

Paper 8: The pedagogisation of health knowledge and outsourcing of curriculum development: The case of the Stephanie Alexander Kitchen Garden Initiative

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It is understood that knowledge that comes to constitute the official curriculum and subsequently guide the day to day life in schools, specifically in health matters, as well as the teaching practices used to communicate health knowledge are no longer the sole the terrain of teachers employed in schools, the schools themselves, or even school districts. It is apparent that the dimensions of health within and under the auspices of schooling are now open to contributions by other providers that exist outside of school systems. We acknowledge schools often resort of outside providers for a number of reasons for example to broaden the curriculum experiences for children, or to compensate for the absence of expertise within a school. The central focus for this paper, is to try to understand these phenomena through the theoretical work of Basil Bernstein. Bernstein's network of ideas (Moore 2013), has deepened the understanding of the nature of school knowledge and how it comes into existence, the concept of disciplinary fields (or more specifically school subjects), and the power arrangements that support (or otherwise) how particular forms of knowledge come to be accepted as legitimate school subject knowledge that gives school subjects particular form and shape. As the constitution of school knowledge shifts with outside providers contributing increasingly and more broadly to the curriculum and school life more generally especially in the name of wellbeing, it is worth turning to Bernstein again to further examine these shifting circumstances. Specifically, we were interested in the source of particular kinds of health knowledge for the purposes of acquisition by children, what journey does such knowledge travel to arrive in school classrooms and in the process, how and in what ways is it pedagogised under the conditions of outsourcing? Our data show that knowledge that was ascribed to Stephanie Alexander herself and her background in growing and cooking food, can be identified as a horizontal discourse. However, the SAKG Foundation acted as agents in both the official recontextualising field (ORF) and the pedagogical recontextualising field as this knowledge was transformed into a vertical discourse compelled as it was, to be

curriculum compliant. As a consequence, the choice, sequence and timing of the learning materials associated with the scheme, mimicked many of the learning elaborations across multiple subject/learning areas of the Australian Curriculum through an elaborate mapping exercise. In the secondary field, it was apparent that it was the co-workers and ancillary staff brought in to do the garden and kitchen work as a horizontal discourse, who managed to keep the original and innovative ideas of the ‘garden to plate’ learning experiences alive and fulfil the intent of the program.

Keywords: Pedagogical Device, horizontal and vertical discourses, recontextualising fields

Funding details: *This work was supported by the Australian Research Council under Grant number DP140102607.*

Introduction

This paper, motivated by the broad goals of the project (described by Macdonald, Johnson and Lingard in this issue), emerged through the consideration of further questions associated with the nature of school knowledge at the point of implementation in schools. Specifically, we were interested in the source of particular kinds of health knowledge for the purposes of acquisition by children, what journey does such knowledge travel to arrive in school classrooms and in the process, how and in what ways is it pedagogised under the conditions of outsourcing? In short, like Bernstein (1990), we were interested in what happens to knowledge along the way.

The previous papers in this issue have established that the knowledge that comes to constitute the official curriculum, that is the knowledge that guides the day to day life in schools specifically in health education, and the teaching practices used to communicate health knowledge, are possibly no longer the sole terrain of teachers employed in schools, the schools themselves, or even school districts. It is apparent that the dimensions of health education within and under the auspices of schooling are now open to contributions by other providers that exist outside of school systems. We acknowledge this is not new and schools often resort to outside providers for a number of reasons for example to broaden the curriculum experiences for children, or to compensate for the absence of expertise within a school (see Macdonald, 2014; Petrie, Penney & Fellows, 2014; Sperka & Enright, 2018; Williams, Hay & Macdonald, 2011; Williams & Macdonald, 2015 for more on this). However, in this paper, our concerns are specifically with school knowledge that is intentionally outsourced to a company, organisation, or in this case, a Foundation. The central focus for this paper is to try to understand these phenomena through the theoretical work of Basil Bernstein. Bernstein's theory, or as Moore (2013) prefers to say, Bernstein's network of ideas, has deepened the understanding of the nature of school knowledge and how

it comes into existence, the concept of various disciplinary fields and how from these, specific school subjects are recontextualised as pedagogic discourse. Hence, our interests are in how particular forms of knowledge come to be accepted as legitimate *school subject knowledge* that gives the school subject particular form and shape. As the constitution of school knowledge shifts with outside providers contributing increasingly and more broadly to the curriculum specifically health education, it is worth turning to Bernstein again to further examine these shifting circumstances.

In this paper, we first, briefly discuss the idea of school gardens as a site for learning. We acknowledge that this is far from new but note from the literature that school garden spaces are increasingly being used for health promotion purposes. We also briefly identify specific use of kitchen-gardens as a learning opportunity in the specific area of health education. This introduces the particular focus of this paper which is the Stephanie Alexander Kitchen Garden (SAKG) initiative. This is an outsourced food education/food literacy program originally aimed developing healthy (and diverse) food choices in children yet at the same time, offer possibilities for indirectly tackling obesity (Yeatman et al., 2013). More recently the program has become better known as a *pleasurable* as well as healthy eating educational experience, with a view to changing children's nutritional habits via garden-to-plate experiences. The SAKG is introduced in the paper by Enright and Kirk (this issue) as one of the organisations of interest in the overall project as described by Macdonald et al this issue.

We then briefly revisit the literature associated with outsourcing with particular reference to health and physical education which is the name of a school subject in Australia. Our particular interests are with the health education elements of this subject area. We are conscious not to be overly repetitive so will acknowledge previous papers in this issue where a more thorough discussion is presented.

We draw upon the key elements of Bernstein's pedagogical device relevant to how they apply here with added attention to Bernstein's (1999) notions of vertical and horizontal discourses. These particular ideas have specific pertinence for our analysis and ensuing discussion as we try to make sense of how the knowledge, embedded within the SAKG initiative, has moved through the various fields identified by Bernstein to eventually arrive in communicable form in classrooms. We are interested to know whether such an initiative challenges the conventions of health and nutritional knowledge or whether, under the perceived pressure of curriculum fidelity, it offers little or nothing new.

For readers unfamiliar with Australian primary and secondary education, it is worth briefly explaining where food education, or food and nutrition studies fit within a national curriculum framework. As a nation of federated states each state is responsible for the delivery of public education. Hence though there are national curriculum documents that relate to curriculum content, how these are enacted and even to some extent the name of subject areas around the country has variations. Food and nutrition studies for example, is an area of study that is within the Australian Curriculum: Health and Physical Education (or HPE). In some states the subject is named PDHPE where the PD stands for Personal Development but is informed by the same national document. A full explanation of the curriculum is beyond the scope of the paper; however, it is worth noting that the teaching of this subject in most states is undertaken by classroom teachers in the primary (elementary) school sector and by trained HPE specialists in the secondary (high) school sector.

Outsourcing of the work of schools

As Enright, Hogan and Rossi (this issue) indicate, long held assumptions about public education being free at the point of delivery are under pressure through increased levels of marketisation of the services schools provide such that the schools sector, in part at least,

resembles a quasi-market. Hursh (2016) would argue that the circumstances surrounding the marketisation of (and in) schools in the USA is at a critical point where a form of academic apartheid based on ability to pay is progressively becoming the norm. The term outsourcing within the context of education, spans the provision of goods and services by the profit and not for profit sectors. The mantras of choice and freedom are often used as the ideological imprimatur for privatising education services on the assumption that 'other' organisations can deliver such services at lower cost and with greater efficiency and with better outcomes (Rizvi & Lingard, 2011), all of this consistent with the ubiquity of neoliberalism and new public management ideals (Ball, 2012). In Sperka's paper in this issue, she similarly points to an extensive literature of the marketisation of schooling, also framed by the tenets of neoliberalism, a term she identifies as common yet often overused. Sperka also notes that there is a wide literature within HPE that identifies where and how outsourcing has been implemented, with much (though not all) of the underpinning research having been undertaken in Australia or New Zealand. Importantly outsourcing should not be seen as precisely the same as privatisation. Whilst in some cases they might produce similar results, the idea of outsourcing is perhaps a more nuanced phenomenon and Sperka (this edition) emphasises this point by identifying curriculum packages and teaching programs that have been used in Australian schools for some time. As Gard (2015) points out, there might be very good reasons to outsource elements of schooling and even curriculum development and implementation, among them is access to expertise that might be otherwise absent. It is apparent that profit is not always a motivating factor and this is a point of contrast to the account provided by Evans and Davies (2015) who identify education as increasingly rampant marketplace controlled only by Adam Smith's 'invisible hand'. Interestingly, Evans and Davies (2015) claim that part of the shift to alternative suppliers of educational services has, as part of its mission, to capture the Pedagogical Device and control the process of

distribution, design and evaluation of school knowledge, affecting the ‘practices and outcomes of PE’ (p.19).

Williams and Macdonald’s (2015) study identified how external providers were used to provide ‘an educationally worthwhile contribution’ (p. 61) to the activities of the schools and for the benefit of the children. As Williams and Macdonald (2015) note, what constituted worthwhile sat within the providers own descriptions of worthwhileness and were not attuned to curriculum documents or policy intentions. Interestingly, this in stark contrast to the Stephanie Alexander Kitchen Garden example as can be seen in what follows.

Kitchen gardens as ‘school work’

Gardens, as a site for school work, are not particularly new. However, more recent emphases on eating habits, specifically healthy eating, and concerns over obesity on a global scale, has prompted a new commitment to such projects in schools but with a more pronounced focus on kitchen gardens for the purposes of food education through food production, preparation and consumption which to some extent separates it out, nominally at least, from nutrition studies. Food education has been studied under various broad banners such as Home Economics or Domestic Science, and other subject names in various jurisdictions. However, the role of a kitchen garden as part of a ‘garden to plate’ learning experience has gained momentum with greater attention to global health discourses (Block, Gibbs, Staiger, Gold, Johnson, Macfarlane, Long & Townsend, 2012; Parmer, Salisbury-Glennon Shannon & Struempler, 2009; Christian, Evans, Conner, Ransley & Cade, 2012) with interventions via curriculum innovation or via randomised trials.

The Stephanie Alexander Kitchen Garden Project (SAKG) in Australia

The SAKG initiative was identified as relevant to the overall project. Its innovation of attention to the ‘garden to plate’ process meant that even though it started life as a health promotion campaign and in particular as a strategy to combat what was (and to some extent still is) being framed as the obesity epidemic (Stephanie Alexander Kitchen Garden Foundation, 2011) it was to all intents and purposes a food education program. In particular, the program attempted to provide a new approach to food education and food literacy. So even though the innovation was identified as an initiative to combat a global health discourse (as the Foundation’s own information and background sheets show), its essence is in creating the conditions for children to develop highly positive experiences with food, from production to preparation to consumption. It was the idea of Stephanie Alexander who grew up in the 1950s in a family that grew its own food. Through this experience she became a food lover and ultimately one of Australia’s best-known celebrity chefs. The project was initially aimed largely at primary schools in the state of Victoria, Australia. It was granted substantial Federal government funding to commence at trial schools followed by a larger roll out. The project now attracts wider forms of support as a Foundation, (including corporate) and the initiative tends to focus far more as an educational *pleasurable* food experience program rather than as a health intervention. The program is now in more than 800 schools nationwide and more recently moved into the secondary (high) school sector. The program has maintained a consistent message which is about children growing, harvesting, preparing, cooking and eating food that is organically grown, is sometimes unusual (that is, less common), and, which may be shared among classmates in the form of a communal class meal and even activities where the community is invited into the school to share the food. The program’s more recent manifestation should not cloud the initial impetus which was to assist in combating the global concerns around youth obesity.

Methods

The methods of the overall study conducted in Australia are detailed in the paper by Macdonald et al. earlier in this issue. The SAKG data included in this paper were gathered in the same way with analysis of documents (in this case, promotional material, curriculum and teaching materials plus background pamphlets), interviews with case study participants and a web-audit. The research team also drew upon material in Stephanie Alexander' cook books and memoir for background material particularly of her experiences in growing up surrounded by the production and cooking of food. For the purposes of this paper, we have drawn upon a single example of the early teaching materials plus the case study interview data. There were two case study schools were small to medium primary schools in the south-east of the Australian state of Queensland. The participants included two principals, three classroom teachers, two garden specialists, one kitchen specialist. The CEO of the Foundation was also interviewed. All interview data were transcribed verbatim and the entire research team undertook an inter-rater agreement task using the interview of the CEO as the test case. Analysis of the data was the undertaken by members of the research teams who worked most closely with this aspect of the study. The Bernstein analysis was undertaken by the two named authors of this paper.

A Bernsteinian theoretical framework

It is only possible to capture some of the key elements of the work of Bernstein in a few paragraphs in order to set up a theoretical framework for analysis purposes relevant to this paper. His work is extensive and developmental across several decades with periodic revisions and adjustments including refinements of his ideas around what he referred to as the pedagogic code. For the purpose of this paper, we draw primarily on Bernstein's notion of the Pedagogic Device (PD) though acknowledge that other elements of his network of ideas are also important to this paper particularly vertical and horizontal discourses. Central to his work was the relationship between symbolic orders, (rules of selection of content), social orders (the nature of practice), and how these two sets of rules structured the nature of experience or in the case of schooling, learning (Bernstein, 1975;1990).

The Pedagogical Device

As Bernstein's analysis of the process of education transmission progressed he sought to understand if general principles could be applied to the transformation of knowledge into pedagogical communication. He asked this question regardless of whether knowledge was intellectual, practical or expressive, or whether such knowledge was official or local. Today, with the advent of new players or providers in what is increasingly being understood as an educational market, a grasp of how knowledge is pedagogised, we will argue, remains as important as ever.

The process of pedagogising knowledge Bernstein (1990) claimed starts with the relationship between what is spoken or written (communication) and how this might have meaning ascribed to it. He showed that there are contexts where this relationship is enacted (such as workplaces, homes or schools) and the relationship in each context is governed by contextual rules. He suggested such rules were not ideologically free though were generally

understood, making them reasonably stable. The Pedagogical Device (PD) he described as being about the relationship between meaning potential and pedagogical communication. The PD he argued was governed by three internal sets of rules, distributive, recontextualising, and evaluative. Distributive rules work to distribute different forms of knowledge, consciousness and practice to social groups. These rules operate within the primary field of knowledge production – where new knowledge tends to come into existence. In all societies Bernstein (1990) claimed there are at least two classes of knowledge, one can be understood as being esoteric and is characterised as exclusive and generally available to small privileged groups. Such knowledge generally takes form through highly specialized languages, tends to have a hierarchical structure and using Bernstein's (1999) language can be understood as a vertical discourse. Bernstein describes vertical discourses as being structured through highly specialized symbolic systems constituted by highly explicit knowledge (p. 161).

The other type of knowledge identified Bernstein suggested was more mundane or common and he characterised such knowledge as inclusive and open to all groups. Bernstein referred to this as a horizontal discourse. Knowledge described in this way tends to be segmentally organised in a relatively flat structure. There is no real hierarchy in the segments, though the different segments become more important at certain points of the overall process. As Bernstein says it is in the realisation of horizontal discourses that creates variation across sites and spaces. As he says such discourses vary in the way 'culture segments and specialises activities and practices' (p. 159).

These two classes of knowledge Bernstein (1990) described as being connected by a highly specialized division of labour, and rules that facilitate their distribution such that more esoteric forms of knowledge within vertical hierarchical structures tend to be located within 'the upper reaches of the educational system' (p. 43), whereas knowledge in its more common or mundane form tends to be located within secondary and primary school systems.

The ordering process of the choice, sequencing, and timing of contents forms the Pedagogic Discourse and as Bernstein (1996) argues, a function of the regulative discourse, that is, the moral code or the rules of social order that “creates the criteria which gives rise to character, manner, conduct, posture etc. In school it tells children what to do, where to go, and so on” (p. 48). As Bernstein (1996) said, the rules of social order are created by the regulative discourse. Within this, Bernstein argues the instructional discourse is embedded; this is represented by the discourses of skills and their basic relationship to each other. Recontextualising rules, create pedagogic discourse, the communications “through which pedagogic subjects are selected and created” (Bernstein, 1990, p. 47) and as such they operate in a recontextualising field formed by two key elements; the Official Recontextualising Field (ORF) dominated by the state and its selected agents and ministries, and the Pedagogical Recontextualising Field (PRF) which included pedagogues in schools and colleges responsible for teacher education, specialised journals and even private research institutions. In the ORF, the choice, sequencing, timing of contents is decided upon (made official) such that the process of transmission can take place, or be communicated to, recipients.

Evaluative rules assess the degree to which the discourses are realized, reproduced and then acquired at the point of transmission. As Bernstein suggests, evaluative rules create a ‘condensing’ process whereby the degree to which the movement of discourses from one place to another can be deemed to have been successful or otherwise and as such though such rules function in all fields they are more commonly seen to do their work in the secondary field of reproduction.

Maton and Muller (2006) emphasised the structure and intent of the pedagogical device relatively simply by suggesting that the hierarchical nature of the rules means that “production precedes recontextualisation which precedes reproduction” (p. 10) and that ordinarily the distributive, recontextualising and evaluative rules that govern this process tend

to be associated with particular sites. Bernstein (1996) suggested these sites could include research papers, conferences, research labs (representing the production); curriculum policy, textbooks, curriculum documents and the wide variety of learning aids (representing recontextualisation), and classrooms (and the practices within them) and examinations and other forms of assessment (representing re-production). At each of these sites and via the rules identified by Bernstein, knowledge is codified and transformed into a form of communication that is can be acquired by learners across different levels of development or in conventional parlance across the different years of schooling (acknowledging that these are not necessarily the same).

In the area of HPE, several authors have drawn upon Bernstein's theorising. Kirk, Macdonald and Tinning (1997) used Bernstein to show how the structuring of pedagogic discourse within the higher education sector was reflective of other changes in the sector and concomitantly, of the internal struggles the subject was having with its own identity and the absence of any agreement as to what actually constitutes the discipline. Among the reasons for this contestation were the power struggles over how the discipline should be defined and what contents (Bernstein, 1975) underpinned such a definition. A consequence of these struggles was the shifting nature of the instructional discourses that underpinned physical education.

More recently, Leow, Macdonald, Hay and McCuaig (2014), acknowledging the increased health burden on schools and with a particular focus on childhood obesity, drew upon Bernstein's PD to map the associations between health policy initiatives and the implementation of such policies specifically through the curriculum. The expert knowledge embedded in health policy initiatives resided within the health sector, described as healthy lifestyle advocates rather than in the education sector. In the field of reproduction, that is at the point of communication to children, the teachers were highly resistant, not because they

considered the policy not worthwhile but because it was viewed as transient. Their view was that a different policy requiring interpretation and communication would come along shortly after, hence there was policy fatigue in the teachers. Moreover, in spite of the imprimatur from the relevant Minister at the time, the implementation of health policy was butting up against the higher priorities of literacy and numeracy. As a consequence, the policy was seldom implemented in the way those in the official recontextualising field had anticipated. In an earlier paper Leow (2011) also noted that the transmission rules of health policy favoured the power invested in Government rather than teachers according to official texts indicating that the recontextualising process was more about compliance than teachers exercising their pedagogical voice.

Penney (2013) drew upon Bernstein's notions of boundaries in many respects to show contemporary classification of and framing in physical education had changed little even with the advent of successive waves of National Curriculum initiatives (particularly in the UK, though Penney also drew upon the Australian context). The social and symbolic meaning historically associated with Physical Education meant that even with new curriculum texts, shifts in practice were difficult to discern. However, it was Penney's position that the best opportunities for change lie at the interface of curriculum, pedagogy, and assessment in any attempt to move towards changes in the nature of knowledge and its communication.

Kirk and Macdonald (2001) identified the challenges of involving teachers in the curriculum design process. In spite of the broad perception that teachers could be part of the process of curriculum design via broader collaboration and act as recontextualising agents with the ORF, their power to do so was limited by the reach and power of their voice. They describe in detail the problems teachers have in being involved in the transformation of innovative ideas into classroom practice mainly because what becomes the knowledge that constitutes a school subject is regulated by those who ultimately control the curriculum. In

the case of Kirk and Macdonald's (2001) analysis, even though the teachers were invited into and recruited for the purposes of curriculum construction, in the end the teachers "did not operate as agents in the recontextualizing field". What was more apparent was that teachers have a proper place in curriculum development processes, but this tends mostly to be in the secondary field, at interface with the RF. The recontextualising field, as a mechanism for the establishment of social order, was something about which Bernstein (1996) was deeply concerned. Specifically, because the growing power of ORF and its agents was likely to diminish the influence of the PRF. This Bernstein argued was likely to erode the relative autonomy of education systems and the work of their schools from political intervention.

Pedagogising SAKG: appropriating the innovative idea

With concerns for children's health specifically healthy eating, Stephanie Alexander was prompted to consider what knowledge about food might be of value for schools (and therefore children) as part of the solution to overcome such concerns. The following statement from the interview with the CEO of the Foundation sets the initial scene:

She [Stephanie Alexander] despaired at the growing I suppose the negative situation around children's health and wellbeing and the growing obesity crisis.

Obviously, the wellbeing of children is the primary concern of Stephanie in the program. The government measures that wellbeing by pinning it to a specific disease and that's obesity.

Obesity is widely understood to be a complex health phenomenon (see Gard 2010; Leow, 2011) usually attributed to intersecting factors with a range of comorbidities. The primary field knowledge associated with obesity as an 'illness' (health science, medicine, dietetics) or

as a social and political phenomenon (sociology, political science) would reside in research institutes, universities and the health sector where obesity has been the subject of research for at least 50 years (Karasu, 2016). From a Bernsteinian perspective this would be a form of vertical discourse and is subject to the highly specialised division of labour of scientific and social researchers.

However, the SAKG initiative/ innovation is founded on a different premise, that of healthy food intake, underpinned by the skills and knowledge of growing, harvesting and cooking it. When asked about the knowledge base for the program, the CEO responded that it was predicated on Stephanie Alexander's personal knowledge:

Personal is a really good way to describe it, but it's the personal experience that a lot of people can relate to.

This perhaps creates a misleading veneer that the primary field of knowledge emanates from Alexander's vision (her idea for the program in the first place) and her knowledge and skills (which can often be found in her cook books). However, such knowledge cannot really be described as esoteric or in the first instance be considered as a vertical discourse. None the less, some of the original ideas do reside with Alexander under the auspices of the innovation. The question then, is how is Alexander's knowledge (and that other chefs for that matter) pedagogised? Equally important, what role does Alexander's (personal) knowledge, which according to Bernstein would be described as a form of horizontal discourse, become integrated into curriculum delivery if at all. Hence, it is the role of the SAKG Foundation that is perhaps of more interest.

At the point of accepting government funding, it is not unreasonable to suggest that the work of the project existed within the Official Recontextualising Field. That is, the

program and its materials were sanctioned by the state for implementation in schools. However the Foundation is perhaps best understood as a recontextualising agent that operates in the PRF. Program writers within or contracted by the Foundation have, as part of the pedagogising process, moved other food related knowledge from the primary field such as nutrition science and dietetics and as we later show from ORF in the form of curriculum fidelity into the PRF for the purposes of producing work books, units of learning or schemes of work, and lesson plans for teachers to use with children in school. It should be noted however that Stephanie Alexander’s innovative idea, is a little lost at this point. That is Stephanie Alexander’s original idea of garden to plate is less visible. The annotated example provided below demonstrates this quite clearly.

[Place Figure 1 about here]

Figure 1: Annotated and abridged example of unit of work (primary school) in the SAKG program

Year Levels: 4-6	
Unit/Module Title: A Good Egg	
Curriculum Links (Examples)	Information about the unit/Module (Abridged)
<p><u>DScience</u></p> <ul style="list-style-type: none"> • Living things have life cycles • The growth and survival of things are affected by the physical conditions • With guidance, select appropriate investigation methods to answer questions or solve problems 	<p>Eggs are an ideal link to learning about life cycles and for exploring food chemistry.</p> <p>First, we crack the assumption that many students hold, that all eggs are hens’ eggs. Which animals lay eggs?</p>
<p>English</p> <ul style="list-style-type: none"> • Understand that the pronunciation, spelling and meanings of words have histories and change over time 	<p>To ensure students understand that many animals lay eggs.</p> <p>Lesson 3 covers the chemistry of eggs and what happens to proteins and water in an egg when it is exposed to heat.</p> <p>This lesson can lead to practical cooking in kitchen classes if you use eggs.</p>

The table is annotated with two callouts. A blue circle labeled 'Dietetics and nutrition knowledge' has arrows pointing to the text 'Which animals lay eggs?' and 'Lesson 3 covers the chemistry of eggs and what happens to proteins and water in an egg when it is exposed to heat.' A black circle labeled 'Cross or multi-curriculum links' has arrows pointing to the English curriculum link 'Understand that the pronunciation, spelling and meanings of words have histories and change over time' and the DScience curriculum link 'With guidance, select appropriate investigation methods to answer questions or solve problems'.

The school knowledge identified in this segment of a unit called ‘A Good Egg’, reveals knowledge from various primary fields as a vertical discourse with examples from scientific fields such as physics (heat), biology (categories of animals), and chemistry (chemical reactions to heat). In lesson two of this unit (30-45 minutes), there is a highly detailed lesson on the biology of a chicken egg under the heading “What’s inside an egg?”. The content of this lesson contains language such as *germ cell*, *chalazae*, *albumen*, *embryo*, and so on. Hence what was identified as the personal knowledge of Stephanie Alexander is subsumed by overlay of ORF expectations drawn from the curriculum, to which this lesson is comprehensively linked. Even though in all likelihood Alexander knows and understands such terms, she is not their source. Material identified in this lesson is much more of a conventional health/nutrition lesson which does not appear to be contingent upon learning in gardens or kitchens. This is not to suggest that these are not good learning opportunities or even that Alexander’s vision for learning experiences have not led to this point. Rather the connections to Alexander’s innovative ideas are more difficult to detect. Lesson three involves cooking eggs and is delivered through the science of chemical change to foods that undergo heating. The cooking of eggs here, important as this is, appears to be more about chemistry than pleasurable eating.

All of this lesson material is valuable and in the context of the materials, is well mapped to Australian Curriculum learning elaborations predominantly in science. However, such knowledge is well established science which undergoes change in the ORF and through such a mapping and re-ordering exercise is made communicable. The CEO confirms this by identifying that the program is founded upon and delivered though the actual contents communicated by the teachers. This is achieved under the broad umbrella term of wellbeing, a term that appears in the Australian HPE curriculum, but to which the SAKG program is not exclusively mapped.

In the way that at the moment wellbeing outcomes or objectives are not officially listed or stated in the curriculum in this country. So therefore, we have to tick off the ones that are listed and the wellbeing piece is an added bonus at the moment if that makes sense from a - I'm talking purely from a teacher's mechanical perspective of what they need to tick off.

It would seem then that what happens in the recontextualising field is relatively conventional, knowledge predominantly from the major sciences is pedagogised through workbook design via a commercial arrangement (the workbooks are part of a package based on a cost recovery mechanism). There is careful attention to the demands of the ORF in that each learning activity is tied to what is termed a 'learning elaboration' of the Australian Curriculum (broadly, and not just in a single subject area) for relatively seamless transfer to the PRF and day-to-day use by teachers. In other words, the design of the workbooks and lesson notes are 'made' official by the recruitment of official curriculum language but made directly useable by teachers and in some cases (though not always apparent in our participants) other workers in the secondary field. So, though one might imagine the Foundation to sit in the PRF, it is drawn into the ORF by the perceived urgency of curriculum fidelity.

Teachers, other staff and volunteers: transforming the innovative idea

Cross curriculum links are a requirement of the Australian Curriculum, with links to be made where feasible and sensible. In the case of SAKG, the CEO identifies the necessity to 'integrate' the material, as she said: 'So we call it integrated. It's an integrated program and we've done that work because in a way we're ahead of where the education system is, that's the truth'. However, this position was not widely shared by the teachers, support workers and

volunteers. Carmel one of the teachers felt that the necessity to comply with curriculum (official knowledge) meant that the subject areas of the curriculum were insulated from the garden project and integration was not well facilitated:

It's very stressful because even though they say we've got it integrated into the curriculum we've got to set C2C¹ curriculum and sorry ... it just doesn't integrate. We do not have the time to try and - I'm pretty good at integration but ... There are some things I just can't integrate.

Hence there are tensions for Carmel at the point of implementation where the knowledge of Kitchen Gardens as it is constituted by the work books and lesson materials, is made communicable. The curriculum requirements, that is, compliance to official knowledge (the Australian Curriculum), according to Carmel is well facilitated by the SAKG material. However, the learning activities for the garden elements, that is digging, planting, tilling etc., and to some extent the actual cooking components, seemed to be incompatible with official curriculum work.

Felicity, a Principal at one of the schools also shed some light on the degree to which the SAKG materials integrate into other areas of the curriculum. For Felicity, the main interest in the program was how it was able to deliver key elements of the Australian Curriculum and other key expectation of primary education. When asked what the key elements of the curriculum were that directly link to the SAKG program she was unequivocal “It would have to be literacy and numeracy”. When asked later about the links to health she suggested that “It will be - well the intent is good. Let's see - not specifically tied curriculum

¹ The Curriculum into Classroom (C2C) initiative is a set curriculum materials in Queensland that represents a “a comprehensive set of whole-school and classroom planning materials for single-level and multi-level classes” (<https://education.qld.gov.au/curriculum/school-curriculum/C2C>, para. 2).

wise, but it makes a lot of sense doesn't it, with health.” Hence the health intentions and ambitions were mostly absent. None the less, Felicity was adamant that external providers had to link with the curriculum simply so that what they offered could be fitted into the process of official curriculum delivery. As Felicity said, “It has to be very curriculumed”. The challenge in this example is that the original intent of the program seems to be lost amidst what might be perceived as more pressing curriculum concerns notably literacy and numeracy.

Carroll, a support worker in the program at a different school with a background in event management and catering, was both more explicit and enthusiastic about the possibilities of integrating the work of the kitchen/garden into the curriculum work of teachers. This included anything from simple mathematics to literacy to science. To some extent this also confirms the imperatives of curriculum fidelity. Of more interest perhaps, Carroll noted that through the process of the kitchen/garden work the tastes of the children had changed. This is one of the central missions of the kitchen garden project and part of its innovation. Carroll was highly explicit about this and her examples of exposing children to what might seem to children contradictory tastes (pears and cheese) and the change of sugars in onions once they are caramelised were indicative of how the central mission of the program led the connection to curriculum rather than bolted on as a compliance measure. Carmel managed to frame all the connections to curriculum through the idea of ‘flavour’ - again a central mission of the program. In other words, the approach to learning about healthy eating via the idea of ‘taste’ is fully in keeping with the innovative approach advocated by Alexander. None the less, it was apparent that health and science discourses were constantly recruited, and within the context of schools, remained important to the overall objective of the program in the particular school:

But what it did open up in talking about sugar was that I said to them, okay, I'm going to show how much people are eating at the moment of sugar per day. I don't want you to get upset because when you see this you'll get

upset. I actually stopped at 24 teaspoons. I didn't go to the 40 because they were getting really upset. So, we got to 24 teaspoons and the kids went really? I went, some people are. You guys might not be, okay, and you have the choice. This is what this is about, is that you can know that that could be hidden and you're eating it without you knowing it and trying, so now you might know to look. (Carroll)

Inevitably perhaps, the teachers often tended to default back to the curriculum, rather than foreground the garden. As Rosemary (a teacher) said: "Normally when we have our health unit we do a lot working on the healthy food pyramid". In the case of Rosemary's school, a garden had always existed but with the SAKG project, the garden was put to greater use. In some respects, this mirrors some of the earlier literature on gardens that demonstrated their existence long before the SAKG project. The leveraging of government funding however positions the SAKG project differently and the political support associated with the perceived obesity crisis created an opportunity to develop new and innovative learning opportunities for children. Interestingly however, Rosemary felt that the essence of the project was being lost mainly through the crowdedness of the curriculum. She described it this way:

Unfortunately, and after doing the training day that we had, which made me a lot more aware, I think that's the part that we've neglected the fun part. I think we spend so much time on trying to fit so much cooking in, doing so many skills and using so much variety ... we're just trying to cram too much in

Rosemary felt that the more creative elements (the cooking) were being lost in an attempt to achieve more fidelity to the curriculum and the teaching materials from the Foundation. It

was like the intentions of the experiential opportunities were being lost to the conventions of everyday schooling framed by curriculum knowledge. Here we have a teacher who willingly wishes to embrace the garden learning experience as ‘alternative’ which were its original intentions. From a Bernsteinian perspective this appears to be a genuine attempt to transform the original innovative idea into classroom communication. Here the ‘alternative’ elements represent the transformation of the material developed by the Foundation and at the same time not be overwhelmed by the demand of the ORF and in ways that seem more consistent with Stephanie Alexander’s original idea. The work of Rosemary seems to be an example of the journey of Stephanie Alexander’s personal knowledge as it was intended. Hence the transformation of Alexander’s ideas appeared to reside with teachers prepared to embrace the original innovation and work independently of official materials, and with the co-workers (non-teacher qualified staff) in the project. Erin, is an example of such a worker.

For Erin, the emphasis was on the kitchen component of the program and this connected to her experience in catering. Most of her conversation focused on cooking (and eating) experiences, particularly around ingredients. It wasn’t particularly clear if the ingredients had come from the garden itself, none the less cooking was connected to the idea of the garden rather than the idea of the curriculum. When asked about how she connected the cooking lessons to the curriculum, she said “To be honest, the teachers [are not] happy for me not to do it formally like that”. Even though Erin seemed not to connect the work that she does to the curriculum (having been advised not to do so), her cooking and eating opportunities appear to be highly valued by the school:

... it's a home kitchen. I like it because it - we're all sort of together. It is at times, particularly with the grade 6s coming, they're a bit big. The (grade 7s got - a whole class of the (grade) 7s, they were too big. But

when the littlies are in - you know, they have their stools if they need a bit of extra height but they can easily work around the bench. We're all together. (parentheses added)

This seems to better represent ideas and approaches Alexander foresaw as being central to her ideas of food education. There is little integration with either the SAKG materials or the Australian Curriculum. The knowledge delivered into the classrooms in this instance is personal knowledge gained from years in industry, which itself is likely to have had its beginnings in Erin's original training in a professional field. However, in this case Erin brings her knowledge into the classroom from outside and is directly pedagogised by her for acquisition by children. This knowledge has not been pedagogised by its transfer through various recontextualising fields at least for the purposes of becoming school knowledge. In this regard, Erin *is* the recontextualising agent and transforms her knowledge of cooking gained from years in industry for the purposes of pedagogic communication in ways that appear more consistent, again, with the original innovative idea of Alexander directly into the secondary field.

Discussion

The SAKG Program, now under the auspices a Foundation, is an example of how the implementation of school knowledge has been outsourced to an external agent. There is some ambiguity around the journey the knowledge travels in order to become communicable in classrooms. The SAKG innovation, that is taking the idea of garden-to-plate as a way of teaching healthy eating has to some extent been transformed not in this case by the state (even though it did receive government funding in the early part of its evolution) but by the Foundation as an agent in the pedagogical recontextualising field. The pedagogical innovation

has been transformed in ways described by Kirk and Macdonald (2001). That is, the innovative pedagogical idea has been mitigated by the ORF for the purposes of curriculum compliance and the strong ties to the Australian Curriculum via mapping to the curriculum elaborations. This might add to the 'sell-ability' of the product to educational authorities but allows the slippage of the idea from the secondary field back to the ORF to be made 'official'. Bernstein (1996) warned about this explicitly.

There are quite specific examples of the curriculum materials that are consistent with the original idea and fidelity to the Australian Curriculum, for example, sustainability. For the most part however, these do not have great prominence and are over-shadowed by the seeming explicit need to connect the SAKG project to official Australian documents.

It should be noted that there is much to admire about the program and the supportive nature of non-teacher qualified staff (kitchen or garden) who are embedded in the program seems to be the ones that enable the broad mission of program as conceptualised by Stephanie Alexander to be realised. In doing so, they are pedagogising agents who function within the secondary field and to some extent circumvent what happens in the ORF and the PRF. This is a different division of labour than that described by Bernstein in the transformation of knowledge. To this end, these workers in the secondary field of reproduction are highly supportive of the original the ideas of 'growing, harvesting, preparing and sharing' as skills and knowledge in and off themselves. This better represents the experiential knowledge of Stephanie Alexander herself to which the CEO refers but which is more easily found in the evidence of the co-workers in the program. In terms of the activities involved in growing, preparing and eating food, these are more recognisable as constituent of knowledge Bernstein labeled as 'common', that is, it is potentially possessable by all. He also regarded such knowledge as common because it has a common history even though there might be local and contextual nuances. It may be that such knowledge is not necessarily

common to all, though it might be potentially accessible to all. In other words, it is not necessarily an esoteric form of knowledge, however we can see that in the case of growing food and eating it, these things might share common elements of their history but from a range of contexts such as inner-city allotments, country schools, and the backyards of the co-workers. Given this, the process of garden-to-plate can be understood as a horizontal discourse as we described earlier. It is this knowledge which is pedagogised by the co-workers themselves and includes the tasks, skills and knowledge associated with breaking ground, digging, preparing soil, enriching soil and so on. Growing then involves the choice of plants, light and water needs, rate of growth, seasonal preference etc. and so it goes on. All of these processes are associated with the production of food to its harvestable state. Then comes the harvesting and cooking, the latter of which can be highly differentiated for deliberately chosen results. There is no real hierarchy in the segments, though the different segments become more important at certain points of the overall process. It is through these commitments to the program and its segmented horizontal nature that the original ideas of Alexander are realised, and not necessarily through the curriculum material designed under authority from the Foundation nor the ORF. Horizontal discourses are at their most powerful when evaluative rules are at their weakest. However evaluative rules were most apparent in the teaching materials with the necessary connections to official curriculum discourses. Perhaps the kind of evaluation that best summed up the success of the program was the examples of where the food grown, harvested, and prepared/cooked were donated to or sold at local events or where the food was used to support a school event. All teachers in the study reported examples of this.

Globalised Health Discourses

The globalised health discourse around healthy eating, weight-management and obesity with its attendant secondary health challenges (such as Type 2 diabetes) provided the context for this innovation and the impetus for Alexander to develop the idea especially as obesity appears to remain a health concern for governments. Given this concern obesity might also be a motivating factor for opening up the curriculum development process to other organisations. It is apparent that this remains a key concern of this program. However, this does not make it part of the pedagogisation process. The central premise is that a food education/appreciation program can help alleviate this perceived problem. As to whether this should be a motivating principle for curriculum development is arguable.

Lower cost expertise and curriculum delivery for health initiative purposes

Well-established pillars of neoliberalism to which we referred earlier such as cost reduction and economic efficiencies has found their way into new forms of public management, education and some cases essential services (Brown, 2015; Connell, 2013). This is not a central concern of any kitchen garden initiative and certainly not a focus of the Stephanie Alexander scheme. In spite of its generous initial funding this program exists in the not-for-profit sector. However, from the observations here and certainly from the history of the program, there is a case for identifying the roll out of the program as a modestly costed public health intervention and framed for schools by the various recontextualising agents. Even though the project evolved into a pleasurable eating experiences, the primary concern for this was to change children's eating habits and to introduce them to 'different' vegetables as healthy alternatives. One could reasonably ask if the innovation which presented a new approach to food education is worthwhile knowledge or whether the innovation was drawn

back into the ORF for the purposes of curriculum fidelity and the accountabilities associated with assessment? So it is not unreasonable to ask if work of those in the gardens and kitchens has ended up as a low-cost health intervention. This may sound like a somewhat harsh criticism of the efforts of the co-workers in this innovation. However, it should not be taken this way. Rather it is now recognised that teachers are increasingly drawn into ‘health work’ that represents a large financial cross subsidy of the health sector (see McCuaig, Enright, Rossi & Macdonald, 2020). Although this is not the purpose of the pleasurable eating intentions of SAKG scheme, it may however, be one of the unintended outcomes.

Conclusion

It seems somewhat trite to return to the ideas surrounding neoliberalism and as Williams and Fullagar (2019) note, market logic is simply part of everyday reality. None the less, much has been written about the ‘neoliberalisation’ of schooling and as Nikolakaki (2014) points out, educational institutions have become a target for marketization agendas such that the very *nature* of education is now a commodity, the delivery of which can be competed for, rather than education being understood as a collective public good. Connell (2013) describes that the adherence to the logic of neoliberalism has emphasised “grip of market logic on schools” (p. 102). The effects of successive policy shifts towards the marketization of education resemble a cascade effect over time gathering both pace and volume and therefore increasing impact. To this end the *social labour* of education, the mutual exchange of the ‘encounter’ of teaching and learning has Connell (2013) argues, been lost. Connell’s estimation may be exaggerated but there can be no denying that the encounter of which she speaks has changed. The papers in this issue point to the marketization not only of schools (and their ‘performance’) but also of the very nature of health knowledge as it appears within schools and their classrooms. That is, what is considered to be ‘worthwhile’ knowledge in schools

(specifically associated with health) and significantly its pedagogisation, is a field potentially open competition and part of a mercantile society (Ball, 2012). However, in the case of SAKG it does not present as a consequence of the ravages of advanced capitalism. Many of the people who become involved in this program are well meaning, concerned about young people and their health knowledge, particularly about food, and see SAKG as an opportunity to contribute to their future. Whilst the teachers we interviewed have mixed feelings about the program mostly around time commitments and crowded curriculum concerns, they tend to support the idea though feel compelled to be curriculum compliant.

Curriculum construction has the illusion of being liberalised because it is seemingly, a space that is now open to others, in most instances with the full support of the relevant government agencies. However, in the case of this initiative, central control is maintained via the ORF where curriculum material under the auspices of the SAKG scheme to all intents and purposes mimic the learning elaborations in the Australian curriculum. As Kirk and Macdonald (2001) point out this was one of Bernstein's great fears. Whilst curriculum compliance may well provide a level of authority for outsourced materials, in this case the desirability to be seen to be delivering the Australian curriculum via a kitchen-garden project, means the true essence of the original innovation is somewhat masked along the way. In the end, it is the non-teacher qualified staff that remain true to the original idea and keep it alive. This suggests that critique of the conditions of outsourcing of curriculum initiatives needs to be more nuanced as Sperka (this issue) from her analysis of recent literature indicates. With greater attention to the myriad of players in the secondary field whose interests, skills and backgrounds may be more attuned to the original innovative ideas rather than be strictly constrained by fidelity to official curriculum documents may result in the type of bespoke innovations that Sperka describes.

One of the peripheral storylines in this paper is how well Bernstein's ideas of fields (the primary or production field, the ORF/PRF, and the reproduction field) and associated rules are attuned to the processes of knowledge transformation under the conditions of outsourcing. However, as Loughland and Sriprakash (2016) argue, Bernstein's network of ideas/theories are highly adaptable. In this case this, the journey that knowledge travels through the various fields and the rules to which it becomes subjected may be different to that described by Bernstein. In a sense, this is because sources of knowledge across Bernstein's field might have alternatives and differences under the conditions of outsourcing. Similarly, workers in the secondary field may not be teachers and may not be informed by ORF agents and curriculum construction. In the case of the SAKG initiative such workers were able to fulfil the original ideas and intentions of the garden-to-plate innovation. Bernstein's network of ideas still enabled us to track the journey of this knowledge and in the process acknowledge the power of the ORF and those who work within it. Not only were we able to track the journey of the knowledge inherent within this program of learning, we were able to identify the points of resistance to state authority through mandated curriculum. This may prove useful as the outsourcing of curriculum development continues.

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