Powerful knowledge, technology and education in the future-focused Good Society

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ABSTRACT

I contend that access to powerful knowledge is the cornerstone of education in the Good Society. Such powerful knowledge is accessed by students through engagement in vertical discourse. I adopt Bernstein's definition of vertical discourse as a form of pedagogical discourse that enables students to link symbolic knowledge, derived from a context, to other symbolic knowledge structures in a vertical manner. Engagement in vertical discourse enables students to transcend an immediate context to examine social classifications and control mechanisms that are inherent in pedagogical discourse. In the process, both education and technologies integrated into the curriculum are revealed to be ideologically charged. To illustrate this, I use the example of the study of augmented reality in a Postgraduate Certificate of Applied Practice. I then make suggestions regarding engagement in vertical discourse, so that practising teachers enrolled in the course are enabled to recognise and engage with the classifications and control mechanisms inherent in technological discourse. Finally, I suggest that engagement in vertical discourse is not an inevitable aspect of 21st Century learning design. Rather, engagement in vertical discourse and access to powerful knowledge have to be incorporated consciously in learning design by teachers who are familiar with the territory.

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1. 'Powerful knowledge' – the essence of education in the Good Society

This investigation examines the nature of 'powerful knowledge' [1] as a key concept mediating the relationships between society, on the one hand, and technology and education, on the other hand. For the purposes of this argument, I will adopt a definition of the Good Society as being "built around a profound sense of equality, democracy and sustainability, with a focus on community, time, care and well-being" [2]. In such a society education plays a critical role in developing citizens whose confidence, awareness and advanced knowledge and skills enable them to cohabit the planet in such a way as to cherish sustainability and prosperity for all. Lawson and Spours argue that education, thus defined, encompasses the following key aspects:

- Fairness and equality
- Personal development and the freedom to exercise democratic control
- Both vibrant state education and vibrant self-organisation of education amongst communities
- Institutions that promote learning and living together
- A curriculum and qualifications that help all learners to engage with 'powerful knowledge' [3].

In this paper, I will propose that the final key aspect, namely the extent to which all learners are able to engage with 'powerful knowledge,' is a precondition for the other key aspects. In considering the nature of 'powerful knowledge' Lawson and Spours identify it with "traditional/difficult" subjects, as opposed to "a more practical and motivational curriculum" [3]. From the perspective of education in the Good Society, this identification creates two difficulties. In the first place, it seeks to define a key aspect of a 'new, different and better' system of education using the structure and discourse of the old system. Secondly, the adoption of such a structure and discourse, more specifically, consigns some students to following an 'academic curriculum' and other students to following a more 'practical curriculum'. If an 'academic curriculum' is associated with the acquisition of 'powerful knowledge' and a more 'practical curriculum' is not, then all students do not have access to such knowledge. Who decides which students are

consigned to 'academic subjects' and whose interests are served in this process?

My thesis is that the academic/practical dichotomy is a symptom, rather than a root cause of the current inequity relating to student access to 'powerful knowledge'. As such, it does not enable us to identify meaningful ways in which education might be designed for the Good Society. In contrast, Bernstein's [4] conception of esoteric knowledge as potentially powerful knowledge enables us to recognise the root cause underlying the impasse associated with the academic/practical dichotomy. In addition, the associated notion of a vertical discourse provides us with a conceptual model that allows us to suggest ways in which learning can be designed to contribute to the realization of the Good Society. I adopt Bernstein's definition of vertical discourse as a form of pedagogical discourse that enables students to link symbolic knowledge, derived from a context, to other symbolic knowledge structures in a vertical manner. Engagement in vertical discourse enables students to transcend an immediate context to examine social classifications and control mechanisms that are inherent in pedagogical discourse [4].

Technology-integrated education has tended to focus on the 'usefulness' of specific technologies in specific educational contexts, rather than focusing on enabling Bernstein's [4] vertical discourses. By way of illustration, I will consider augmented reality from the point of view of its 'usefulness' in specific educational contexts. I then make suggestions for the ways in which such an understanding of usefulness might be supplemented by approaches that enable students to engage in vertical discourses.

2. Bernstein and the pedagogic device

Bernstein's definition of 'pedagogic' practices incorporates a good deal more than traditionally understood interactions between teachers and students in recognised learning contexts. His view is that any social context in which cultural production or reproduction takes place may be viewed as pedagogic practice. From this point of view, the interactions between doctors and patients — or interactions between architects and planners — is no different from the interactions between teachers and students [5]. Bernstein points out that approaches to cultural reproduction view education as a carrier of power relations external to itself. These power relations entail patterns of dominance relating to matters such as class, patriarchy and race [6].

This view of education might create the impression that pedagogic discourse, per se, is neutral whereas the specific content that it carries is ideologically charged. In considering this supposed neutrality, Bernstein compares what he calls the 'pedagogic device' to the 'language device'. A broadly Chomskyan view of language differentiates between a fixed universal language capability and specific, culturally-mediated language usage. In the same way, the pedagogic device can be considered as a fixed, universal construct while diverse pedagogical practices will be content- and context-mediated. Bernstein, however, argues that neither language device nor pedagogic device is ideologically neutral. In fact, the pedagogic device can be related directly to the distribution of forms of consciousness and the constraints upon such forms of consciousness [7]. The vehicle through which this distribution is achieved is pedagogic discourse. Pedagogic discourse can be either horizontal or vertical, depending on the form of consciousness that it engenders.

2.1. Horizontal and vertical discourses

Bernstein [4], following Durkheim [8], argues that all societies differentiate esoteric knowledge from mundane knowledge.

Whereas mundane knowledge is rooted in everyday experience and is inextricably linked to a specific context, esoteric knowledge is abstract and transcends the immediate context by connecting the mundane to the transcendental. Bernstein also links these two kinds of knowledge to different structures and different social relations.

Mundane knowledge can only be gained in specific, material contexts. Such knowledge is not transferable from one context to another. In this sense, mundane knowledge is segmented and is not only tied to a local context but is, in fact, absorbed by the local context. Mundane knowledge thus only allows access to forms of 'segmented' horizontal discourse [9].

In contrast, esoteric knowledge is conceptual knowledge that is indirectly tied to a specific context. Horizontal discourse involves context-specific, culturally-determined segmented knowledge that may be linked to adjacent segments horizontally. In contrast, vertical discourse consists of 'specialised symbolic' knowledge structures that may be linked to other symbolic knowledge structures hierarchically [10]. For this reason, Bernstein argues that such knowledge structures are not consumed in a specific context at a specific time and in a specific place. Rather, the pedagogy of vertical discourse is extended beyond the bounds of context, time and space. Whereas horizontal discourse is inextricably rooted in context, vertical discourse is only indirectly linked to context. This indirect link creates a 'potential discursive gap' [9]. Such a discursive gap is the primary site of ideological control but it is also, potentially, the site of ideological overthrow and replacement since it could become the site of new understandings of the relationship between the material and the immaterial.

With reference to education, Bernstein argues that segments of horizontal discourse have been inserted and recontextualised into the contents of school subjects, with the supposed purpose of making such subjects more accessible to the young. An example of this might be the redesign of a language curriculum (presumably inspired by a national ministry of education) to focus on the use of language in specific contexts of use, rather than on language as system — related to other languages as similar systems. In such a curriculum, the student's understanding of language is 'recontextualised' or mediated by the choice of contexts. Who chooses the contexts and are these contexts selected solely on the grounds of their educational efficacy?

Vertical knowledge in such subjects is relegated to providing a fixed number of strategies aimed at increasing the student's repertoire of horizontal segments of knowledge. For Bernstein, this represents a shift of focus. No longer is the aim to give all students access to 'powerful knowledge'. The aim now becomes an endorsement of the application of specific skills in a specific context as sufficient. For Bernstein, this represents a shift in education from a focus on ensuring that all students have access to 'powerful knowledge' to the assumption that many students will not access 'powerful knowledge'. In the process, the desirability of engaging with 'powerful knowledge is diminished [12]. The handful of students who are able to access the highest levels of vertical discourse are initiated into the 'mythology of education' and come to know that such school subjects — in fact — do not exist in their own right in any meaningful way.

3. Technological discourse

The integration of digital technologies and technological discourse into the curriculum also proceeds from the assumption that technological discourse is neutral. Just as pedagogical discourse is deemed to be a carrier of ideological content, so also is technological discourse deemed to carry ideological content (while being considered neutral itself). Such an approach to technological