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# Arnold wanted X but we got Y – the Queensland senior physical education syllabus application of the Arnoldian perspective

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## ABSTRACT

**Background:** For over two decades, the Queensland Curriculum and Assessment Authority (QCAA) has used Arnold's tri-dimensional perspective of movement (1979, 1988) as a framework for its senior Physical Education (PE) syllabus documents (1998, 2004, 2010, and 2018). As the most recent version, the Queensland Senior Physical Education Syllabus-2019 (QSPES) cites Arnold's perspective as 'a philosophical and educative framework to promote deep learning in three dimensions: about, through and in movement contexts' (QCAA 2018, 1), it is reasoned these principles will be evident throughout this Australian state syllabus.

**Purpose:** The purpose of this paper is to examine the claimed adherence to the Arnoldian perspective in the QSPES (QCAA 2018) as stated in its curriculum intention statement (see QCAA 2018, 1).

**Discussion:** The authors suggest that a reinterpretation of Arnold's intention has occurred in the application of his perspective to the QSPES (QCAA 2018) and suggest what may occur as a consequence of this reinterpretation.

**Conclusion:** We conclude by discussing the potential effects of this reoriented view of Arnold's perspective on students, teachers, and PE in general. The discussion highlights a familiar story of PE attempting to legitimise itself through science and academia and how in most cases the warnings against such validation have fallen on deaf ears.

## ARTICLE HISTORY

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Arnold; syllabus; slippage; academicisation

## Introduction

For over 20 years in Australia, physical education (PE) curriculum development has been influenced by Arnold's (1979; 1988) conceptualisation of three dimensions of 'about', 'through', and 'in' movement. These dimensions we collectively refer to as 'the Arnoldian perspective', representing three types of knowledge to unify the mind–body dichotomy which PE has long wrestled with (Pill 2016; Thorburn 2008; Whitehead 1990). The Arnoldian perspective created an understanding of PE in school curricula that was distinct from the PE that occurred, or potentially occurred, in other physical activity settings (Siedentop 1990). Here, the use of capital 'P' and 'E' delineates the school subject Physical Education from lower case use of 'p' and 'e' to designate physical education as an educative endeavour or outcome of Physical Education. To make our subject bias visible, our thoughts align with those of

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Siedentop (1972) that PE as a process is educational, made valuable by ‘play’ and deemed necessary if it facilitates motor ability development and broader educative outcomes when framed by the Arnoldian perspective. Consequently, physical education as an outcome is not restricted to a school subject.

How the Arnoldian perspective is understood and enacted by scholars and practitioners is a legitimate concern (Brown 2013a). Further, understanding the Arnoldian perspective is required by those writing and teaching syllabus documents informed by this approach. Pill and Stolz (2017, 75) found that while Australian teachers knew of the Arnoldian perspective, their understanding ‘was at a superficial level’ while Brown (2013b, 151) observed ‘teachers and curriculum developers not adequately developing, possessing and comprehending the concept of education “in” movement as it was intended by Arnold’. Similarly, others have highlighted problems with implementing not well-understood syllabus documents, including Arnold’s conceptual framework (Clennett and Brooker 2006; Pill and Stolz 2015; 2017; SueSee and Edwards 2013). While a syllabus document may provide an imperative for a way of thinking about the design and enactment of PE, it is unlikely to be implemented successfully if central tenets are misunderstood (Brown and Penney 2017; Penney and Evans 1999).

The purpose of this paper is to examine the adherence to the Arnoldian perspective in the Queensland Senior PE Syllabus (QSPES) (QCAA 2018), as claimed in its syllabus curriculum intention statement (see QCAA 2018, 1). From an interpretivist perspective, we analyse the ways in which Arnold’s work is represented in the QSPES (QCAA 2018). The importance of this paper is that it draws attention to interpretations of curricula and the possibilities of knowledge of, and alignment to, theory in curriculum. This focus is on the context of one conceptualisation of quality PE (QPE), the QSPES (QCAA 2018). Here we define QPE as the intersection of curriculum, pedagogy, and assessment (Penney et al. 2009) and use it to frame our discussion in search of the linkage between the three dimensions as this is one aspect that Penney et al. (2009) identified as QPE. It has been contended in the extant literature that other Australian syllabus documents assert an Arnoldian influence, for example, the Australian Curriculum for Health and Physical Education (AC: HPE) (Australian Curriculum and Assessment and Reporting Authority – ACARA 2012) without demonstrating alignment, thereby lacking fidelity to the Arnoldian perspective (Brown and Penney 2012). This lack of connection led Brown (2013a) to suggest Arnold’s vision has been ‘lost’, or confused or misinterpreted, from its ‘original’ intention. We set out to find if this was similarly so, or not, in the QSPES (QCAA 2018).

### *Arnoldian concept: the ‘gold standard’ justification*

Stolz and Thorburn (2020) questioned the numerous assumptions regarding what an Arnoldian perspective could achieve, particularly its holistic and broad representation of theory and practice knowledge, or that it may represent ‘gold standard’ PE (Stolz and Thorburn 2017). Kirk (1988) argued the value of the Arnoldian perspective lay in its ability to theorise ‘the form and content of physical education in relation to its educational status in schools’ (71). In Australia, others have noted the influence of the Arnoldian perspective (Australian Council of Health Physical Education and Recreation 2009; Australian Curriculum, Assessment and Reporting Authority 2016; Kirk 1988; Pill and Stolz 2015; 2017; Stolz and Thorburn 2017). It seems from its popularity in informing Australian syllabus documents, including the Australian Curriculum for Health and Physical Education (AC: HPE) (ACARA 2016) that the Arnoldian perspective may enable the transformation of PE, particularly regarding its educational status problem (Kirk 1988). However, it has been suggested teachers struggle to create authentic teaching, learning and assessment experiences that represent an Arnoldian perspective leading to incongruence or ‘slippage’ between curriculum representation and implementation (Brown and Penney 2012; Pill and Stolz 2015; SueSee and Edwards 2013).

### *About, through and in – what did Arnold say?*

Arnold's three conceptual dimensions of physical education can be summarised as:

1. Education about movement: Movement can be studied as a body of knowledge. This requires consideration of how best to apply knowledge in practical situations. Arnold (1988, 107) suggested 'education "about" movement is predominantly concerned with the transmission of propositional knowledge' or knowing 'that'. Knowing 'that' enables students to study movement through complementary discipline knowledge from physiology anatomy, sociology and philosophy for example.
2. Education through movement: Movement is an instrument of value in bringing about the goals of education as they relate to the development of the 'total person' (Arnold 1979, 172) – cognitively, morally, socially and physically. Kirk (1988) explained learning through movement as the development of 'valued ends' (71); and
3. Education in movement: Movement acts as a source of personal meaning. Arnold suggested someone knowing how to meaningfully participate in a satisfying and engaging movement, is determined by the degree to which the experience 'permit(s) the person to actualize the physical dimensions of his being in the form of developed capacities, skilled accomplishments and objective achievements that are in themselves worthwhile' (1979, 178). Kirk (1988) explained education in movement as 'knowledge that can only be gained through active participation' (71).

Although literature submits that physical education often reflects education in movement (Pill 2015), Arnold suggested education 'through' movement is '... perhaps most easily associated with the term physical education' (1979, 170). At the senior years level, Stolz and Thorburn (2017) suggested education 'in' and 'through' movement tend to be merged, and the 'about' dominates, with the substance and meaning of the 'in' dimension given 'lip service'. Aligned with this assertion, in an Australian context, previous research (Pill and Stolz 2017) questioned Australian teachers' understanding of the Arnold concepts and found they had dissonance between the rhetoric of the curriculum framework and the reality of the enactment of school curriculum.

Arnold (1979) highlighted although movement during 'through' and 'about' episodes may be a 'means to an end', education 'in' movement alternatively 'must be entered into for its own sake, where its intrinsic worth and qualities can be experienced, and its values made manifest' (179). Arnold cautioned that 'to deny this world of bodily action and meaning because of prejudice or neglect is to deny the possibility of becoming more fully human' (1979, 179). Arnold likened his movement dimensions to a triangle 'not separate but functionally related' (1988, 112) and cautioned against them being viewed otherwise. He suggested if, for example, movement was overly valued in intellectualist terms its meaning would be compromised through becoming a 'hived off and disembodied academic pursuit' (1988, 112). Similarly, he warned if the movement was to become only a means to an end, it would be reduced in its educational worth.

Arnold is clear within his movement dimensions that skill has pre-eminence. He stated when 'examining the relative claims of skill, knowledge, fitness and pleasure in relation to physical education I will argue they should be placed in this order of priority' (1991, 66). Nonetheless, Arnold (1991) suggested knowledge 'about' movement is important, because without it, activity lacks rationality. Furthermore, while knowledge 'about' movement is important, it can be criticised on at least two grounds. Firstly, on its own, it changes nothing without action. Secondly, when too much 'emphasis is placed upon the cognitive and intellectual' (1991, 72) the result is an educated mind, not an educated 'whole' person. If there is any doubt about the importance Arnold placed upon developing movement, he argued 'knowing how in the form of skills, must take precedence over theoretical knowledge' (1991, 74). Whilst he highlighted the pre-eminence of skill, he emphasised the interrelatedness and overlapping of the three dimensions along with their inter-

dependency (Arnold 1979), meaning a curriculum document using an Arnoldian perspective would include integration of, and equal valuing of the three dimensions.

The Arnoldian perspective seemed to speak of promise, enabling a more educative curriculum beyond reducing PE to students just *doing* movement. Different knowledge had the potential to be valued equally. Otherwise, it would be difficult to argue an Arnoldian perspective being realised. Given the QSPES (QCAA 2018) specifically references Arnold's (1979) dimensions of movement as providing a 'philosophical and educative framework' (QCAA 2018, 10), one would assume the Arnoldian perspective is visible throughout the document. In the next section, we analyse and evaluate the QSPES in terms of this visibility.

## Context

In Australia, each state and territory is responsible for curricula/syllabus documents, with South Australia, Tasmania, Queensland, the Northern Territory and the Australian Capital Territory adopting the AC: HPE for Years (grades) Foundation-to-Year 10, while New South Wales, Victoria and Western Australia have adapted the AC: HPE for jurisdictional representation and context. In the case of Years 11 and 12 (referred to as 'senior PE'), where student marks contribute to a university entrance score, each state has a 'board' that directs the senior years curriculum for that state.

In 2009, the peak professional body for HPE, ACHPER, produced a National Statement on the curriculum future of Health and PE in Australian compulsory schooling (Foundation to Year 10 <https://www.achper.org.au/documents/item/75>). The statement affirmed the importance of the Arnoldian perspective in future HPE curricula. At the time of writing AC: HPE structure reflects the Arnoldian perspective through the Key Idea: Value Movement, and the Movement and Physical Activity Strand and Sub-strands: Moving Our Body, Understanding Movement and Learning Through Movement (ACARA 2016; Brown 2013). The Arnoldian perspective also underpinned the Victorian Certificate of Education (Brown and Penney 2012: Victorian Curriculum and Assessment Authority 2011 PE syllabus and the Western Australian PE Studies Curriculum Council of Western Australia 2009; Jones and Penney 2019) documents, albeit neither explicitly reference Arnold's work. More recently, a South Australian senior PE syllabus stated, 'an integrated approach to learning in Physical Education supports an Arnoldian educational framework that promotes deep learning "in, through, and about" physical activity' (SACE Board of South Australia 2018, 1). Further, Arnold's influence on curriculum documents in Australia is both far-reaching, in some syllabus explicit and in others' implicit.

## Queensland senior PE and Arnold's perspective – a brief history

Whilst this paper examines the application of the Arnoldian perspective to the QSPES (2018), the three preceding versions will also be referred to demonstrate the reinterpretation of Arnold's (1979; 1988) work, or slippage over time. We suggest this as the Arnoldian perspective has not been amended between 1998 and 2010, as the epoch these three documents span. This wider consideration is also important for the reader to see the Arnoldian perspective was not always interpreted and applied as it is in the QSPES (QCAA 2018).

The QSPES (Queensland Board of Senior Secondary School Studies 1998) was informed by Arnold's work for the first time. Around the same time, an evaluation of a pilot of this syllabus by Penney and Kirk (1998) concluded 'there is very little else currently underway in the English-speaking world to match developments in Queensland' (43). The 1998 QSPES emphasised integration of the physical and the theoretical, with each knowledge domain contributing 50% of the final grade which had currency for university entrance. Subsequent editions were published in 2004 and 2010, retaining the same weighting of theory and practical knowledge. The QSPES (QCAA 2004) included a section on the importance of integration between theoretical and physical knowledge with the writers observing:

... integration implies a dual role for physical activity in Physical Education. Physical activity serves both as a source of content and data and as a medium for learning. This interrelationship directly implies that learning in Physical Education *cannot be separated* from engagement in physical activity. (2)

This section has outlined the Arnoldian perspective and has shown its notable influence on informing Australian curriculum and syllabus documents, despite teachers sometimes experiencing difficulty understanding and applying it in their work (Brown and Penney 2012; Pill and Stolz 2015; SueSee and Edwards 2013). Such challenges can result in slippage between the intention of Arnoldian perspective and what happens in actual teaching. This next section will examine the QSPES (QCAA, 2018) further to conclude the ways in which the Arnoldian perspective has been used, as claimed in the syllabus curriculum intention. We frame our discussion using Penney et al. (2009) version of QPE. Finally, based on the valuing of the dimensions and grades awarded as outlined by the QSPES (2018), the conclusion will be drawn about the potential effects of such a document. Or, if the physical education under the QSPES (2018) revised Arnoldian perspective does not allow students to understand themselves as intelligent performers (Kirk 1983), the process of which may become miseducative (Brown 2013a).

## Methods

### Theoretical framing

Theoretically, we used an interpretivist framework (Pope 2006) to facilitate understanding of Arnold's perspective within the QSPES (QCAA 2018). With an interpretivist framework, the knowledge that emerged from this research is grounded in the language of the QSPES.

### Methodology

Interpretivist theoretical framing generally leads to qualitative research. This research used deductive logic (Pope 2006) to interpret specific meanings arising from the language of the QSPES (QCAA 2018). Broadly speaking, our focus of deductive orientation of coding was on text from the QSPES (2018) and Arnold's (1988; 1991) statements and ideas regarding 'about', 'through', and 'in'. Specifically, the process was that of applying the pre-determined codes drawn from the literature (Arnoldian concepts) to the QSPES (QCAA 2018).

### Analysis

Document analysis was used to interpret the QSPES (QCAA 2018) material (Ary, Jacobs, and Sorenson 2010). This approach is a form of qualitative analysis involving a systematic procedure of repeated review, examination, and interpretation of the text to gain meaning and empirical knowledge of the construct being studied (Gross 2018). In this study, the QSPES (QCAA 2018) referenced the Arnoldian perspective, and our document analysis sought evidence of alignment and consistency (or inconsistency) with Arnold's perspective.

Our analysis involved the researchers reading and interacting with the QSPES (QCAA 2018) and comparing it to the Arnoldian perspective. The reading, comparing, and analysing led to conclusions being drawn in relation to the research purpose. We searched for alignment and consistency of application (or inconsistency) of the Arnoldian perspective to the QSPES (QCAA 2018). The researchers aimed to take the meaning of terminology as literally as possible and used research on these concepts and terms to further understand and draw conclusions about what would be seen in the QSPES (2018) if an Arnoldian perspective was applied. In undertaking a deductive analysis of the QSPES (QCAA 2018) and its intentions, claims, assessment weighting, description of subject matter and outcomes, the researchers formed a research question to organise the discussion of

the results: ‘To what extent is there adherence to the Arnoldian perspective in the QSPES (QCAA 2018), as claimed in the syllabus curriculum intention statement?’

### **Author positionality**

We recognise ‘where the researcher is coming from’ reflects ontological assumptions (beliefs about the nature of the social reality and what is knowable), epistemological assumptions (beliefs about the nature of knowledge), theoretical positioning, and experience in the field (Holmes 2020). The Authors are all former PE teachers with experience in Australian high schools (Years 7–12) ranging from 4 to 20 years. Additionally, Authors 1 and 2 taught senior secondary (Years 11 and 12) PE. The researchers have also collectively taught in university physical education teacher education between 10 and 16 years. We adopted self-reflection and a reflexive approach, where the authors acknowledged and disclosed, and opened up for critique, each other’s thoughts, assumptions, and influences on thinking. This was necessary to mitigate the potential for the influence of pre-conceived notions of what *should be* from the authors’ lengthy experience of teaching PE in school and university settings.

## **Results and discussion**

### **Application of Arnold’s work in the QSPES (2018)**

#### **Curriculum**

Here, we discuss and evaluate how the Arnoldian perspective has been used in the QSPES (QCAA 2018) when applied to the curriculum. We use Penney et al. (2009) three intersecting dimensions of QPE – curriculum, pedagogy, and assessment to frame our discussion. We also refer to ‘integration’ as it is inherent to the Arnoldian perspective. We do so by being cognisant of the context of the following claim for QSPES, that ‘in Physical Education, Arnold’s seminal work (1979; 1988) provides a philosophical and educative framework to promote deep learning in three dimensions: about, through and in movement contexts’ (QCAA 2018, 1). Specifically, is deep learning occurring and valued in all three dimensions equally in the QSPES?

The QSPES (QCAA 2018) suggested that the Arnoldian perspective is important to deep learning ‘in’, but its application is somewhat unbalanced in terms of the marks allocated to learning from the ‘about’ in comparison to the ‘in’ and ‘through’ (82% ‘about’ and 18% ‘in’ and ‘through’). See Figure 1 for a breakdown of marks awarded for movement as subject matter. This is further highlighted in the context of Arnold’s beliefs about PE examinations which had a ‘paralysing impact, especially amongst the senior forms of our Secondary Schools’ (Arnold 1968, 7). In other words, he had ‘disdain for the pernicious influence of examinations’ (Stolz and Thorburn 2017, 382). Arnold went further to argue ‘aspects of education that are not examined should not be squeezed out of existence’ (1968, 7). The QSPES (QCAA 2018) is not alone in seemingly misrepresenting Arnold’s work, with the Arnoldian perspective being used to promote the ‘academicisation’ of PE in other curricula, particularly through an over emphasis of ‘about’ movement (Brooker and Macdonald 1995; Macdonald, Kirk, and Braiuka 1999; Reid 1996; Stolz 2014). Stolz and Thorburn (2017) highlighted that rather than experiencing integrated curriculum documents, we are left with silos, ‘as the “about” dimension tends to disproportionately dominate, particularly in senior schooling and higher education programmes and that the “in” dimension is paid lip-service to’ (385). Stolz (2014) contended that ‘about’ and ‘through’ movement have tended to overshadow ‘in’ movement. In summary, it is unclear why the QSPES (QCAA 2018) writers produced a syllabus claiming to be informed by Arnold’s perspective but were selective and reductionist about how it is used.

**Summative internal assessment 1: Project — folio (25%)**

Criterion Objectives	Marks
Explaining	3
<b>Demonstrating and applying</b>	<b>8</b>
Analysing	4
Evaluating and justifying	7
Communicating	3
Total	25

**Summative internal assessment 2: Investigation — report (20%)**

Criterion Objectives	Marks
Explaining	4
Analysing	6
Evaluating and justifying	7
Communicating	3
Total	20

**Summative internal assessment 3: Project — folio (30%)**

Criterion Objectives	Marks
Explaining	4
<b>Demonstrating and applying</b>	<b>10</b>
Analysing	5
Evaluating and justifying	8
Communicating	3
Total	30

**Summative external assessment 4: Examination — combination response (25%)**

**There is no instrument specific marking guide for external assessment.**

**Figure 1.** A summary of the marks allocated over the course of study – *demonstrating and applying* relates to marks given for movement as subject matter. (Collated from QSPES, QCAA 2018).



## Pedagogy

The alignment between pedagogy and the other two parts of Penney et al. (2009) QPE concept is reflected when they argue ‘how one teaches is inseparable from what one teaches, from what and how one assesses and from how one learns’ (431). The QSPES (QCAA 2018) mentions authentic environments, defined as ‘contexts that include specific characteristics of a category of physical activity to allow specialised movement sequences and movement strategies to be performed and data to be gathered’ (89). This definition suggests that movement in the QSPES (QCAA 2018) is only meaningful because students gather data about performance. Such an assertion is at odds with what others have observed about why adolescents participate in the movement. For example, for enjoyment, challenge, skill development, access to social support networks, and for health reasons (Allender, Cowburn, and Foster 2006; Allison et al. 2005; Lubans et al. 2017). As meaning is highly subjective, it is doubtful students will gain meaning from collecting data as part of their movement experience or gathering data leads to movement which is meaningful. Further, if the student is not required to use that data to improve physical performance, then it can be argued the process is for theoretical and abstract purposes. Therefore, the claimed notion of authenticity is questionable and further departs from Arnold’s (1988) belief that movement should be valued for its own sake.

Further, the authenticity of the claim gathering data makes movement meaningful must be questioned if the primary purpose is to develop the ability to talk about movement rather than *perform* movement. A hypothetical conversation between a bystander and a student best highlights the contradiction.

Bystander:	‘Why are you gathering data?’
Student:	‘To make movement meaningful’
Bystander:	‘What will you do with this data to make your movement meaningful?’
Will you use it to change your movement?’	
Student:	‘No, I shall report the limitations and improvements, but I will do nothing’.

Knowledge ‘through’ and ‘in’ movement that is only worth 18% is hard to be described as ‘deep’ if it is not worth as much as knowledge ‘about’ or knowledge that changes nothing and remains completely theoretical and abstract. It is evident learning ‘in’ and ‘through’ movement in the QSPES (QCAA 2018) serves the purpose of informing knowledge ‘about’ movement and is a means to an end. This contradicts Arnold’s perspective in two ways. Firstly, knowledge ‘in’ and ‘through’ are not valued equally and secondly movement is not valued for its own sake, but as a ‘means to an end’. The QSPES (QCAA 2018) sees movement as valued (and authentic) for its role in data gathering and has no value for its own sake. As the movement has no value for its own sake (and is only meaningful and authentic as a means to gather data to support the ability to talk or write about movement) a data-gathering pedagogy appears to be required by teachers of the QSPES (QCAA 2018). Jones and Penney (2019) reported similar occurrences when observing other syllabus documents informed by Arnold’s perspective, describing a ‘privileging of learning about movement in the official text and in pedagogic practice ...’ (27).

## Integration of ‘about’, ‘through’, and ‘in’ movement

Whilst the QSPES (QCAA 2018) does not go into detail regarding integration, this consideration cannot be separated from the Arnoldian perspective, as it values all three dimensions equally and is not separate but functionally related (Arnold 1988).

Earlier QSPES (2004; 2010) suggested the purpose of physical activity was for content, data, and as a medium for learning. When compared to the QSPES (QCAA 2018), the reduction of the physical contribution to the assessment grade suggests it is no longer regarded as important for its intrinsic value, or education ‘in’ and ‘through’ movement, with movement meaning reduced to

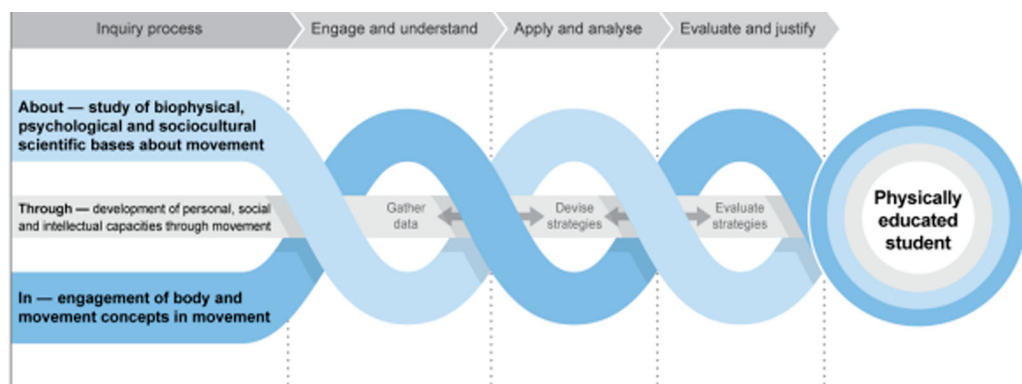


Figure 2. A representation of a physically educated student (QCAA 2018, 11).

generating data for learning. This ‘watering down’ (or slippage) in the process of being physically educated, suggests the physical, as content knowledge, is devalued as subject matter.

Further, the QSPES (QCAA 2018) described being physically educated as learning through an ‘inquiry approach that explicitly involves the integration of body and movement concepts with biophysical, sociocultural and psychological concepts and principles to enable the development of a physically educated student’ (QCAA 2018, 10). This integration is represented in Figure 2 where, for learning ‘in’ the QSPES (2018), writers argued ‘movement is experiential and intrinsically values physical activity in all its varied forms’ (11). This claim appears inaccurate through its reference to intrinsically valuing movement as the kind of movement the QSPES (QCAA 2018) values, is movement for collecting data, devising strategies, and evaluating strategies. The document does not reflect (through marks allocated), that movement including performance is valued. Arnold (1988) looked to foresee this when he argued ‘one of the differences between pursuing an activity for an educational reason, as opposed to a utilitarian one ... is that the former sees the activity as valuable in itself whereas the latter sees it only as an instrument or means to bring about something else’ (120). Based on this concept of physical activity being valued for its own sake, and how it was typified in previous syllabus documents (QSA 2004; 2010), the lines in Figure 2 look inaccurate in size for representing learning ‘in’ and ‘through’, although the line for learning ‘about’ should perhaps be increased in size to be more representative. Whilst Figure 2 represents the three dimensions being equally valued (as they are equal in size), we argue it does not reflect what is occurring in the QSPES (QCAA 2018) with marks allocated for the three dimensions not being equal. This disproportionate valuing does not reflect alignment between the Arnoldian perspective on which the QSPES (QCAA 2018) is claimed and lacks alignment between the claimed deep learning across the three dimensions and the content and learning experiences where movement is used to collect data, and not content for learning ‘in’ and ‘through’.

### Assessment

The final part of Penney et al. (2009) notion of QPE is assessment, which should align with curriculum goals and be taught through appropriate pedagogy. Further, ‘assessment should redress the mind/body dualism propagated by traditional approaches to assessment, curriculum and pedagogies in PE, through tasks that acknowledge and bring to the fore the interrelatedness of knowledge, process (cognitive and motor), skills and the affective domain’ (Hay 2006, 317). The QSPES (QCAA 2018) by only allowing 18% of marks from the physical domain, contradicts Arnold’s perspective, as there is a disproportionate valuing of the cognitive or ‘about’ movement, with 82% of the apportioned grade (see Figure 1 for a summary of the marks allocated over the course of study. The criteria, *demonstrating and applying* relate to marks given for movement). Further, Arnold

(1979) emphasised the importance of the inter-connectedness and inter-dependence between all three dimensions and that one should not be prioritised over another.

To highlight that the learning ‘in’ and ‘through’ has been undervalued compared to learning ‘about’, we examine the Summative Internal Assessment 3-Folio assessment task (QCAA 2018). This task is out of 30 marks. Ten marks for *demonstrating* and *applying*, as the physical or the learning ‘in’ and ‘through’, and the remaining 20 marks for knowledge ‘about’. If a student managed to receive six out of the possible ten marks for the physical aspect and achieved full marks for the remaining criteria (all related to the cognitive or learning ‘about’), their total marks would be 26/30 or 86%. Further, if they only attained a mark of four out of a possible ten for the *demonstrating* and *applying* and full marks again for the remaining, they would achieve 24/30 or 80%. For the latter case, the student is unable to perform ‘specialised movement sequences and a movement strategy in an authentic performance environment’ (QCAA 2018, 62) yet they are attaining a level of 80% of the marks if they achieve 100% for the written. Whilst the instrument-specific marking guide or criteria do not use A–E, there are five possible levels, and it is likely 4 out of 10 would reflect a ‘D’ grade. In the context of integration, this example is indicative of how far the learning ‘through’ and ‘in’ has been devalued in terms of assessment. This example also demonstrates a lack of fidelity with the Arnoldian perspective and fails to reflect deep learning in all three dimensions as the syllabus claims. This example reflects a person who is physically educated, to a high level by QSPES (QCAA 2018) standards but lacks congruence with the Arnoldian perspective. It shows a student who can express the impact knowledge has on movement but demonstrates or performs movement to a below-average level. This type of physically educated student has shifted in characteristics or typology from the intelligent performer Kirk (1983) described, valuing intent and action, to one valuing intent but little action. Further, integration seems valued only for learning ‘about’ movement and data gathering.

Assessment usually brings images of grades being allocated and marks being given. Studying the subject matter included in the QSPES (QCAA 2018) one could assume, will lead a student to being physically educated. The current QSPES (QCAA 2018) states that to become physically educated:

... students learn to see how body and movement concepts and the scientific bases of biophysical, sociocultural and psychological concepts and principles are relevant to their engagement and performance in physical activity (1)

In previous QSPES documents (QCAA 2004; 2010) the ‘intelligent performer’ was part of being physically educated, as the individual used knowledge to improve one’s own performance. Kirk (1983) developed this point further, suggesting characteristics of an intelligent performer such as intention with actions, the ability to read a skill into an appropriate context, knowledge of facts about performance, and the ability to go beyond these facts to ‘forge connections between propositions and actual instances of their occurrence’ (Kirk 1983, 42). The term ‘intelligent performance’ is omitted in the QSPES (QCAA 2018) document and is consistent with the limited connection to ‘in’ and ‘through’ movement. There is no expectation for the student to physically improve their performance, and marks are disproportionately allocated for performance. In the QSPES (QCAA 2018) intentions with actions (or knowledge ‘through’) are no longer required as knowledge ‘about’ is valued (82%) more than the ability to use knowledge to improve actions or implement intentions (18%). This disproportional valuing of knowledge does not reflect Arnold’s (1991) view that thought without action changes little, and the scholar is interested in the pursuit of knowledge whereas the wise person uses knowledge.

The QSPES (QCAA 2018) writers contended ‘a physically educated student communicates and demonstrates the interrelatedness of learning about, through and in physical activity; makes informed decisions and critical judgments regarding their own and others’ involvement in physical activity’ (101). Again, there is the absence of the importance of action in this definition, resonating with Arnold’s (1991) caution against only the educated mind and not the educated person. The

‘deep learning’ described by the QSPES (QCAA 2018) privileges ‘about’ movement, which we have shown seemingly limits the emphasis of ‘in’ and ‘through’. Unpacking the QSPES (QCAA 2018) definition of the physically educated student further, ‘communicating’ is indicative of knowledge ‘about’ movement and ‘demonstration’ knowledge ‘in’ and/or ‘through’ movement. However, as knowledge ‘in’ and ‘through’ is not assessed equally to the theoretical or ‘about’ movement it is less valued. It appears that previous views of being physically educated (intelligent performance or using knowledge to improve performance) in 2018 are not one who can associate intent and action to themselves.

## Square peg, round hole

### *Knowledge ‘about’, not ‘through’, or ‘in’*

This section will be broken down into three parts based around the type of knowledge valued by the QSPES (2018), future PE teachers, and students the subject attracts. The suggestions are based on the authors’ reading and interpretation of the objectives and values expressed by QSPES (2018). We acknowledge we are making predications which cannot be tested; however, these are supported by others who have issued warnings regarding similar values about PE subject matter, learning and assessment: in particular with regard to the question: What may happen if the over-valuing of the ‘about’ continues?

So far it has been argued the QSPES (QCAA 2018) bases the syllabus on the Arnoldian perspective (‘about’, ‘through’ and ‘in’) but has had difficulty articulating it. The syllabus writers have applied the Arnoldian perspective in ways that appear to misalign their initial claims as providing an educative framework to promote deep learning in three dimensions. When Penney et al.’s (2009) QPE framework is used, we argue there is a lack of alignment between curriculum, pedagogy, and assessment. It is claimed the curriculum is based on Arnold’s framework to promote deep learning across the three dimensions yet learning in the three dimensions is not experienced with the values espoused the way Arnold intended. Furthermore, the assessment does not assess all learning equally across the three dimensions; therefore, learning is not valued equally. The QSPES (QCAA 2018) is concerned with *collecting* knowledge ‘in’ and ‘through’ movement, however, this knowledge is only appreciated in the context of writing ‘about’ movement. Learning ‘in’ and ‘through’ are no longer valued for their own sake and have become a ‘means to an end’. This reductionism is suggested since most of the marks (82%) are allocated for writing ‘about’ movement, in contrast to demonstrating performance or knowledge ‘in’ and ‘through’ movement. Movement is no longer depicted as it was in previous QSPES (QBSSSS 1998; QSA 2004; QSA 2010) versions. The ‘about’ is the dominant part, whereas Arnold argued all three parts must have equal relevance while considering skill as preeminent. What we have identified has similarly been found in curricula elsewhere (Brown and Penney 2018; Jones and Penney 2019; Stolz and Thorburn 2017) expressing concern little more than cursory service is paid to the ‘in’ and the ‘about’, resulting in disproportionate representation. Further, Brown and Penney (2017) suggested when speaking about senior PE in the state of Victoria (where 100% of the grade is from theory) that PE constructed and assessed in this manner may be counterintuitive to the appropriate intersection of curriculum, pedagogy and assessment to represent QPE, for three reasons: firstly, due to the continued privileging of intellectual knowledge; secondly, ‘physical activity simply becomes another site for where propositional knowledge is to be developed and thirdly, it devalues the concept that physical activity in and of itself is an opportunity where intelligent performance can develop’ (129). Evidently, Arnold’s (1979) warning has been ignored, that whilst language is important between meaning and movement, language does not become a substitute for movement. In the case of the QSPES (QCAA 2018) language ‘about’ movement seems to have become more important than actual movement. Whilst language has not completely substituted movement, it has been subject to reductionism in comparison to the three preceding QSPES (1998;

2004; 2010), with physical performance now contributing to only 18% of the grade. This reduced emphasis on movement, spanning more than two decades, suggests a reinterpretation of an Arnoldian perspective.

Valuing propositional knowledge gains over practical could result in PE becoming ‘studied’ rather than ‘experienced’ (Thorburn 2017). It is important to remember syllabus documents are not theories to be explained. They are to be implemented by teachers who trust the writers to produce working documents. Our contention is, that curriculum documents that are unworkable are more or less fantastical. In other words, they lack reality congruence (Elias [1987] 2007), such as with the intent of an Arnoldian perspective for example.

Teachers may be left to wonder ‘what happened to my subject’, assuming they are involved deeply enough in their curricula to notice the kinds of difference that we, as academics are positioned to. From the scholars mentioned, there have been many who seemed concerned about where PE is *going* and have warned against the direction of curriculum reductionism and misinterpretation. Yet the QSPES (QCAA 2018) to a greater or lesser extent seems to have gone down this path. For example, Thorburn and Stolz (2017) cautioned against this view of over-valuing the knowledge ‘about’ by suggesting there should not be an over privileging ‘of abstraction and cognition (concepts and rules) and under-representing the centrality of the body in human experience’ (723). Similarly, Brown (2013a) argued if students

do not get the opportunity to understand themselves as intelligent performers (Kirk 1983), engage with their embodied consciousness or acknowledge that they have the opportunity to create “self-knowledge” then the process of physical education could be said to be miseducative. (23)

We contend that the incongruence we have illustrated needs to change, or there will be unintended consequences (Elias 2009) the syllabus writers did not anticipate. These consequences will be briefly discussed in the next section.

Sutton (2007) suggested that in cricket ‘*having* such batting skills and embodied memories, and being able to employ them, is utterly different from *knowing* about them, or being able to describe them, or even remembering your earlier experience of them’ (767–768). The QSPES (QCAA 2018) direction seems to be towards students who can mostly narrate movement and concepts but place little value on or may not be able to demonstrate performance competence. The PE community may be content with this being an example of the *best* that studying PE in Queensland can produce. However, if it is not then a discussion is required. If the conversation is avoided, the warning mentioned at the beginning of this article, the subject becomes 100% theoretical with practical only used for gathering data, may occur.

Thorburn (2008) builds on this point arguing high-level knowledge developed ‘in’ and ‘through’ a relatively high-level physical activity performance should develop knowledge in a more complex way than that knowledge developed through a reduced level of performance. He uses swimming to suggest that

a more able practical performer will develop a greater feeling and sensitivity for water and will consequently understand kinaesthetic feedback about performance in a more refined way. A less able swimmer would explore the same relationship but in a less sophisticated way. (Thorburn 2008, 269)

Is Thorburn suggesting that less physically capable performers will verbally or in written form demonstrate a less sophisticated form of knowledge? Perhaps writers of the QSPES (QCAA 2018) disagree with Thorburn due to the devaluing of the physical in this document, and alternatively suggest a student who receives an A standard by the QSPES (QCAA 2018) criteria is physically educated to a high level based on their written response. Furthermore, if the trend ‘progresses’ to no physical mark contributing to the grade awarded, then it perhaps is assured that either Thorburn’s warning materialises and that those with poor knowledge developed ‘in’ or ‘through’ produce less sophisticated knowledge ‘about’.

The indications are Australian PE is in a state of decline based on movement skill levels and physical fitness continually waning (Commonwealth of Australia 1992; Tinning et al.1994; Pill 2016). Whilst not the only point of QSPES, it is hard to imagine a culture being created where being skilled physically or having high levels of fitness are valued from a subject which only attributes 18% of marks to this physical subject mastery. It is by no means ‘drawing a long bow’ to suggest future students who have studied under this syllabus, would suggest that to be good at PE you need to be able to write a lot about what you need to do to improve performance, but you do not have to be good at *doing* it. In 2018, the last year 12 students studying under the previous QSPES (QSA 2010) numbered 11,457 students (QCAA 2019). This syllabus awarded a final grade based on 50% of the marks coming from the practical and 50% of the marks from theoretical knowledge. By contrast in 2022, the number of students who completed year 12 under the QSPES (2018) was 5736 students (QCAA 2023) effectively reducing the number of students by over 50% in four years. Based on this decline perhaps the current QSPES (QCAA 2018) version of what it is to be physically educated (valuing knowledge ‘about’ more than knowledge ‘in’ and ‘through’) would do little to address this concern based on its valuing of movement.

### PE teachers

Whilst it is not a pre-requisite at the time of writing for students who wish to become PE teachers in Queensland to have studied QSPES (QCAA 2018) our experience as teacher educators in HPE and PES, is that many will have studied the subject in the context of their career aspirations. If the QSPES (QCAA 2018) attracts students with the characteristics suggested above, what will characterise future teachers? If an ‘if-then’ relationship is suggested, then there may be a high portion of people choosing to become PE teachers who can tell students about movement principles and have knowledge ‘about’ movement but have limited knowledge ‘in’ movement or how to *do* movement. Tinning (2023) echoed this concern when considering physical education graduates who may know a lot about the subject matter, however questioned have they become better teachers because they possess this knowledge? To reiterate Thorburn’s (2008) point, their knowledge will be to varying extents less sophisticated. We argue, given the marking breakdown of the QSPES (QCAA 2018), it will contribute to those who know a lot about *how* to do, but are unable to perform the skills which they apparently know so much about. Thorburn (2008) suggested this type of learning or knowledge (knowledge which lacks personal performance insights based on experiential learning) is very different to knowledge developed ‘in’ and ‘through’ movement. Through the reinterpretation of Arnold’s (1979) work, the QSPES (2018) seems to discriminate against those who can perform (physically) but cannot verbalise, and values those who cannot perform (physically) but can verbalise.

### Conclusion

The purpose of this paper was to examine the claimed adherence to the Arnoldian perspective (1979; 1988) in the QSPES (QCAA 2018), and if Arnold’s framework has been used as claimed in the syllabus intention. It was found that the perspective has been redefined, incorrectly applied, or modified to suit a purpose, which seems to value or privilege knowledge ‘about’ movement. Movement ‘in’ and ‘through’ appear marginalised in this syllabus. This being the case, then what we have identified is a step away from an Arnoldian perspective which claims to define the structure of the curriculum and is an imbalance between the theory-practice relationship (Jones and Penney 2019). Using Penney et al. (2009) QPE model we have shown a lack of alignment between the syllabus intention, pedagogy (in terms of content and learning experiences) and assessment (in terms of how marks are awarded). The authors suggest future research needs to examine the reasons syllabus documents are produced based on a perspective and then reinterpret the same perspective and ‘turn 180’. It seems, that Arnold desired an integration and equal valuing of knowledge in PE (the

X), yet syllabus writers have misinterpreted his work and the PE community got the opposite – ‘Y’. Whilst commenting on Physical Teacher Education programmes, Tinning (2023) recently made the same ‘call for arms’ as we do, for the PE community to be willing to scrutinise the influence of neo-liberal regulatory bodies, the marginalisation of physical activity and the privileging of knowledge about movement from the sciences.

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## References

- ACARA (Australian Curriculum, Assessment and Reporting Authority). 2012. “The Shape of the Australian Curriculum.” Australian Curriculum, Assessment and Reporting Authority.
- ACARA (Australian Curriculum, Assessment and Reporting Authority). 2016. “Australian Curriculum: Health and Physical Education: Foundation to Year 10.” <https://www.australiancurriculum.edu.au/f-10-curriculum/health-and-physical-education/>.
- ACHPER (Australian Council for Health, Physical Education and Recreation). 2009. “The ACHPER National Statement on the curriculum future of Health and Physical Education in Australia”. <http://www.achper.org.au/documents/item/75>.
- Allender, S., G. Cowburn, and C. Foster. 2006. “Understanding Participation in Sport and Physical Activity Among Children and Adults: A Review of Qualitative Studies.” *Health Education Research* 21 (6): 826–835. <https://doi.org/10.1093/her/cyl063>
- Allison, K. R., J. J. Dwyer, E. Goldenberg, A. Fein, K. K. Yoshida, and M. Boutilier. 2005. “Male Adolescents’ Reasons for Participating in Physical Activity, Barriers to Participation, and Suggestions for Increasing Participation.” *Adolescence* 40 (157): 155–170.
- Arnold, P. 1968. *Education, Physical Education and Personality Development*. London: Heinemann.
- Arnold, P. 1979. *Meaning in Movement, Sport and Physical Education*. London: Heinemann.
- Arnold, P. 1988. *Education, Movement and the Curriculum*. London: Falmer.
- Arnold, P. 1991. “The Preeminence of Skill as an Educational Value in the Movement Curriculum.” *Quest (Grand Rapids, Mich.)* 43 (1): 66–77. <https://doi.org/10.1080/00336297.1991.10484011>
- Ary, D., L. C. Jacobs, and C. Sorenson. 2010. *Introduction to Research in Education*. 8th ed. Belmont, CA: Cengage.
- Brooker, R., and D. Macdonald. 1995. “Mapping Physical Education in the Reform Agenda for Australian Education: Tensions and Contradictions.” *European Physical Education Review* 1 (2): 101–110. <https://doi.org/10.1177/1356336X9500100202>
- Brown, T. D. 2013a. “A Vision Lost? (Re)Articulating an Arnoldian Conception of Education ‘in’ Movement in Physical Education.” *Sport, Education and Society* 18 (1): 21–37. <https://doi.org/10.1080/13573322.2012.716758>
- Brown, T. 2013b. “‘In, Through and About’ Movement: Is There a Place for the Arnoldian Dimensions in the New Australian Curriculum for Health and Physical Education?” *Asia-Pacific Journal of Health, Sport and Physical Education* 4 (2): 143–157. <https://doi.org/10.1080/18377122.2013.801107>
- Brown, T. D., and D. Penney. 2012. “Learning “In”, “Through” and “About” Movement in Senior Physical Education? The New Victorian Certificate of Education Physical Education.” *European Physical Education Review* 19 (1): 39–61. <https://doi.org/10.1177/1356336X12465508>
- Brown, T. D., and D. Penney. 2017. “Interpretations and Enactment of Senior Secondary Physical Education: Pedagogic Realities and the Expression of Arnoldian Dimensions of Movement.” *Physical Education and Sport Pedagogy* 22 (2): 121–136. <https://doi.org/10.1080/17408989.2015.1123239>
- Brown, T. D., and D. Penney. 2018. *Examination Physical Education*. London: Routledge.
- Clennett, A., and R. Brooker. 2006. “Teaching Health & Physical Education in Contemporary Australian School Education: Rethinking Teachers Curriculum and Pedagogical Work.” Accessed May 24, 2023. <http://www.aare.edu.au/06pap/bro06797.pdf>.
- Commonwealth of Australia. 1992. *Physical and Sport Education: A Report by the Senate Standing Committee on Environment, Recreation and the Arts*. Canberra: Senate Printing Unit.

- Curriculum Council of Western Australia. 2009. *Physical Education Studies*. Perth: Curriculum Council of Western Australia.
- Elias, N. 1987 [2007]. *Collected Works Vol. 8. Involvement and Detachment*. Dublin: University College Dublin Press.
- Elias, N. 2009. *Collected Works Vol. 16. Essays III*. Dublin: University College Dublin Press.
- Gross, J. M. S. 2018. "Document Analysis." In *The SAGE Encyclopedia of Educational Research, Measurement, and Evaluation (Vols. 1-4)*, edited by B. Frey. SAGE. <https://doi.org/10.4135/9781506326139>.
- Hay, P. 2006. "Assessment for Learning in Physical Education." In *International Handbook of Research in Physical Education*, edited by D. Kirk, D. Macdonald, and M. O'Sullivan, 312–325. London: Sage.
- Holmes, A. G. D. 2020. "Researcher Positionality: A Consideration of its Influence and Place in Qualitative Research: A New Researcher Guide." *Shanlax International Journal of Education* 8 (4): 1–10. <https://doi.org/10.34293/education.v8i4.3232>
- Jones, A., and D. Penney. 2019. "Investigating the 'Integration of Theory and Practice' in Examination Physical Education." *European Physical Education Review* 25 (4): 1036–1055. <https://doi.org/10.1177/1356336X18791195>
- Kirk, D. 1983. "A New Term for a Vacant Peg: Conceptualising Physical Performance in Sport." *Bulletin of Physical Education* 19 (3): 38–44.
- Kirk, D. 1988. *Physical Education and Curriculum Study: A Critical Introduction*. London: Croom Helm.
- Lubans, D. R., C. Lonsdale, K. Cohen, N. Eather, M. R. Beauchamp, P. J. Morgan, and J. J. Smith. 2017. "Framework for the Design and Delivery of Organized Physical Activity Sessions for Children and Adolescents: Rationale and Description of the 'SAAFE' Teaching Principles." *International Journal of Behavioral Nutrition and Physical Activity* 14 (1): 1–11. <https://doi.org/10.1186/s12966-017-0479-x>
- Macdonald, D., D. Kirk, and S. Braiuka. 1999. "The Social Construction of the Physical Activity Field at the School/University Interface." *European Physical Education Review* 5 (1): 31–52. <https://doi.org/10.1177/1356336X990051003>
- Penney, D., R. Brooker, P. Hay, and L. Gillespie. 2009. "Curriculum, Pedagogy and Assessment: Three Message Systems of Schooling and Dimensions of Quality Physical Education." *Sport, Education and Society* 14 (4): 421–442. <https://doi.org/10.1080/13573320903217125>
- Penney, D., and J. Evans. 1999. *Politics, Policy and Practice in Physical Education*. London: FN Spon, an Imprint of Routledge.
- Penney, D., and D. Kirk. 1998. *Evaluation of the Pilot Senior Syllabus in Physical Education: Second Interim Report*. Brisbane, QLD: Board of Senior Secondary School Studies.
- Pill, S. 2015. "Rethinking Sport Teaching in Physical Education." Doctor of Philosophy thesis. University of Tasmania.
- Pill, S. 2016. "Exploring Challenges in Australian Physical Education Curricula Past and Present." *Journal of Physical Education and Health: Social Perspective* 5: 5–17.
- Pill, S., and S. Stolz. 2015. "Exploring Secondary Physical Education Teachers' Conceptualisation of Physical Education." Proceedings of the 29th ACHPER international conference, edited by M. Drummond, 23–32.
- Pill, S., and S. Stolz. 2017. "Exploring Australian Secondary Physical Education Teachers' Understanding of Physical Education in the Context of New Curriculum Familiarisation." *Asia-Pacific Journal of Health, Sport and Physical Education* 8 (1): 67–79. <https://doi.org/10.1080/18377122.2016.1272425>
- Pope, C. 2006. "Interpretive Perspectives in Physical Education Research." In *Handbook of Physical Education*, edited by D. Kirk, D. Macdonald, and M. O'Sullivan, 21–26. London: SAGE.
- QCAA (Queensland Curriculum and Assessment Authority). 2018. *Physical Education 2019 v1.1 General Senior Syllabus*. Brisbane: Author.
- QCAA (Queensland Curriculum and Assessment Authority). 2019. "Subject Enrolments and Levels of Achievement – 2018." [https://www.qcaa.qld.edu.au/downloads/publications/qcaa\\_stats\\_sen\\_subjects\\_2018.pdf](https://www.qcaa.qld.edu.au/downloads/publications/qcaa_stats_sen_subjects_2018.pdf).
- QCAA (Queensland Curriculum and Assessment Authority). 2023. "Year 12 Certification Summary – 2022 Cohort." [https://www.qcaa.qld.edu.au/downloads/publications/qcaa\\_stats\\_yr12\\_cert\\_summary\\_2022.pdf](https://www.qcaa.qld.edu.au/downloads/publications/qcaa_stats_yr12_cert_summary_2022.pdf).
- QSA. 2004. *Senior Physical Education Syllabus*. Brisbane: Author.
- QSA. 2010. *Senior Physical Education Syllabus*. Brisbane: Author.
- Queensland Board of Senior Secondary School Studies. 1998. *Queensland Senior Physical Education*. Brisbane: National Library of Australian Cataloguing-in-Publication data.
- Reid, A. 1996. "Knowledge, Practice and Theory in Physical Education." *European Physical Education Review* 2 (2): 94–104. <https://doi.org/10.1177/1356336X9600200202>
- SACE Board of South Australia. 2018. *South Australian Certificate of Education. Physical Education 2020 Subject Outline. Stage I*. Adelaide: Author.
- Siedentop, D. 1972. *Physical Education: An Introductory Analysis*. New York, NY: Wm. C. Brown & Company.
- Siedentop, D. 1990. *Introduction to Physical Education, Fitness and Sport*. Mountain View, CA: Mayfield Publishing Company.
- Stolz, S. A. 2014. *The Philosophy of Physical Education: A New Perspective*. New York, NY: Routledge.
- Stolz, S., and M. Thorburn. 2017. "A Genealogical Analysis of Peter Arnold's Conceptual Account of Meaning in Movement, Sport and Physical Education." *Sport, Education and Society* 22 (3): 377–390. <https://doi.org/10.1080/13573322.2015.1032923>



- Stolz, S. A., and M. Thorburn. 2020. "Sisyphus, Crisis Discourse, and the Theory-Practice gap in Physical Education: A Polemic." *Sport, Education and Society* 25 (5): 518–529. <https://doi.org/10.1080/13573322.2019.1614553>
- SueSee, B., and K. Edwards. 2013. "A Case Study of a Queensland Senior Physical Education Syllabus: Does the Rubber (Ever) Meet the Road?" In *A Defining Time in Health and Physical Education: Proceedings of the 28th ACHPER International Conference, November 27–29*, edited by J. Quay and A. Mooney, 158–170. Melbourne, Victoria: ACHPER.
- Sutton, J. 2007. "Batting, Habit and Memory: The Embodied Mind and the Nature of Skill." *Sport in Society* 10 (5): 763–786. <https://doi.org/10.1080/17430430701442462>
- Thorburn, M. 2008. "Articulating a Merleau-Pontian Phenomenology of Physical Education: The Quest for Active Student Engagement and Authentic Assessment in High-Stakes Examination Awards." *European Physical Education Review* 14 (2): 263–280. <https://doi.org/10.1177/1356336X08090709>
- Thorburn, M. 2017. "Intelligence, Practice and Virtue: A Critical Review of the Educational Benefits of Expertise in Physical Education and Sport." *Sport, Ethics and Philosophy* 11 (4): 453–463. <https://doi.org/10.1080/17511321.2017.1334003>
- Thorburn, M., and S. Stolz. 2017. "Embodied Learning and School-Based Physical Culture: Implications for Professionalism and Practice in Physical Education." *Sport, Education and Society* 22 (6): 721–731. <https://doi.org/10.1080/13573322.2015.1063993>
- Tinning, R. 2023. "Falling Towards Academia: A Memoir About the Changing Nature of PETE." *Curriculum Studies in Health and Physical Education* 14 (1): 41–55. <https://doi.org/10.1080/25742981.2022.2044363>
- Tinning, R., D. Kirk, J. Evans, and S. Glover. 1994. "School Physical Education: A Crisis of Meaning." *Changing Education* 1 (2): 13–15.
- Victorian Curriculum and Assessment Authority. 2011. "Victorian Certificate of Education." <http://www.vcaa.vic.edu.au/Pages/vce/index.aspx?Redirect=1>.
- Whitehead, M. 1990. "Meaningful Existence, Embodiment and Physical Education." *Journal of Philosophy of Education* 24 (1): 3–14. <https://doi.org/10.1111/j.1467-9752.1990.tb00219.x>