a decision whether to pass a bus that is standing at a bus stop. Clearly when riding a bike in such circumstances we would say that 'you need wits about you' because new events present themselves, sometimes unexpectedly. Schön uses this notion to develop the concept of reflection-in-action in relation to professional practice where the practitioner clearly has a repertoire of "expectations, images and techniques" (1984) that provide a basis for learning what to look for and how to respond to

what is found. i.e. sometimes we are surprised by what confronts us in professional situations, particularly as teachers (!), and it is such sources of surprise that provide the meat for reflection-in-action.

For Schön the art of practice for teachers that embraces both knowledge-in-action and reflection-in-action is a deep-seated questioning and challenging of thinking which for the teacher might include questioning the implications of the UK's National Curriculum upon classroom practice, debating the values and principles propounded within the institution or challenging the range of qualifications and their assessment schemes provided by awarding bodies and so on. Reflection-on-action follows each of the other processes and involves looking back at what has been done in practice to ask questions of practice, before making decisions about the future.

Working in tandem, knowledge-in-action and reflection-in-action show that teaching, as an 'art', is not a soft touch. It involves not just responding to the dictates of an enframed environment, but as part of this process of 'art' philosophically creating questions that enable the teacher to question and challenge at the boundaries of their own practice. The irony is that this paper is enabling us to use knowledge-in-action and reflection-in-action to do the same! In other words, the work of Schön provides one philosophical interpretation of how practitioners developed their own 'art' in practice, against a background of technological enframing.

Lev Vygotsky

As we interconnect reflection-in-action with reflection-on-action through knowledge-in-action, Schön's attempt to rationalise the art of practice emerges as a clear link between Vygotsky and Schön (Schön, 1984, 1987).

In the short space of this paper it is barely possible to scratch the surface of a prolific writer. Vygotsky's work is located just after the Russian Revolution and stretched from the 'Psychology of Art' (1968) through to the *Essays in History of Behaviour* (1930) which he wrote in collaboration with one of his students, Luria. He was not averse to applied philosophical inquiry; for example, his 'A Study of Emotions', is as much a critical response to Cartesian dualism as it is an attempt to create the grounds for eliminating the latter.

In 'The Psychology of Art', according to one his translators, Alex Kozulin (1986, p. xxxix), 'emphasized that psychological inquiry is akin to criminal investigation, relying upon indirect evidence; in such roundabout investigation, works of art, manifestations of cultural-anthropological data play no less import role than direct responses'. A central element in Schön's work was also his appreciation of the art of professional forms of practice. Here also lies one of Vygotsky's obvious

sources of intellectual passion; the development of psychological methods of enquiry, which is evident in both *Myshleni i rech* and *Mind in Society*. This shows that he not only sought to challenge psychology theory but also the very means by which such projections were developed.

Conflicts Created through the Enframing of the Apparatus of Education

Although both Vygotsky and Schön focus upon the link between art and practice there are distinct differences between their analyses. Vygotsky's confines himself largely to an analysis of the psychological interpretations of 'art' viewed as an aesthetic phenomenon. An aesthetic appreciation of a work of art viewed as an object is one that takes in all of the senses. In Vygotsky's case this was almost exclusively focused upon his analysis of literature. For Vygotsky (1968) poetry or art is a special way of thinking that could lead to the creation of scientific knowledge or some form of technological enframing (Vygotsky makes no reference to the latter term). Schön limits himself to questions of form or the outward appearance or shape of a work of art.

Aspects of Vygotsky's work is consonant with Martin Heidegger's later reflections upon 'The Origin of the Work of Art' (Heidegger, 2001), although here the author is concerned with the more general inter-relationship of beings and being. We can see that the special relationship that Vygotsky identifies between poetry as a form of being and science emerges if we reduce poetry to an object of aesthetic appreciation.

The interpretation of 'art' in each instance has a ramification for how both Schön and Vygotsky interpret and develop their understanding of the art in a professional context such as teaching. For example, Schön's primary concerns centre on a rationalization of the 'form' taken by professional practice in terms of an ongoing and dynamic relationship between knowledge-in-action and reflection-in-action. On the other hand Vygotsky's work looks at the psychology of aesthetic appreciation of particular forms of art found in literature, such as the work of Shakespeare, which requires no reference!

By re-reading the original work of both authors and then using Heidegger's work to develop our understanding of the key issues we feel that we have uniquely developed a basis for challenging and questioning how both Schön and Vygotsky have been interpreted in terms of classroom practice. As their view of 'art' originated in Kant's (1722) third critique simply provided a philosophical rationale for aesthetic judgment of art and beauty which was then critiqued by Heidegger. What this shows is that relevant and ground-breaking though they have each

been, the process of enframing and subsequent research within a professional context, has failed to appreciate some of the issues associated with 'being' in a complex social environment.

If every flower, as Silesius implies blooms because it blooms, then within an artistic sense and based upon the interpretations of Heidegger, the practice of teaching itself when it blooms as 'art' and is developed by each teacher, it then transcends any attempt to objectify or enframe it. It is in fact these complex human factors within the context of the 'being' that enable teachers to break out from their own enframing. These are the facts beyond Schön and Vygotsky that deserve greater enquiry, rather than the process of simply reducing everything to predictable forms of science.

Enterprise Learning

The 2004 Report (Dfes,2004) from the UK's Department for Education and Skills (DfES) presupposes that students are being developed as objects to serve the economy by providing a broad emphasis that the Department's aim is:

"to help build a competitive economy and inclusive society by;

creating opportunities for everyone to develop their learning

releasing potential in people to make the most of themselves

achieving excellence in standards of education and levels of skills."

It would be difficult to disagree with what might seem like a worthy purpose, and in a rapidly changing business environment within the knowledge economy, who could argue that these opportunities are not necessary? However, in a world of education that emerges from technological enframing with fixed expectations and a designated way of working that limits creativity, the real issue is 'how can opportunities be developed that help young people release their potential when all of the focus within the school environment inhibits creativity and limits learning to the achievement of targets and results?'

With so much emphasis placed upon developing a way of rationalizing the process of teaching and the role of the teaching against a tightly controlled framework, it seems surprising that on the other hand the UK government has recently used a range of initiatives (Hopkins and Reynolds, 2001) designed to persuade teachers to change the way they think about their own practice. One of the key drivers of these initiatives has been that of enterprise. In fact, the notion of enterprise learning and the support it has received from the UK government in itself highlights a paradox.

According to the Howard Davies Review (2002), enterprise capability is concerned with:

"the ability to handle uncertainty and respond positively to change,

to create and implement new ideas and new ways of doing things, to

make reasonable risk/reward assessments and act upon them in a

variety of contexts, both personal and work".

The Davies Review Highlighted Two Components that Make Up Enterprise Learning

These are:

1. the learning environment – the school, community or business. It emphasised that this environment should not be traditional and involve structured sessions but should enable students to make decisions through autonomy and have personal responsibility for their actions.
2. the enterprise process – the approach/process/project upon which students are working, involving the tackling of a problem or identifying a need from which project or activity can be planned for to meet final outputs or outcomes that can then be evaluated by students.

Following on from the Davies Report, schools within the England, Northern Ireland and Wales have been able to apply for a variety of forms of specialist status, each of which has provided an opportunity for them, in return for funds, to make teaching more exciting and practical across a specialist theme and one of the forms of specialism is business and enterprise status.

Schools have also had the opportunity to develop Pathfinder projects. These projects enable schools to build on the increasingly distinctive specialisms of local schools, colleges and training providers within an enterprise or work-related context. For example, the City of Nottingham Pathfinder (2004) aims to "create innovative learning opportunities based on active partnerships between employers and their representative organizations, work-based learning providers, schools and colleges" in a way that provides "innovative approaches to designing and delivering vocational courses and qualifications."

Methodology

To obtain research-relevant information that would help to test the potential for some form of enterprise education to breakout from the straitjacket of technological enframing extended semi-structured interviews (Drever, 1997; Hitchcock and Hughes, 1995) were conducted with two classroom teachers who had been pro-active in enterprise education, and

who were randomly selected on the basis that their schools had been involved in the above initiatives.

Interviews were largely non-directive to reduce the control of the interviewer (Cohen and Manion, 1997) and attempted to discover the benefits of engaging in such initiatives from the school's perspective, as well as to discover how or if by engaging in such programs any special elements materialised that were perceived as making teaching better suited to more creative forms of learning. Respondents were encouraged to talk about their experiences (Moser and Kalton, 1977) in order to describe and analyse their encounters

Engaging with the Concept of Enterprise

Both business educators were concerned about the sort of environment in which they worked, and were enthusiastic to deliver something that would be different. For example one respondent talked about the need to 'light a spark' that would get the students to open up in a way that would be different to the curriculum. They both felt that the curriculum turned students into participants, whereas enterprise activities set them up as players where they could go and do the sort of things that they were not allowed to do within a classroom.

From the schools point of view, the interviewers felt that the benefits were that:

- working in a different way improved the relationships they had with their students
- enterprise moves away from delivery, and acts as an impetus for better teaching
- there is limited centralized pressure, and the activities leveled the playing field in terms of the mixture of abilities, taking away the stereotype of the high-flyer or non-achieving student
- enterprise activities were organic, as students could decide what to do and then take responsibility for their own learning, learning by doing to produce action learning in a real context
- students were not taught in a formal sense, but were coached, based upon advice and support for their learning
- an overspill was the sense of enjoyment and confidence that students developed that went beyond the business curriculum
- programmes increased opportunities for co-operative team learning and helped to develop confidence and self-esteem
- students learned to work alongside people they did not know, often in unfamiliar circumstances
- international awareness was raised, with the school becoming a window upon the world
- the process was inclusive and got rid of barriers, and not just the constraints of the curriculum but also of stereotyping, as enterprise activities were something that everyone could have a go at.

At one of the schools the development of enterprise education had led to groups of students going to a number of conferences, including one in Sweden, as well as the development of trading links with one school in the United States. Activities ranged from selling zips, magnets, key rings to hanging baskets and vegetables, and many of the proceeds were siphoned off to good causes, such as 'Trauma Teds' carried in local fire engines given to children involved in serious road traffic accidents.

Art within a Professional Context

Our previous research (Needham, 2004) illustrated the huge effect that technological enframing has upon the role of the teacher, many of whom feel disenfranchised and distanced from professional decision-taking within their own sector. The elusive butterfly of art had been pinned down to provide a static form of representation?

It has been very difficult for our analysis within this research to show 'art' in its raw form or in the making, mainly because there are no research methods to our knowledge that would allow us to record it. We discussed enterprise learning with two proactive individuals, both of whom seized an opportunity to engage in a government funded initiative that significantly changed their role within the context of teaching and support for their students.

However, the fact that we cannot record 'art' does not mean that 'art' is not taking place. Research methods in education place the researcher in a position where they are required to obtain a rigorous and correct representation of an aspect of practice justified through their research methods/blueprint. This approach pre-supposes that 'truth' underlining the interpretations made by educational researchers through the use of their methods of enquiry does not reveal the real picture of events. It might reveal the correct picture according to that method or blueprint, but this view is enframed and hence does not take cognisance of the interrelationship of beings involved in any given event.

The Glorious Paradox

If we lived in Heidegger's world, research would itself be a form of technological enframing. However, he also recognises that research creates a myriad of insights which help to inform our world. It is why we analyse our own research methods before moving inside to reason and justify them. i.e. there is a distinct interplay between, on the one hand, acting as researchers within a methodological paradigm for reporting research, and on the other as phenomenologists participating in our own forms of enquiry.

The philosophical element of the study relates to the issue of 'truth' for teachers as human beings.

This was resolved by adopting a pre-philosophical framing of truth, or as the Ancient Greeks would say, *aletheia*, as 'unconcealment' of the presence of beings (Heidegger 1962). The difficulty with the unconcealment of beings is that, as we have seen in the evidence, teachers cover over or dissemble beings in the classroom. This is not a conscious act but reflects the characteristics of beings themselves (Heidegger, 1962, 1977). Unconcealment, or as the Ancient Greeks called it *Aletheia*, is an event that presupposes an inter-relationship between beings. Heidegger uses the Ancient Greeks as the main source of his work to show that "in art work it is the truth that has set itself to work" (Heidegger, 2001) in setting up a world in the classroom. It will therefore come as no surprise to you, particularly if you have read the paper this far, that the world within the classroom cannot be reduced to objects that stand over and above self-directed subjects.

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Summary

In a world where technological enframing dominates, reason comes into play and our research illustrates that this fossilises and prescribes teaching and learning. Although reason has come into play, this paper illustrates that there are sometimes opportunities for teachers, such as through enterprise education, to have a sense of being as individuals to promulgate the artistry of their work in a way that enables them to stand in their own ground rather than be sucked along by others who have their own agenda. It might create the ground for powerful teaching that reaches to the very heart of our being human were it possible for us to free ourselves from the yoke of dominant overarching forms of technological enframing.

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