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Karen Lambert

Laura Alfrey

Justen O'Connor

Dawn Penney  
*Edith Cowan University*

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# **Artefacts and influence in curriculum policy enactment: Processes, products and policy work in curriculum reform**

\*Karen Lambert<sup>1</sup>, Laura Alfrey<sup>1</sup>, Dawn Penney<sup>2</sup> and Justen O'Connor<sup>1</sup>,

*<sup>1</sup>Faculty of Education, Monash University, Frankston, Australia*

*<sup>2</sup> School of Education, Edith Cowan University, Perth Australia*

*and Faculty of Education, Monash University, Frankston, Australia*

\*Dr Karen Lambert (corresponding author)

Faculty of Education

Monash University

Victoria, Australia

+61 3 99044400

email: karen.lambert@monash.edu

ORCID: <https://orcid.org/0000-0001-7406-4013>

Twitter: InfinityKaren

LinkedIn: <https://au.linkedin.com/in/drkarenlambert>

Karen Lambert has been teaching teachers to teach for the past seventeen years. Her teaching specialities lie in health and physical education pedagogies, youth health, gender and sexuality studies, and health promotion. She engages poststructural feminist and queer theory in her teaching as a result of her research interests around identity, place and

difference. She is currently researching and writing in the areas of scholarship of learning and teaching, curriculum policy reform, and embodied learning and pedagogies in physical education.

Dr Laura Alfrey

Faculty of Education

Monash University

Victoria, Australia

+61 3 99044421

Email: [laura.alfrey@monash.edu](mailto:laura.alfrey@monash.edu)

ORCID: <https://orcid.org/0000-0002-4200-710X>

Twitter: @lauraalfrey

LinkedIn: <https://www.linkedin.com/in/laura-alfrey-36021434/>

Laura is a Course Leader and Senior Lecturer within the Faculty of Education at Monash University, Australia. Her research uses innovative approaches to explore teacher professional learning, inclusion, and the process of curriculum renewal in Health and Physical Education.

Professor Dawn Penney

School of Education

Edith Cowan University

2 Bradford St | Mt Lawley WA 6050

Tel: +61 8 6304 2339

Email: d.penney@ecu.edu.au

Twitter: @profdpenney

ResearchGate [https://www.researchgate.net/profile/Dawn\\_Penney2](https://www.researchgate.net/profile/Dawn_Penney2)

ORCID iD, 0000-0002-2000-8953

Dawn Penney is a professorial research fellow in the school of education at Edith Cowan University and an Adjunct Professor in the Faculty of Education at Monash University. Dawn's research centres on developments in policy, curriculum and assessment in Health and Physical Education and seeks to bring to the fore issues of equity amidst 'reforms'.

Dr Justen O'Connor

Faculty of Education

Monash University

Victoria, Australia

+61 3 99044417

Email: justen.oconnor@monash.edu

ORCID: <https://orcid.org/0000-0001-6368-6693>

Twitter: @justenoconnor

LinkedIn: <https://www.linkedin.com/in/justen-oconnor/>

Justen is a researcher within the Faculty of Education at Monash University, Australia. His research centres on understanding personal, social and environmental factors in order to expand access and opportunity for people to engage in physical education, physical activity and sport.

## **Artefacts and influence in curriculum policy enactment: Processes, products and policy work in curriculum reform**

Artefacts are an important part of policy work, and a means of representation, translation, re-negotiation, and resistance of policy. Despite their integral role in policy enactment, however, little research has focused on policy artefacts. This paper reports and analyses the production and re-production of a specific set of artefacts, arising from the policy work of four teacher educators seeking to influence the interpretation and enactment of the Australian Curriculum in Health and Physical Education (AC HPE). Analysis and discussion pursues: the rationale for producing a set of artefacts focusing on a particular feature of the AC HPE; the processes of artefact production; actions designed to activate and re-present the artefacts; and emerging evidence of uptake and impact. The relationship of artefacts to policy work is shown to be strategically significant for teacher educators, teachers and others invested in new curriculum developments, and is characterised as both fluid and generative. We argue that artefacts have important performative policy potential and play a key role in supporting and shaping curriculum policy enactment.

Keywords: policy artefacts, enactment, curriculum reform, teacher education, Health and Physical Education (HPE), curriculum policy

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130210 Physical Education and Development Curriculum and Pedagogy (40%)

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## Introduction

Curriculum is not something that is easy to pin down: it looks like a concrete everyday term but in fact is rife with complexity about what kind of thing is actually being questioned, analysed or thought about. *Curriculum attention includes documents, events, rationales, assumptions, enactments at different levels and tending in different directions...* (Yates 2018, p. 142, our emphasis)

As Yates' (2018) commentary reflects, conceptualisations of curriculum grounded in education policy sociology have recognised it as a complex social, political and pedagogical process, rather than a singular 'thing'. Following Ball et al. (2011a, 2011b), we suggest that what happens and what is possible amidst curriculum reform, centres on the policy work of a range of policy actors, operating within different policy networks. We specifically recognise policy actors as inescapably involved in the ongoing production, negotiation, interpretation, adaptation and re-representation of curriculum in and through a range of artefacts. Such artefacts include formal curriculum documents, accompanying guidance materials, textbooks, on-line resources, programs of work, lesson plans and assessment materials, that all variously reflect the inherently unfinished nature of curriculum (Penney 2013). From this perspective, an official curriculum text is 'a text with gaps to be filled amidst enactment, through the collective input of various professional voices' and via the strategic production and dissemination of various artefacts (Penney 2013 p. 192). As Ball et al. (2012) explain, artefacts are the means of representation, translation, re-negotiation, and resistance of policy, and the mechanism for making and communicating particular policy meanings while simultaneously subsuming or denying alternative meanings.

While various agencies and individuals are acknowledged as engaging in policy work through the production and/or dissemination of artefacts, research that has actively pursued the strategic production and dissemination of artefacts amidst curriculum reform,

is limited. This paper responds by exploring the processes of production and dissemination of a specific set of artefacts arising from the policy work of four teacher educators seeking to guide the interpretation and enactment of the Australian Curriculum in Health and Physical Education (AC HPE) (Australian Curriculum Assessment and Reporting Authority [ACARA] 2020a) as entrepreneurs and provocateurs (Lambert & Penney, 2019). The analysis reported in this paper addresses four research questions: i) What was the rationale for producing a set of artefacts focusing on a particular feature of the AC HPE?; ii) How were these particular artefacts produced?; iii) How have the artefacts been activated in professional arenas?; and iv) What is the emerging evidence of reach, uptake and impact of these artefacts? In engaging with these questions, we present the relationship of artefacts to policy work as an inherently fluid and generative process of strategic significance to teacher educators, teachers and others invested in curriculum renewal, regardless of state, country or curriculum learning area. The gaps, silences and contradictions inherent in any official curriculum text expose curriculum as malleable as well as complex; this research extends insights into how educators can leverage the potential of artefacts to expand curriculum possibilities amidst policy enactment.

Before turning to the detail of the AC HPE and the artefacts that are central to the research, we expand upon the theoretical perspectives inspiring and guiding our work.

### ***Curriculum policy, prudence, and artefacts***

Curriculum reform is associated with complex, ongoing processes of text production, negotiation, selective appropriation and re-representation that play out across education networks; involving government agencies, school systems, schools, teacher education institutions, professional associations, and an array of commercial, government funded and not-for-profit organisations invested in education on the local, national and



international stage (Ball 2007; Ball & Junemann 2012; Evans & Davies 2015). Connelly and Connelly (2013) usefully distinguish between *formal curriculum policy*, comprising mandated curriculum requirements; so called *implicit curriculum policy*, taking the form of guidance materials and accompanying resources and texts (including textbooks), produced by a range of actors; and *prudential curriculum policy*, that is the curriculum contextualised and enacted by teachers as they see fit, taking into consideration the specifics of their individual school contexts and their particular visions for a new curriculum. Connelly and Connelly (2013) highlight that the production of implicit curriculum texts blurs the distinction between what is mandated and recommended in curriculum reforms. Thus, as Penney (2018, p.105) explained, ‘the concept of *implicit curriculum policy* acknowledges that guidance materials invariably influence curriculum enactment and in some instances will displace formal curriculum policy as the prime source of reference for teachers’. Penney (2013) draws particular attention to the prudence ‘required of any actors who have an interest in shaping policy enactment’ (p.195), explaining that:

Prudence...focuses on informed strategic action that will encourage and enable the expression of particular discourses and potentially, limit the expression of others. It is consciously designed to fill the gaps and silences that feature in the official text, to mediate the tensions that readers will see in the text, and align aspects of the official text with established practices. It will direct attention to the legitimacy and value of particular interpretations of the official curriculum text...*Prudence then, will call for and be reflected in the strategic production of ‘artefacts’... ‘that ‘mark’’ policy directionality’ (Ball et al., 2012). Prudence also involves and requires equally strategic dissemination of these artefacts.* (p.195, our emphasis)

Penney’s (2013) commentary was directed to teacher educators and professional associations and their prospective roles in shaping the ‘directionality’ of the AC HPE. This project responded to this call to engage more overtly in strategic policy work and

the production of policy artefacts that may inform, expand, mediate and/or challenge teachers' readings of the official AC HPE texts.

### ***The role of artefacts in curriculum policy reform***

Straddling the space between requirements and recommendations (Connelly & Connelly, 2013), artefacts provide material and discursive support for teachers to 'do' curriculum policy in their specific contexts (Maguire et al. 2011). Ball et al. (2012, p. 121) note that networks of teachers generate sets of ideas about what policy enactment might look like and/or what should be done in a process of reproduction and as 'simulacrum of primary texts'. By arguing that such representations 'draw attention' to and 'mark' policy directionality as well as exemplifying policy enactment, Ball et al. (2012) locate artefacts as significant indicators, and possibly activators of policy work.

In this research we conceive artefacts broadly, drawing from a number of perspectives, including cultural (Hodder 2000), design and learning (Kalantzis & Cope 2020), socio-material (Horan, Finch & Reid 2014), discursive (Ball et al. 2012; Maguire et al. 2011), policy (Plowright 2011), and performativity (Butler 1999). As a result, artefacts include all those 'things' that may appear, emerge or remain as a consequence or product of human activity. Plowright (2011, p. 92) states that 'artefacts are those objects and events that are produced by people'. He further explains that they are a 'means of encoding and expressing information, knowledge and understanding, in order to make these accessible to and usable by the participants involved in the process' (p. 110). For us, artefacts signal and signify our work as policy actors *doing* policy (Mulcahy 2015). When viewed as having a performative effect, artefacts are discursively and materially constructed and constituted, hence capable of impacting upon the *doings* of others, and on what the artefact(s) or actors might become and do over time, and across various contexts. This is made clearer in our method and discussion sections when we speak to

different characteristics and types of artefactual development and the traces of their impact on others.

The ‘things’ to emerge as policy artefacts are therefore wide and varied, and include, but are not limited to: utterances; discourses; signs; acts/actions, behaviour, practices; activities and events; movement and performance; documents or other written material; tangible or material objects; visual and auditory material; online and social media material and; any combinations of these. We now turn our attention to the policy that led to the creation of the artefacts that we share in this paper.

### ***The Australian Curriculum Health and Physical Education (AC HPE): Gaps and possibilities***

The AC HPE was openly promoted as prospectively a basis for some significant shifts in curriculum and pedagogy in HPE (Macdonald 2013), particularly because of the Five Propositions or ‘Key Ideas’ underpinning the development of content specifications. These Five Propositions are summarised in Table 1 below.

Table 1: Defining the Five Propositions

Proposition	Definition (from Lambert et al., 2017)	Supporting references
Develop health literacy	Building the knowledge, understanding and skills to research, apply and assess health information and services	Alfrey and Brown (2013)
Value movement	Providing a variety of movement challenges and opportunities for students to enhance a range of personal and social skills and behaviours that contribute to health and wellbeing	Brown (2013)
Focus on educative purpose	Prioritises progression and development alongside meaning making and application in contemporary health and movement contexts	Dinan Thompson (2013)

Include a critical inquiry	Involves deeply analysing and evaluating the contextual factors that influence the ways people live, including health and movement behaviours	Leahy, O'Flynn and Wright (2013)
Take a strengths-based approach	Affirms that all students and their communities have particular strengths and resources that can be nurtured to improve their own and others' health, wellbeing, movement competence and participation in physical activity	McCuiag, Quennerstedt and Macdonald (2013)

For formal curriculum definitions visit <https://www.australiancurriculum.edu.au/f-10-curriculum/health-and-physical-education/key-ideas/>

In relation to our research, their significance as a focal point for curriculum and pedagogical innovation is important, however, so too is the recognition of their inherently fragile standing in the AC HPE text. While portrayed as a central feature they simultaneously lack mandatory status. Arguably because of this, they have been adopted in an almost uniformly unchanged format as the foundation for State and Territory versions of the AC HPE. As teacher educators, we positioned ourselves as policy actors amidst this complex policy context, with a responsibility to shape interpretations and enactment of the AC HPE.

### ***Teacher educators as policy actors***

Policy invites action yet rarely describes what that action might look, feel or sound like, and the AC HPE was no exception in this regard. We recognised that a range of voices would fill some gaps, join some lines, and prospectively open up and bring policy to life in and through both interpretation and enactment efforts. Recent literature has highlighted that teacher educators have an important part to play in the interpretation and enactment of curriculum and that like teachers, they occupy a variety of positions in relation to

policy, for a variety of reasons, with a variety of consequences (Lambert & O'Connor 2018; Lambert & Penney 2019). We consequently recognise the value of diverse, varied and multiple stances and suggest that policy actor roles are not finite, meaning that how policy is 'done' or manifests is open. Further, we identify teacher educators' policy work as including debating, questioning, unpacking, researching, and writing about policy as well as exploring and/or developing and/or inspiring the production of tangible objects, or artefacts, emerging as, and evidencing curriculum enactment. This expectation goes some way to explaining our interest in the AC HPE and particularly, the Five Propositions, as a source of curriculum innovation in HPE.

### ***Rationale for a focus on the Five Propositions***

According to ACARA (2020b), the Five Propositions emerged from a robust global research base to become significant elements that both shaped and signalled the futures-oriented nature of the AC HPE. While positioned prominently at the front end of the curriculum by the AC HPE writers, unlike the actual content itself, the Five Propositions lack mandatory status (i.e., are not compulsory to include/address). Additionally, each state/territory may have taken some small licence with them, yet did not, as they developed their context specific versions of the AC HPE. Thus, on the one hand they have remained stable and uncontested amidst jurisdictional curriculum re-modelling, and yet on the other they offer guidance for enactment. This apparent stability amidst the fluidity of formal policy suggested to us that any artefacts relating to the propositions would be relevant nationally *because* they could cross the boundary between recommendations and requirements. We anticipated that this would be an important function, particularly in the absence of formal advice or information about the pedagogical enactment of the AC HPE, with jurisdictional authorities tending to focus on assessment, reporting, and generating work samples for assessment rather than pedagogy. Hence, this perceived gap in the

policy process was one of the key reasons we chose to focus on the propositions within this research.

We view the Five Propositions as an invitation to think about and teach HPE differently. Curriculum traditionally focuses on *what* teachers teach and not *how* they teach it, but the propositions openly give pedagogical directionality to the curriculum text. That said, both research (Lambert, 2018) and anecdotal evidence from some teachers and teacher educators suggested to us that without further guidance and support, the propositions may be at best overlooked, at worst ignored, and as a result lost in policy translation. Some of the common questions we received from teachers regarding the propositions prior to developing any artefacts were: *What are they? What do they mean? What do they look like in practice?* It was questions such as these inspired our production of artefacts that we hoped would both enhance and influence teachers' engagement with the propositions.

## **Research method**

This paper builds on and extends findings from a research project that followed the curriculum policy interpretation and enactment journey of four HPE policy actors<sup>1</sup> (female professor, senior lecturer and lecturer, and a male senior lecturer) in an (removed for anonymity) university. These findings have been published elsewhere and we acknowledge that original research project and its broader methodology<sup>2</sup> and findings (Lambert & O'Connor, 2018a; Lambert & Penney, 2019). By starting from the findings from our past policy work we keep policy enactment open and unfinished. Therefore, in the section/s that follow attention is directed towards explaining the new methodologies that led to the creation of an artefact produced from our policy work, after which we proceed to sharing findings, analysis and discussions.

### ***Methods for creating and analysing artefacts***

If artefacts are wide and varied as previously suggested, then it follows that their function and production, will also vary. Necessarily, it is important to consider the role of the person(s) creating the artefact, in our case four teacher educators positioning themselves as policy actors seeking to ‘do’ particular kinds of policy work. In this paper we draw upon the methodological and analytical ideas of Plowright (2011) to better understand: how particular artefacts are negotiated and formed as a focus amongst policy actors; the processes that shape the production of artefacts and their work in relation to official texts; the re-presentation of artefacts to professional audiences and; their potential reach on the profession.

To understand how artefacts serve different functions/uses based upon the creator and their focus or interest, Plowright (2011) offers a hierarchy of artefact characteristics to consider when thinking about the methods of producing as well as analysing artefacts as research data. He identifies four main characteristics of artefacts with increasing complexity, yet not mutually exclusive:

- *Informational artefacts*: function to record and store information. The creator takes the role of curator. Examples include: written or auditory research notes to self and research diary entries.
- *Presentational artefacts*: function to present information to and share it with others through describing or showing. They typically have denotative meaning i.e. does not go beyond surface meanings. The creator takes the role of the presenter. Examples include: a school rules poster, a TV news report or a health information fact sheet.
- *Representational artefacts*: function to re-present information to and share it with others by offering a particular socio-cultural, contextual or experiential

construction of that information. They typically have connotative meaning i.e. go beyond surface meanings. Such artefacts may also be presentational though differ in that they “‘stand in’ for other things” (p. 94) and build on the techniques of the previous levels. The creator takes the role of the representative who speaks on behalf of others or themselves to author the artefact. Examples include: a TV advertisement, a children’s storybook re-presenting the idea of kindness or this article.

- *Interpretational artefact*: function to offer an interpretation of deeper meaning via the purposeful creation of artefacts. Such artefacts go beyond both denotative and connotative meaning to continually present, re-present and interpret the socio-cultural symbols, signs, and discourses commonly drawn upon in our shared contexts. The creator takes the role of the interpreter to ‘implicitly or explicitly explain the *meaning* of, for example and event or experience, by offering an interpretation or translation of that experience’ (italics in original, p. 95). Examples include: a children’s storybook re-presenting gender stereotypes, an alcohol company sponsoring a drug education resource program.

(Adapted from Plowright 2011, pp. 91-105)

Any artefact may have characteristics of each of the above, in fact the higher order ones will always have lower order aspects present. With the increasing complexity of the artefact there will also be increasing socio-cultural and discursive meanings to be derived from them, making the analysis of artefacts a deconstructive project (Plowright, 2011). Plowright (2011) identifies semiotic analysis, discourse analysis, and content analysis as suitable artefact analysis methods and offers a Framework for an Integrated Methodology (FRaIM) which draws these three approaches together. He suggests that doing this encourages a broad and integrated reading of artefacts that is potentially lacking if only



one method of analysis is used. Plowright's (2011) approach thus offers a more conceptual and holistic technique. Arguing that the ultimate aim of analysing data is 'to develop an understanding of the way we construct meaning out of experiences', Plowright (2011, p. 110) posits this three-tiered process as a method for analysing the 'social and cultural artefacts produced by people'. In our work we remain aware of relevant features of semiotic analysis<sup>3</sup> and content analysis<sup>4</sup>, though instead, and following Plowright's (2011, p. 110) comment that 'all artefacts are embedded in a particular discourse or discourse domain, which is located in one or more specific contexts' favour more a discourse analysis approach. This choice is also guided by the context of our research (i.e. policy and curriculum practices, and policy actors); our conceptual focus (i.e. artefacts as socio-material policy work) and; our theoretical backdrop i.e. Ball et al. 2011a, 2011b and Connelly & Connelly 2013.

### *Discourse analysis*

Discourse analysis is a method used to identify and derive meaning from the discourses at play in our social worlds. In our work we draw on Foucauldian conceptions of discourses as complex, discontinuous and unstable bodies of knowledge that are multiple and circulating, and routinely produced by power (Foucault 1978). This includes 'words and things', though is, according to Foucault, beyond signs and signifiers, emerging instead as 'practices that systematically form the objects of which they speak' (Foucault 1972, p. 49). **Thus, in one sense, artefacts have discursive effect through their association with policy, and yet in other ways they also provided a material signification** of policy, the meanings of which are largely dependent upon the sign, the object and the creator. In starting from the view that curriculum policies are discursively produced, interpreted and enacted through and by systems of power and knowledge within (and circulating) the socio-cultural and political contexts of their emergence, it also follows that curriculum

policies are a form of governmentality (Ball et al. 2012). By virtue of this association, artefacts ‘become part of the tools and techniques of governmentality’ (Ball et al. 2012, p. 122) with various policy actors implicated to different degrees in their production and constitution.

In our research we produced a number of artefacts which are shared in a moment as findings. To analyse these artefacts we used a two stage coding process (Ryan & Bernhard 2000), where the first stage involved initial or open coding for basics like artefact style (e.g. colour, tone, signs), source (e.g. material, online, social media), creator and audience (e.g. who, affiliations), and emerging themes. This also included application of Plowright’s (2011) framework to identify characteristics of the artefacts as well as possible meanings associated with them. During the second stage we took a more deconstructive approach keeping the instability of language in mind and read the artefacts for the types of discourses drawn upon to create meaning and their regulatory effect (Foucault 1978). Thus, in our search for meaning we coded as much for themes and concepts, as contradictions and inconsistencies, speakers and listeners, and the ever-present regulatory power produced through and by policy structures and practices in particular ways (Foucault 1978).

In the findings and discussion section to come, our discourse analysis is accompanied by deployment of Plowright’s typology to characterise three levels of artefacts created, produced, and/or found in the research process. Because the research methods at each level vary slightly we accompany the analysis and discussion with details of the methods of data collection at the assigned level.

## **Findings and discussion**

Artefacts tell a story and have histories of production and re-production. In the discussions that follow we share three ‘levels’ of different types of artefacts that have

emerged from within and around our work. We now discuss the primary artefact that was developed as part of the research, and then move on to the secondary and tertiary artefacts which were also produced. Below we also analyse these artefacts for meaning within the socio-cultural contexts of their emergence, and then discuss the implications of this before offering some concluding thoughts

### ***The primary artefact: The Five Propositions cards***

The *Five Proposition cards* (Lambert et al. 2017) (henceforth known as ‘the cards’) are the original artefact we produced from our policy work as teacher educators (Figure 1a). We intended for the cards to support pre-service and in-service teachers, as well as teacher educators, in enacting the Five Propositions. We saw the cards as a reflection and evaluation tool to support educators in looking anew at established HPE programs, and/or as a way to design new programs.

<insert Figure 1a, Sleeve and front of the Five Proposition cards>

In designing the cards, we generated a number of reflective questions aligned with, and reflecting how we individually viewed each proposition. This provided an opportunity for users to ponder answers according to where they positioned themselves as well as their local contexts. This initial task of developing the questions was ‘informational’ (Plowright 2011) in that we recorded and stored information. We then curated the information focussing on ‘presentational’ matters (Plowright 2011) such as what we wanted to say and what we wanted the cards to look like. We did this by editing for similarities/overlap, sourcing feedback from the original AC HPE curriculum writers, reducing the number of questions, thinking about design matters, and engaging a design company. The more connotative meanings, and hence ‘representational’ nature

(Plowright 2011) of the questions, emerged through multiple sharing and re-sharing for clarity and understanding, reading for uniform written style, giving consideration to learners and contexts, and ensuring that pedagogical and assessment functionality was embedded. In this way and prior to even being a tangible artefact, i.e. a set of cards, the questions began to more closely align to the AC HPE and the cards began to materialise and to take on a more purposeful task, the interpretation of curriculum policy. An example of the final questions for the proposition *Take a Strengths-based Approach* are shared in Figure 1b.

<Insert Figure 1b, Take a Strengths-based Approach questions>

In conclusion, the cards displayed in Figure 1a were thoughtfully and strategically aligned with each of the original propositions and have brought them to life in ways that more ‘presentational’ artefacts to come from policy, such as textbooks or lesson plans, might not be able to do. This is because the cards are ‘interpretational’ artefacts (Plowright 2011) capable of enacting the propositions pedagogically by virtue of their performative effect (Butler 1999). By taking into account the socio-cultural symbols, signs and discourses commonly drawn upon from inside our own ‘policy storms’ (Lambert & O’Connor 2018a) we were able to visualise and anticipate the enactment challenges faced by others. We then used these insights to design and create an artefact that had to be useful and usable, as well as contextually relevant, whilst also remaining strongly connected to the original text. We argue the cards have struck a balance in this regard and that their production shares many of the same characteristics as the production of curriculum policy by way of the need for constant negotiation and compromise as well

as ongoing processes of refinement, all whilst remaining cognisant of other discourses at play in policy networks.

### ***The secondary artefacts: Artefact activators***

Our awareness of the often slow, ad hoc and/or resistant uptake of curriculum policy change prompted us to seriously consider how we would get the cards directly into the hands of those we were seeking to support. We therefore needed a process that would ensure the legitimacy and status of the primary artefact (the cards) would be maintained and promoted in and about professional arenas, and also that this might be possible amidst our concerns about uncertain processes of curriculum reform. We anticipated that the cards were unlikely to be accepted coming from a university and in turn, being associated with a few individual teacher educators. We knew that we needed to engage with an organisation that had credibility and status in the field, national reach, and a sales platform. For us, that organisation was the national peak body in the country, the Australian Council for Health, Physical Education and Recreation (ACHPER). After the design phase we approached ACHPER National to promote the cards through their online platform (see Figure 2a). Through this partnership we gained direct access to over 9500 schools and individual members across the country. In this sense ACHPER National acted as the curator of the cards, and their sales platform serves as an example of an ‘informational artefact’.

As the cards were now a viable product we knew we had to do a range of things to ‘activate’ them. The actions taken were varied and strategic in that they sought to activate and re-present the artefacts to professional audiences, in a way they operated as a marketing strategy, yet emerged as artefacts in their own right. In this section we highlight the importance of other activities and other artefacts in the strengthening of impact. Below we share the story of an array of secondary level artefacts, what we are

calling *artefact activators*. Each will be discussed and analysed with Plowright's (2011) typology in mind, though firstly we provide an explanation of how we 'found' the artefacts we re-present over the coming pages.

### *Methods of finding other artefacts*

Within academia, search engines like Google and Google Scholar have become attractive for finding grey literature quickly and simply, particularly when looking for specific content (Haddaway, Coughlin & Kirk 2015). To identify artefacts, a digital search was conducted using keywords within the Google search engine and social media formats Twitter, Facebook and Instagram. A list of keywords and hashtags associated with the project were identified as well as suitable synonyms. Given the limited scope of the search, these were manually entered and visually screened. The date range was confined to after August, 2017, the date the cards were launched. The following Boolean search pattern illustrates the initial search parameters used in Google: Proposition\* OR rationale OR strengths-based OR critical inquiry OR value movement OR health literacy OR educative purpose AND card\* OR <author institute> OR <author names> OR <professional association>. The following hashtags were searched in various combinations together with author and institute handles: #HPE, #PE, #PDHPE, #PhysEd, #Propositions, #VicCurriculum, #NSWSyllabus.

### *Artefact activator 1: ACHPER National/State partnerships*

As discussed above, the online sales platform is an artefact that has informational impact (Figure 2a). A short blog accompanied the cards and functioned as a 'presentational artefact' in that it explained the development process and introduced the Five Propositions as well as the four authors (Lambert 2017). The denotative meaning of this was that ACHPER National endorsed both the cards and the authors, however the deeper and more

connotative meaning was that they also endorsed the Five Propositions, and arguably the notion that the cards could ‘stand in’ for them, thus functioning as a ‘representational artefact’. In the period 2017-2019 the card sales have totalled around 4000 items and this was enabled by online mechanisms like the sale platform as well as social media.

<Insert Figure 2a, ACHPER National sales platform (Lambert 2017, @ insert URL);  
Figure 2b, ACHPER Victoria conference participant Tweet>

#### *Artefact activator 2: Presentations (workshops and conferences)*

At the same time as the cards were launched online, a number of ‘interpretational’ style teacher professional development workshops were presented. This led to a number of advocates or ‘enthusiasts’ (Ball et al. 2011a) of the cards. The enthusiasts were policy actors (Ball et al. 2011a) who like us, were engaged in the work of policy interpretation and hence keen to learn about the enactment potentialities of the Five Propositions. In workshops we guided, advised and informed participants via a number of ‘presentational artefacts’ such as Powerpoint slides, interactive activities, and small group discussions. Via templates and school focussed programming and planning activities we supported participants to design their own lesson plans and assessment tasks for students in their own contexts and they walked away with starting examples of ‘interpretational artefacts’. This is an important area of future research for us, that is, documenting the impact of the cards in/on the work of teachers, what Connelly and Connelly (2013) explain as prudential curriculum policy.

#### *Artefact activator 3: Social media presence*

The aforementioned ‘enthusiasts’ who positioned themselves as advocates of the cards

often chose to share and ‘activate’ the cards and related materials via social media. Figure 2b shows a Tweet created by a curriculum leader from New South Wales (NSW) who engaged in one of the workshops and then by curating the responses of others re-presented their ideas more widely to Twitter followers. This displays Plowright’s (2011) typology nicely as the creator shifts from curator to presenter, and the Tweet, like many Tweets acts as a ‘presentational artefact’, an object to show others, and in that process three other artefacts are presented in the cards, the workshop, and the presenters.

This Tweet is also significant because at this time NSW had not yet released their state endorsed version of the AC HPE, the *Personal Development, Health and Physical Education (PDHPE) syllabus* (New South Wales Education Standards Authority [NESA] 2018) suggesting that curriculum leaders such as these were seeking advice about the Five Propositions including their interpretation and enactment (Lambert 2018). As a result of this need, and the impending and subsequent endorsement of the PDHPE syllabus in 2018, ACHPER NSW approached us requesting a re-design of the cards, asking could we change ‘Health and Physical Education’ (HPE) to ‘Personal Development, Health and Physical Education’ (PDHPE)? We did. In this artefactual example an older version of the formal curriculum (the AC HPE) is re-presented as a newer version (the PDHPE syllabus), and hence another ‘interpretational artefact’ loaded with contextually, i.e. NSW specific, signs, symbols, discourses and significance emerged.

#### *Artefact activator 4: Teachspace blogs and videos*

In 2018 our focus shifted from interpretation to enactment and this meant we needed a different artefact to do that kind of work. (Authors) met and discussed how this might be possible and agreed that short instructional videos focussed on what the Five Propositions might look like in practice were scripted and recorded, then published and marketed. In



the scripting phase (Authors) used a short storyboard style process to address each proposition. It included each author providing a brief ‘take’ on each proposition, explaining that a little more, and then providing either a school and/or university based example of the proposition in teaching and learning, pedagogies and assessment. These ‘interpretational artefacts’ were rolled out as blogs including a video and transcript (see Figure 3) over a period of about 6 months as part of a Faculty teacher resource webpage called *Teachspace*.

<Insert Figure 3, How focussing on the pleasure of movement helps PE teachers create lessons that last a lifetime (Lambert & O’Connor 2018b @ insert URL)>

#### *Artefact activator 5: Academic publications*

We regard publications written during this time to also be examples of secondary level activators of the cards, though likely to another audience. At the time of writing there have been three related publications. The first focuses on initial practitioner interpretations of the Five Propositions (Lambert 2018), the next on documenting the initial research process and findings (Lambert & O’Connor 2018a), and the final reflects upon the policy actor work of teacher educators (Lambert & Penney 2019). The cards appear as artefacts in the latter two. The articles fluctuate between all four of Plowright’s (2011) levels resting comfortably as an ‘interpretational artefact’ due to the data analysis processes used to draw meaning, themes, and discourses to translate policy enactment experiences.

In conclusion, we acknowledge that the cards alone were unlikely to have had an impact without this broad collection of secondary level *artefact activators* to carry them into the hands of educators. Through a range of secondary artefacts, the cards have flowed into a variety of spaces we could not have reached on our own or in the usual academic

mode of conferences or publications. In focusing our policy work as tertiary educators on resource development, we have adopted an entrepreneurial position (Ball et al. 2011a), producing an artefact that is beginning to ‘stand in’ for the formal curriculum.

### *Tertiary artefacts: Artefact actions*

We now share some modest evidence of emergent uptake, actions and reach of our primary and secondary level policy artefacts on the work of others, what we conceive of as a tertiary level of artefact creation and dissemination, what we call *artefact actions*. This will include discussion about the ways in which jurisdictional education sectors, teachers, and pre-service teachers engaged with the cards to reproduce artefacts of their own. Consideration is also given to the important role of social media as a space to curate, present, author and interpret as well as transmit, circulate and diffuse artefacts. Following this discussion, we turn our attention to reach and modest evidence of impact.

#### *Artefact action 1: Sector action*

Principle support was given across the various education sectors to the Five Propositions as an important policy directive with the potential to inform pedagogy and assessment practices. However, as Lambert and Penney (2019, p. 4) assert, whilst seemingly a point of prospective commonality across the country, ‘divergences in enactment of the AC HPE across jurisdictions has identified that the policy and educative potential of the propositions remains largely untapped’. This, as well as reduced government funding meant many curriculum leaders in the space were searching for support from many quarters, thus making the cards and associated activators (e.g. conferences, seminars and video blogs) appealing and complimentary to their localised policy work. Much support came from NSW where curriculum leaders anticipating Ministerial endorsement of the *PDHPE syllabus* (NESA, 2018) were proactive in developing their own understandings

of the AC HPE. In NSW, curriculum leaders from the Association of Independent Schools (AISNSW) attended conferences (see Figure 2a), invited (Authors) separately to present keynotes at annual conferences, and alone have ordered 1500 sets of cards - the state of NSW has claimed 2000 of the 4000 sold.

<Insert Figure 4a, Five Proposition cards resource in NSW DET workshop; Figure 4b, Teacher watching video and planning; Figure 4c, Graduates desk image

In 2018, after syllabus endorsement, the NSW Department of Education (DET) prepared a 60 minute online professional learning course or ‘representational artefact’ entitled, *Unpacking the PDHPE K-10 syllabus propositions*. Figure 4a shows that on the 30<sup>th</sup> slide of that course the cards are listed as a key support resource with a link for purchase to ACHPER NSW who first requested we produce specific PDHPE versions of the cards. To receive DET ‘approval’ via a professional learning module is a little unusual as often such organisations steer away from supporting textbooks or other forms of commercial teaching resources. This inclusion amongst their own policy work is an example of an ‘interpretational artefact’ in that the module is a government sector specific translation of a state specific version of the AC HPE, it is therefore layered with complex meanings that are highly contextual. The re-contextualisation of the cards in this way has seeped them into the many and varied localized social, cultural, political and emotional reform meaning making processes (Maguire, Braun, & Ball 2015) as well as the resultant many and varied discursive re-articulations of policy (Ball et al. 2011b).

The sector endorsement signalled to us the importance of creating, maintaining and nurturing relationships with key curriculum leaders in their early stages of policy interpretation. A suggested strategy for others would be to target and provide tangible support to enthusiastic curriculum leaders across a variety of education sectors. In this

way they build the necessary confidence to narrate, translate and transact curriculum documents (Ball et al. 2011a).

#### *Artefact action 2: Teacher action*

The reach is evidenced in Figure 4b which is a Tweet from a NSW teacher who was using the cards to support his programming and planning. **In the Tweet, the author displays his own planning alongside an image of (author)** which comes from one of our *Teachspace* videos (recall Figure 3). **While neither the video, (author) or cards are tagged, the Twitter handle of the NSW PDHPE Curriculum and curriculum leader for DET are, suggesting local support for curriculum artefacts are central to their dissemination and uptake.** This artefact shows features of Plowright's (2011) typology and also signals an important message about time i.e. *'what happens when I have 1 lesson all day'*. To us, this means the video, and by association the cards, are useful resources for time-poor teachers, and are being used on the ground by teachers in their planning and programming. Future research will explore the impact of the cards, and other artefacts on the prudential curriculum policy (Connelly & Connelly 2013) work of teachers in their contextualised lesson plans, teaching and learning activities, and assessment.

#### *Artefact action 3: Pre-service teacher action*

The reach of the cards, and the possible impact of them on the thinking of others is evidenced in Figure 4c, a photograph sent from a recent graduate. In this photograph the former pre-service teacher has composed their desk on the first day of school, with a blank school diary, open computer and HPE proposition cards stuck to the back of the desk. The unsolicited email and photograph were accompanied by the message *'Hi (Author), I've attached a picture of my desk space where I have proudly displayed the 5 propositions cards you gave us'*. Clearly a 'presentational' artefact this image suggests

that pre-service teachers and graduates also have a part to play in curriculum policy reform, and may in fact be strong advocates who can more easily filter teaching and learning resources into school contexts.

In conclusion, the artefacts both produced and re-produced from and by others have circulated widely as different kinds of artefact actions that ‘reinforce and represent what is to be done’ (Ball et al. 2012, p. 121). As we see in Figures 4b and 4c, these actions have not always come from individuals with status or standing suggesting that the cards and the centrality of the propositions is filtering to people on the ground who are using them to inform and shape their own enactment work. In some sense because of the simplicity of the cards, many may also not realise that the artefacts signal curriculum reform uptake and policy enactment. In short, in being taken up by others the cards have marked policy directionality (Ball et al. 2012). **They have a life of their own, acting to support others to do their own policy work. This is many steps removed from us.** The evidence suggests that the cards have supported and mobilised the Five Propositions within the formal curriculum text **by becoming a significant and accessible point** of reference for curriculum change as well as associated planning in HPE. Thought of in this way, the cards have performative effect in that they can shape their own direction as well as deployment in multiple and agentic ways. This use of the cards in the everyday work of teachers is key to determining the reach of the cards.

#### ***A final note on reach of the Five Proposition Cards***

We acknowledge that we can’t fully gauge the impact or outcome of the cards yet, we can only see what they have initiated via the evidence available to us. This means that moving forward we need to collect evidence of the various levels and types of artefacts having an influence on readings of/responses to the various jurisdictional interpretations of the AC HPE. This work will also help us to determine the factors that influence

enactment.

As an initial attempt to gauge the reach of these various artefacts we did two things. The first involved a simple Google ‘image’ search of the term ‘the five propositions’ (Figure 5a). The search yields numerous images of the cards indicating to us that they are being searched for regularly and deployed by others in various ways (as shown by authors and click through websites). A Google ‘all’ search places the cards and various artefact activators second behind only the online AC HPE website. It could be argued that the screenshot presented as Figure 5a has characteristics of an ‘informational artefact’ as it is, though live on screen it has different characteristics. The live internet version of Figure 5a scrolls up and down through Plowright’s (2011) hierarchy. Therefore, despite its relatively low order ranking as an artefact, this screenshot provides a lot of information about frequency of search and/or access, as well as authorship and the subsequent artefact activities of others.

<Insert Figure 5a, Google image search of ‘five propositions’; Figure 5b, *Teachspace* analytics>

Another example of reach comes via Faculty *Teachspace* analytics (Figure 5b) where across the five articles we reached over 9500 people in 14 months. We have the second highest ranking article at the site in, ‘*Why critical inquiry can be a game-changer for health and physical education teachers*’ (<https://datastudio.google.com/u/0/reporting/15kjtIWXBw-Ln0bXGDEMxki9Z-X1vuhvU/page/yp0X>) with traffic coming from a range of sources, though (authors) Twitter account is an important pathway. This reinforces the importance of social media as an activator of resources directly into teachers’ hands via their phones and other

devices. The articles have had good traction in NSW, for reasons previously mentioned. The analytics are interactive and as a ‘presentational artefact’ provide us with information about reach, how much, where to and who, as well as mode of delivery. This data gestures at opportunities to re-launch the articles through other platforms, perhaps in other ways, and to create other similar styles of professional support that appear to be useful in the marketplace.

## **Conclusion**

Teacher educators have an inescapable role in policy work. More specifically, we argue in this paper that teacher educators are uniquely positioned to be involved in the production, re-production, re-contextualisation, translation and dissemination of artefacts. Teacher educators, and teachers more generally, are constantly selecting and using particular artefacts, whilst simultaneously ignoring or paying limited attention to others. Acknowledging the potential for artefacts to influence policy interpretation and enactment, we advocate for proactive, strategic and explicit approaches to this aspect of teacher educators’ policy work. Here we echo Ball et al (2012) and Penney’s (2013) call for prudence, and suggest that we be strategic in terms of choosing, using, developing and disseminating policy artefacts.

Within the context of HPE, and as the findings presented in this paper have demonstrated, artefacts such as *The Five Proposition Cards* (Lambert et al. 2017) have the potential to influence educators’ thinking about, engagement with, and deployment of the Five Propositions. This is especially significant because the Propositions have much potential in terms of influencing pedagogy in HPE, yet they are precariously positioned within the curriculum and, as such, could easily be overlooked.

More generally, we argue that teachers and teacher educators engaging with curriculum internationally can use the findings of this research to inform their own policy

work. To summarise, our broad enactment strategy, and with prudence in mind, we advise dissemination and activation via partnerships with governing bodies, presentations, social media as well as more traditional academic publications such as this one. Policy work is not preserved for policy writers, educators of all guises have a role or ‘position’ to play in enacting policy, and curriculum in particular.

<sup>1</sup> We acknowledge our notable points of difference such as formal degree training, teaching experience, research interests, values, age, professional goals, motivations, academic position, engagement and experience with education policy sociology, curriculum reform policy and theoretical inclinations. We recognise that our subjectivities and positionalities have informed our interpretations of and engagement with policy, and specifically how we viewed and reproduced the Five Propositions in and through our work, and as a consequence came to mould/create/develop artefacts from that textual reproduction. This paper shares an example of our collegiality, openness, and fondness as much as our policy actor work. We suggest this opened a space for entrepreneurship, innovation and curiosity to be nurtured.

<sup>2</sup> Over a 12 week semester we engaged in a number of policies circulating us at the time, focusing specifically upon how we might apply the Five Propositions in our day to day teaching work. Various forms of data were collected ranging from emails, individual planning and reflection journals, writing exercises, face-to-face meetings and individual teaching examples of our work or artefacts. See Lambert & O’Connor (2018a) for more details about how we enacted policy in different ways in and through our work, thoughts, day-to-day conversations, broader discourses and artefacts. For an example of our policy work and subsequent consideration of the role of teacher educators as policy actors see Lambert & Penney (2019).

<sup>3</sup> Content analysis is a method of closed coding used to determine the presence, meaning and relationships of certain words, themes, or concepts. In our research content analysis helps us to: understand how we pre-coded our own artefacts; identify and quantify relevant artefacts online via search engines, and; identify observable words, themes or concepts of the artefacts.

<sup>4</sup> Semiotic analysis is a method used to study how meaning is formed by considering signs and symbols, and the processes by which they come into being or signification (Plowright, 2011). Importantly, and in the case of our research and previous definition of artefacts, a sign is any ‘thing’ that can stand in for something else, such as images, words, letters, objects, sounds, sights, gestures, actions and more. In our research semiotic analysis helps



us to: acknowledge our roles and intentions as creators of artefacts; identify and interpret artefactual signs, and; gauge how meaning is (re)produced through processes of signification.

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1. This is a note. The style name is Footnotes, but it can also be applied to endnotes.

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Table 1, Defining the Five Propositions

Figure 1a, Sleeve and front of the Five Proposition cards

Figure 1b, Take a Strengths-based Approach questions

Figure 2a, ACHPER National sales platform (Lambert, 2017 @ insert URL); Figure 2b, ACHPER Victoria conference participant Tweet

Figure 3, How focussing on the pleasure of movement helps PE teachers create lessons that last a lifetime (Lambert & O'Connor, 2018b @ insert URL)

Figure 4a, Five Proposition cards resource in NSW DET workshop; Figure 4b, Teacher watching video and planning; Figure 4c, Monash graduate desk image

Figure 5a, Google image search of 'five propositions'; Figure 5b, *Teachspace* analytics