

Article

## **Technologies, Democracy and Digital Citizenship: Examining Australian Policy Intersections and the Implications for School Leadership**

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*Received: 14 October 2013; in revised form: 9 December 2013 / Accepted: 12 December 2013 /*

*Published: 9 January 2014*

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**Abstract:** There are intersections that can occur between the respective peak Australian school education policy agendas. These policies include the use of technologies in classrooms to improve teaching and learning as promoted through the *Melbourne Declaration on Educational Goals for Young Australians* and the *Australian Curriculum*; and the implementation of professional standards as outlined in the *Australian Professional Standard for Principals* and the *Australian Professional Standards for Teachers*. These policies create expectations of school leaders to bring about change in classrooms and across their schools, often described as bringing about ‘quality teaching’ and ‘school improvement’. These policies indicate that Australian children should develop ‘democratic values’, and that school principals should exercise ‘democratic values’ in their schools. The national approaches to the implementation of these policies however, is largely silent on promoting learning that fosters democracy through education, or about making connections between teaching and learning with technologies, school leadership and living in a democracy. Yet the policies promote these connections and alignments. Furthermore, understanding democratic values, knowing what is a democracy, and being able to use technologies in democratic ways, has to be learned and practiced. Through the lens of the use of technologies to build digital citizenship and to achieve democratic processes and outcomes in schools, these policy complexities are examined in order to consider some of the implications for school leadership.

**Keywords:** democracy; technologies; school leadership; digital citizenship; professional standards

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## 1. Introduction

Policies can be considered to be the authorized or official talk of the State [1]. They specify what is legitimate and agreed by those with the power to make policy decisions [2]. Furthermore, government policies about school education provide one window into what type of society and citizens schools are expected to produce. In this paper, Australian school education policies that address curriculum and those concerned with the notions of ‘quality of teaching and school leadership’ are examined to consider the theme of ‘democracy’ through the lens of teaching and learning with technologies. ‘School education policies’ are defined as those official statements agreed and issued at the national level, for implementation in schools.

In Australia, school leaders are seen as central to ensuring students leave school having achieved the outcomes expected of them [3]. These outcomes include the ability to use technologies as part of their personal learning styles [4]. Principals are the conduit between the creators of government policies, and policy implementation in school communities. Principals have to synthesise the respective government policies and make sense of them, so they are implemented in meaningful, cohesive and complementary ways at the local level. This policy approach can be called ‘steering at a distance’ [5]. Although this concept was originally developed for the Dutch higher education sector, it is applicable to Australian school education where policies are used within the context of increased school autonomy, to drive the implementation of government policies at the local level. In such a paradigm, principals are critical to the implementation of Australian school education policies [6].

The use of technologies in Australian classrooms has been promoted for several decades as a way to provide high quality teaching and learning [7,8]. Over the past 20 years or more, government and non-government policies and reports from around the world have advocated the benefits of the use of technologies in teaching and learning, for both individuals and society [9,10]. Indeed Professor Klaus Schwab (Founder and Executive Chairman, World Economic Forum) has argued that the use of technologies is critical for individuals and countries to innovate their processes and products, and in that way, to maintain international competitive advantages in the global economy [11].

More recently, the concept of ‘digital citizenship’ has emerged. There are varying interpretations of what this phrase means. Some use it to refer to the appropriate use of technologies such as what norms for communication are acceptable; what constitutes digital etiquette; and the rights and responsibilities of people when online [12]. In this paper, ‘digital citizenship’ is interpreted more broadly, to encompass the ability to participate in society online [13]. This broader interpretation is based upon an understanding that there is a dialectical relationship between technologies and society [14], and if a society in the 21st century wishes to reproduce democratic relationships, then these have to occur in online worlds as well as in face-to-face contexts.

The approach taken in this paper is critical [15] and deconstructive of concepts that are constituted and comprehended linguistically in policies [16]. That is, this paper is based upon an analysis of

policies that combines philosophy with social science through an analysis of the language used in peak Australian school education policies. The approach used in this study is reflective and practical in its intent. Consistent with the work of Habermas [15], the concept of ‘democracy’ is considered as a location for cooperative, practical and transformative activities in complex, pluralistic, technology-rich, globalizing societies, of which schools are but one instrument.

## 2. Democracy and the Context of Australian School Education

Australia considers itself to be a representative democracy [17]. Australia is a Federation of six States and two Territories, where power and authority are shared between Federal and State parliaments, governments and courts [17]. The States and Territories have primary responsibility for the provision of school education, as outlined in their respective Education Acts. Agreement about national policy initiatives occurs through a Ministerial Council comprising the elected politicians who are responsible for school education in each State and Territory. These Ministers of Education along with the Australian Government Minister for Education form the Standing Council on School Education and Early Childhood (SCSEEC) [18], which was previously known as the Ministerial Council for Education, Early Childhood Development and Youth Affairs (MCEECDYA) [18]. Agreement by this Council is required for peak national policies to be endorsed and implemented across Australia.

Policies agreed by the Ministerial Council are funded either through the Australian Government Department of Education or the Australian Government of Employment. These two government departments were previously known as the one Department of Education, Employment and Workplace Relations (DEEWR) [19]. The names and structure of these government departments were changed when there was a change of Australian Government following a national election in September 2013. These changes are reflective of the power and authority exercised by governments from time to time.

The Australian Government provides considerable funding to the respective Australian States and Territories to support specific education initiatives. Strictly speaking, federal funding agreements are supposed to be in line with nationally agreed policies. The 2012 *National Education Agreement* highlights this symbiotic relationship stating: “This Agreement and the shared National Goals are mutually reinforcing” ([20], p. 1). The power over funding and an electoral mandate however, does provide the Australian Government with considerable authority to promote its own policy agendas. For example, prior to the 2013 Federal election, the previous Australian Government negotiated bilateral agreements for six years of future school education funding with several States and a Territory, under a program called the *Better Schools Plan*. With the change of the Australian Government, these agreements are being reviewed and public information about them has been withdrawn [21].

### 2.1. Democracy and Education

At the beginning of the 20th Century, the American educator John Dewey wrote several books and articles about democracy and education [22] in which he advocated the importance of learning about democracy by being democratic in schools and classrooms. Dewey consistently articulated his fundamental belief of the role of education to develop free human beings, associated with one another on equal terms and therefore, democratically [22]. He saw the role of education to develop self-reflective people who could take their place in a democratic society, able to actively exercise their

citizenship wisely. That is, he saw that schools could “produce free human beings whose values were not accumulation and domination but rather free association on terms of equality and sharing and cooperation, participating on equal terms to achieve common goals which were democratically conceived” ([23], p. 2). Dewey made connections between the political doctrine of ‘democracy’ and styles of teaching and learning that were democratic. In this paper, it is Dewey’s approaches to learning that entail being able to participate in a representative democracy, as well as the phrase ‘democratic education’, used as a descriptor for the ways in which teaching and learning can be constructed, that are of interest. Both these concepts provide a backdrop for considering digital citizenship in the 21st Century, and the role of school leaders in supporting quality teaching and learning with technologies.

## 2.2. Peak Australian School Education Policies

Currently, the overarching Australian school education policy is the *Melbourne Declaration on Educational Goals for Young Australians* [8]. All other national school education policies sit under, and interpret this policy. This *Declaration* places an emphasis on building a democratic society stating that “as a nation Australia values the central role of education in building a democratic, equitable and just society...” ([8], p. 4). This policy also states that “... a school’s legacy to young people should include national values of democracy...” ([8], p. 5). Against the aspirations of Australia being a democracy, the goals of the *Melbourne Declaration* are as follows:

Goal 1: Australian schooling promotes equity and excellence

Goal 2: All young Australians become:

- Successful learners
- Confident and creative individuals
- Active and informed citizens [8].

To achieve these goals, two major and complementary policy directions in Australian school education are being implemented: the development of an *Australian Curriculum*; and a suite of initiatives aimed at improving the quality of teachers and school principals.

### 2.2.1. Australian Curriculum Policies

The *Australian Curriculum* is currently under development. It is being designed and implemented with certain core knowledge, understandings, skills and general capabilities having been identified as required by all Australian school students. The structure of the *Australian Curriculum* includes subject or learning areas which outline the knowledge, skills and understandings required in each of these disciplines. *Civics and citizenship* is one learning area in the *Humanities and Social Sciences* [24]. Woven across the respective learning areas, are a set of seven general capabilities of which ‘information and communication technology (ICT) capability’ [25] is one; and three cross-curriculum priorities ‘Aboriginal and Torres Strait Islander histories and cultures’; ‘Asia and Australia’s engagement with Asia’ and ‘Sustainability’ [26].

The general capabilities are supposed to be explicitly included in the content of the respective learning areas [25]. This curriculum design has been structured to enable the *Australian Curriculum* to

meet the goals set out in the *Melbourne Declaration on Educational Goals for Young Australians*: that is “that all young people in Australia [are] supported to become successful learners, confident and creative individuals, and active and informed citizens” ([8], p. 7). Given this structure, there is a curriculum policy intersection between ‘Civics and citizenship’ and ‘ICT capability’. This is one of the policy intersections this paper explores.

### 2.2.2. Australian Professional Standards of Performance

The suite of initiatives aimed at improving the quality of teachers and school principals in Australia include two Ministerially-agreed national policies concerning professional standards in school education: the *Australian Professional Standard for Principals* [27], and the *Australian Professional Standards for Teachers* [28]. The *Australian Professional Standard for Principals* is intended as a framework for informing the professional learning of school principals, and the *Australian Professional Standards for Teachers* is designed as an accountability framework of teachers’ performance. The development and implementation of these standards was supported through a *National Partnerships Agreement* [29], the five year *Smarter Schools National Partnership for Improving Teacher Quality* [29]. This *National Partnership* operated between 2008–2009 and 2012–2013 and also included the disbursement of \$550 million in bilateral agreements “to support states and territories to improve the quality of the Australian teaching workforce” [29].

The *Australian Professional Standards for Teachers* is structured according to four career stages and seven professional standards. The second professional standard is: “know the content and how to teach it” ([28], p. 3). This particular standard includes six focus areas, and the sixth focus area specifies the inclusion of ICT in teaching and learning [28]. The fourth standard also includes a focus area that addresses teaching and learning with technologies. The fourth standard is “create and maintain supportive and safe learning environments” ([28], p. 7), and the fifth focus area in this standard specifies that technologies have to be used safely, ethically and responsibly in teaching and learning [28]. Consequently, teachers are required to explicitly include technologies in their classroom practices, and their classroom performance can be evaluated on the ways in which they address these standards in their teaching approaches. As such, there is a policy intersection between the *Australian Curriculum* ICT general capability, and teaching and learning with technologies as outlined in the professional standards for teachers. It is this policy intersection that constitutes another policy avenue this paper explores.

## 3. Theoretical Approach

As asserted earlier, school leaders are increasingly required to align local school activities to centrally mandated policies and standards [6]. Alignments between stated policy visions and the implementation strategies applied within schools, are seen to support ongoing improvements in school performance [3]. Australia’s peak school education policies have been developed to be mutually reinforcing [20], but little research has occurred to analyse whether this intended approach to policy development and implementation has been achieved, and further, what might be the implications for school leadership. The first steps in such an enterprise require that the alignments and connections between peak policies be analysed. That is the purpose of this paper.

To identify and analyse the policy intersections between *Melbourne Declaration on Educational Goals for Young Australians*, the *Australian Professional Standards for Teachers* and the *Australian Professional Standard for Principals*, a critical and deconstructive analysis of these peak Australian school education policies was undertaken. This process sought to identify intersections between the policies and to analyse the identified intersections and alignments. This research was informed by the work of Habermas [15] and Derrida [16].

An examination of the *Melbourne Declaration on Educational Goals for Young Australians* [8] identified a high level vision concerning the role of Australian school education to build Australia's democracy, teaching and learning with technologies, and ensuring quality teaching and school leadership. These high level vision statements from the *Melbourne Declaration* were then used to track whether the *Australian Curriculum* documents, the *Australian Professional Standards for Teachers* [28] and the *Australian Professional Standard for Principals* [27] were aligned to these high level themes.

Within the *Australian Curriculum*, the documents most relevant to this analysis were those used in the development of the learning area of *Civics and Citizenship* [24,30,31], and those documents that informed the development of the general capability, that is called the 'ICT capability' [25,32,33]. As such, the intersections between *Civics and Citizenship* and the ICT general capability were analysed to determine their alignment with the *Melbourne Declaration*. A similar process of checking alignment with the *Melbourne Declaration* was used to analyse the *Australian Professional Standards for Teachers* [28] and the *Australian Professional Standard for Principals* [27].

Finally, as all legitimate policies are accompanied by budgets, [34], the 2012 *National Education Agreement* and one of the bilateral *Smarter Schools National Partnership for Improving Teacher Quality* [35] were examined to determine the degree of alignment between the funding allocations provided by the Australian Government, and the agreed national policies for curriculum, teaching and learning with technologies, and quality teaching and school leadership. The following discussion outlines the findings from this policy analysis.

#### 4. Discussion

If it is accepted that one of the roles of schools is to educate students so they become citizens that can take their place in the type of society government leaders envisage, and that policies about school education provide a window into what type of society and citizens schools are to produce, then the intersections and alignment between democracy, technologies, digital citizenship and school leadership should be evident in Australia's peak school education policies. The following section discusses whether this is the case.

##### 4.1. Melbourne Declaration and the Australian Curriculum

As indicated earlier, the *Melbourne Declaration* emphasizes that schools have a role in building Australia as a democracy. This vision is demonstrated in the following two statements from that policy:

“as a nation Australia values the central role of education in building a democratic, equitable and just society...” ([8], p.4); and

“... a school’s legacy to young people should include national values of democracy...” ([8], p. 5).

Interpreting these aspirations, the second goal of the *Melbourne Declaration* includes that young people should leave school as “active and informed citizens” ([8], p.7). In this peak policy document however, there are no statements to suggest what are ‘democratic values’, and there appears to a conflation between ‘democracy’ ‘democratic values’ and ‘active and informed citizens’. Although linguistically easy to do, there are no statements to suggest that students should leave school as active and informed democratic citizens. Given that the words of peak policies such as the *Melbourne Declaration* are pored over long and hard by their authors and many bureaucrats prior to their authorisation, this absence of drawing connections between democracy and citizenship is problematic. It is entirely possible for students to be ‘active and informed citizens’, and yet behave undemocratically.

The *Melbourne Declaration* also places an emphasis on students using technologies as the following extracts from this policy illustrate:

“Successful learners ... have the essential skills in literacy and numeracy and are creative and productive users of technology, especially ICT, as a foundation for success in all learning areas” ([8], p. 8); and

“As a foundation for further learning and adult life the curriculum will include practical knowledge and skills development in areas such as ICT and design and technology, which are central to Australia’s skilled economy and provide crucial pathways to post-school success” ([8], p. 13).

However, there are no direct connections made between ‘teaching and learning with technologies’ and ‘civics and citizenship’ education, and no mention is made of the concept of ‘digital citizenship’. Suffice to say then, that there is not an internal connection of ideas on the key themes of ‘democracy’ ‘democratic values’ and ‘active and informed citizens’ within the *Melbourne Declaration*.

The conflation between ‘civics and citizenship’ and ‘democracy’ is also evident in the *Australian Curriculum*, as the following statement highlights: “*Civics and Citizenship* develops students’ understanding of Australia’s political and legal systems and effective participatory citizenship in contemporary Australian society” [31]. Although this statement does not refer to ‘democracy’ as such, the main emphasis in the documentation outlining the *Civics and Citizenship* learning area [30] appears to be on what is to be taught about Australia’s democracy, and to a lesser extent on approaches to teaching and learning, which could broadly be called ‘democratic’, albeit they are not acknowledged as such. Indeed, while the words used in the *Shape of the Australian Curriculum: Civics and Citizenship* [30] could be interpreted as promoting democratic ways of teaching and learning, there is no ‘joining the dots’ between the concepts of democracy and democratic values in teaching and learning, even though, with only a couple of sentences, these connections could be made.

As is the case in the *Melbourne Declaration*, there are no connections made in the *Civics and Citizenship* learning area between the use of technologies in teaching and learning, and the concepts of ‘democracy’, ‘democratic values’, or how technologies can be used in a democratic society, more generally. Disappointingly, the integration of the ICT general capability into the *Shape of the Australian Curriculum: Civics and Citizenship* paper is rudimentary at best. The ‘ICT capability’ has been reduced to two short paragraphs outlining in generalized ways, how students could demonstrate ‘ICT competence’ through identifying, sifting and sorting information. The other general capabilities have been contextualized within the *Civics and Citizenship* learning area, but unlike these, the ‘ICT

capability’ provides teachers no guidance about how technologies can be meaningfully incorporated into the learning area of *Civics and Citizenship*, nor how to make connections between the content of *Civics and Citizenship* and the ICT capability. The introduction of the concept of ‘digital citizenship’ is one obvious and straightforward way such a connection could be made, but there is no mention of ‘digital citizenship’ in either a limited or an expanded way. This is a missed opportunity, and dates the Australian Curriculum to the 20th rather than the 21st Century. The alignment between the *Australian Curriculum* and the *Melbourne Declaration* in relation to the concepts of democracy, teaching and learning democratic values, and ICT capabilities then, are evident, but share the same weaknesses.

#### 4.2. Professional Standards and the Australian Curriculum

The intention of the respective Australian professional standards is to promote ‘quality in teaching and school leadership’, and to promote an ethos of ‘school improvement’. What is intended by ‘quality’ is addressed indirectly, referring to ‘improved student outcomes’ or students’ performance on the respective national literacy, numeracy and civics and citizenship tests [36]. The notion of ‘quality teaching and school leadership’ is recognized as complex, and is the subject of many countries’ efforts [37]. ‘Quality teaching and school leadership’ is also widely claimed to have measurable impacts on students’ performance at school [38]. The Australian researcher, Professor Geoff Masters has posited that high quality professional performance in education is multi-faceted and includes having expert knowledge in a recognized discipline; understanding the underlying principles within a field of knowledge; acquisition of a depth of experience in the profession; remaining abreast of recent developments pertinent to the field; and having competency with the tools and techniques relevant to the discipline [39]. Both teachers and school leaders who exercise a suite of professional approaches consistent with these techniques are considered to make a difference to the quality and nature of students’ learning while at school [39].

Linked to the notion of ‘quality teaching and school leadership’ is the concept of ‘school improvement’. In Australian school policies, symbiotic relationships exist between the improvement of the performance of schools as measured by the outcomes achieved by students on pre-determined benchmarks [36], and the role of teachers and school leaders is to support students to achieve these outcomes [39]. This symbiotic relationship is recognized as ‘school improvement’: “the ultimate goal of school improvement is to improve outcomes for students” ([40]). As such there is a cyclic logic that argues that “effective leaders create cultures of high expectations, provide clarity about what teachers are to teach and students are to learn, establish strong professional learning communities and lead ongoing efforts to improve teaching practices” ([40]). If the aspirations of ‘democratic values’, the content of ‘civics and citizenship’, and the processes of ‘ICT capability’ are each seen as policy priorities however, then the alignments across the policies should be evident. But these aspirations are not carried through in the respective Australian professional standards. Indeed, the *Australian Professional Standards for Teachers* and the *Australian Professional Standard for Principals* address the issues of teaching and learning with technologies, democracy and digital citizenship in separate, different and inconsistent ways.

The *Australian Professional Standards for Teachers* identifies specific requirements of teachers’ classroom performance in relation to teaching and learning with technologies, as is evident in the

standards 2.6 and 4.5 [28]. As these standards are intended to be used to provide performance accountability, teachers are obliged to include technologies in their classroom practices. There is however, no requirement or mention in the *Australian Professional Standards for Teachers* that specifies teachers have to develop ‘democratic values’ in students or promote an understanding of democracy, as outlined in the *Melbourne Declaration*. Conversely, the *Australian Professional Standard for Principals* does advocate that principals implement ‘democratic values’ but makes no mention about the role of school principals in supporting teaching and learning with technologies. Furthermore, there is no conceptualization of the professional standards and curriculum policies intersecting or operating dialectically or symbiotically, so that teachers and principals in schools in Australia might develop students as active and informed democratic citizens. Furthermore, there is no mention in either set of professional standards for teachers or school principals of developing ‘digital citizenship’ in either a limited or an expanded way.

#### 4.3. Connections between Budgets and Policy Priorities

To determine what is truly valued in government policies, it is illuminating to check the alignment between the funding provided and the stated policy priorities. While both the *National Education Agreement* [20] and the *Smarter Schools National Partnership for Improving Teacher Quality* [35] indicate that the funding allocated in these Agreements is to implement the *Melbourne Declaration on Educational Goals for Young Australians* [8], neither statement places any emphasis on democracy, democratic values, or digital citizenship. The Agreements do nominate specific outcomes and the *Smarter Schools National Partnership for Improving Teacher Quality* provided ‘reward payments’ for the achievement of explicit measures and targets. These measures however, do not equate ‘quality teaching and school leadership’ with democratic values in teaching and learning, or with digital citizenship. The *National Education Agreement* however, does nominate separately, the improvement of teacher and school leader quality, and the use of ICT, as parts of a “modern teaching environment” ([20], p. 4). These policy outcomes though, are not seen to intersect. As such, while there are superficial statements made that the respective funding agreements are to implement the *Melbourne Declaration on Educational Goals for Young Australians*, in a ‘mutually reinforcing way’ [20], there is so explicit funding ‘line of sight’ nor intersections drawn, between the vision of the *Melbourne Declaration* and the nested curriculum and quality teaching and school leadership policy statements.

This analysis suggests then, that there are weaknesses in how school education policies promote democratic values, an understanding of democracy in Australia, and how to develop students who are active, informed and democratic citizens in a globalized and technologically-rich society. As such, there seems to be a policy vacuum into which school leaders can step. But what can be done by school leaders to address these policy weaknesses? The following sections proposes some initial thoughts that may provide avenues for further elaboration about how the intersections between ‘democracy’, ‘democratic values’, ‘digital citizenship’ and ‘quality teaching and school leadership’ may be addressed.

## 5. Opportunities for the Future: Implications for School Leadership

It is acknowledged that teachers and school leaders have significant roles to play in supporting students to leave school having achieved the goals identified for them [41]. Furthermore, the educational theories teachers and school principals apply to understand how students learn, guides the decision they make in their classrooms and schools [42]. Given this backdrop, if Australian school students are to develop ‘democratic values’ and to learn how to meaningfully use technologies to be active and informed democratic citizens, in ways that are inter-connected and meaningful, then they require practical opportunities to learn what that way of life means, and how they might conduct themselves within it.

There is little recent Australian literature that provides insights into the ways in which Australian schools teach civics and citizenship, even though ‘civics and citizenship’ is one of the national standardised tests conducted in Australia with a random sample of Year 6 and Year 10 students, on a triennial cycle [43,44]. Indeed, much of what is written about the teaching of ‘civics and citizenship’ in Australia has been prepared by the various Australian governments. There is even less Australian literature on the role of school leaders in supporting the development of ‘democratic values’ in schools, or about how they can support the use of technologies to develop students’ democratic values, across the respective learning areas of the *Australian Curriculum*. Yet understanding how the peak Australian policies connect, intersect and align may contribute to school leaders’ understandings so that they can synthesise and make sense of the various government policies, and implement them in meaningful, cohesive and complementary ways. The next section tentatively explores some possibilities and approaches school leaders may wish to consider.

### *Networked, Democratic School Leadership*

To support teaching and learning that is integrated, connected and democratic, school leaders have to understand their role in relation to these policy priorities. As such, it is proposed that the role of school leaders is to create an environment in which the principles of a democratic society can be experienced, understood and acted on. Based on the acceptance of this approach, the challenge and opportunity for school leaders becomes to truly reframe their work in light of using democratic values and applying democratic processes. But what might this mean in practice?

It is early days for considering what school leadership might ‘look like’ if it were networked and democratic, but the identification of some principles that were agreed upon across their school would provide a basis from which to build and expand, and may assist in establishing some future directions for the school. These principles could be conceptualized based upon the following in-school organizational structures that school leaders utilise within their schools: the curriculum, and information and decision-making structures. These structures in practice are not discreet but overlap, and may not be the only structures operating in schools. Starting with these structures however, provides a place from which to conceptualize networked, democratic school leadership and the way schools can be organized with democratic ends in mind.

## Curriculum Structures

The *Australian Curriculum* provides considerable guidance about what is to be taught in the respective learning areas, and provides some guidance about the types of teaching and learning styles that should be employed for the students to achieve the required outcomes. The weaknesses in the *Civics and Citizenship* learning area outlined above, could be rectified with school principals supporting teachers to explicitly make the connections between the content of the learning area, and democratic learning styles. Such an approach could be achieved by school principals working with their teachers to discuss what it means to incorporate democratic values into their specific learning areas, and the ways in which technologies could be used to assist these processes. There will not be single answers or the one right answer; but the problematizing of the issue and discussion about the place of 'democratic values' and technologies in teaching and learning, in itself, starts the process.

Technologies can be used to assist in connecting the curriculum with democratic values in a range of ways: through both the content taught and the teaching and learning approaches implemented. Technologies can bring the work of democratic governments around the world into the classroom. For example, democratic governments in Europe, the UK and USA are turning their attention to how they can utilize technologies to provide more information to their citizens [45]. These initiatives are referred to as 'open data' projects and are commonly linked to concepts of 'open government', where the provision of government services is seen to be underpinned by principles of collaboration, participation and transparency [46]. Examples of such projects include the National Aeronautics and Space Administration (NASA) crowd-sourcing project, *Open Innovation Projects* in the USA [47], and the OpenGeoscience in the United Kingdom [48]. One of the main aims of government open data initiatives is to make public data universally available in easily accessible and engaging ways.

These government initiatives generate big data sets that are openly available and can be used by teachers and students in a wide range of learning areas. The use of these data sets however, not only provides students with real, current government data, but provides teachers with the cues to be able to explicitly make the connections between the content, forms and processes of governance. That is, the curriculum becomes connected to meaningful content with the use of technologies.

## Information and Decision-Making Structures

Digital technologies have created an infrastructure for human networking. Applying the same principles underpinning the open data projects being used by governments but on a smaller scale, school principals can make the information structures in their schools, collaborative, participatory and transparent. Reflecting on the way their schools are organized, creating democratic processes of information sharing and decision-making can be a first step to implementing democratic values across a school. Students can be highly involved in classroom decisions concerning class rules, curriculum, or assessment requirements. In democratic schools, students can help with establishing and maintaining the school culture, school rules, scheduling, curriculum, and budgeting decisions. That is, if students are to learn how to value democracy, they have to experience an education that actively engages their teachers and them as citizens in their own schools and communities. Such approaches have to be put

into practice not only in classrooms, but through the leadership of the school principal and school leadership team.

## 6. Conclusions

In Australian school education, the terms ‘democracy’ and ‘democratic values’ are used to refer to the type of knowledge students are expected to learn about the processes of a representative democracy. But school students require practical activities through which to learn what living in a democracy means, and to have opportunities to critically reflect upon how they might conduct themselves within such a society. Australian principals are required to implement national and local policies within their schools. But these policies do not seem to provide any guidance about what are ‘democratic values’ or how these translate into practice in schools. There has been no ‘joining of the dots’ in school education policies between the rhetoric of ‘democratic values’ and the promotion of technologies for quality teaching or school improvement. Furthermore there are no substantial connections made in the peak Australian school education policies, between the use of technologies in teaching and learning, and the teaching of civics and citizenship. The policies are silent on the concept of ‘digital leadership’, yet the introduction of this concept would be one way in which the teaching of democracy and democratic processes could occur with the use of technologies.

The lack of connections made between the policy priorities of ‘democracy’, ‘democratic values’, ‘civics and citizenship’, ‘ICT capability’ and ‘quality teaching and school leadership’, provides challenges for school principals implementing the *Australian Curriculum* and the respective professional standards in their schools. These various policies create expectations of school leaders to support teaching and learning with technologies as part of improving the quality of teaching in their schools, but there is little recent work in the context of the current peak Australian school education policies that illuminates what types of learning fosters democratic values through education or with technologies. To build digital citizenship and implement democratic processes and outcomes in schools is consistent with the policy priorities outlined for Australian school education. As such, it is now time to build on the tentative steps taken in this paper, to consider further, the implications for school leadership.

## Conflicts of Interest

The author declares no conflict of interest.

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