The Treatment of Curiosity in Strategic Documentation

A study of the articulation of The New Zealand Curriculum value of curiosity by schools.

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Abstract

A significant focus of futures-oriented education is to promote and nurture curiosity. There is a strong consensus between published literature and research findings that curiosity is beneficial and plays a significant part in student achievement. Through the promotion of curiosity, students are prepared to ask and answer questions about things they do not know. Discovering the answers to these questions leads to both individual growth and the expansion of a collective knowledge and understanding, shared within and beyond the formal school context. Curiosity has been included in the New Zealand Curriculum since 2007. This research study addressed the issue of the definition and justification of the inclusion of curiosity as a value in the Curriculum. To achieve this intention, a review was undertaken of how curiosity is defined and described in publicly available school strategic documentation, and interviews conducted with Principals who had indicated that they value curiosity in their schools. An in-depth picture of how curiosity is treated and justified was developed through the study. It was found that curiosity is both difficult to define, and poorly represented in school documentation. The interview participants, nonetheless, argued that curiosity is worth encouraging for its benefits to both students and society. Curiosity does have a place in educational pedagogy and practice and it is important that it continues to be signposted by its inclusion in The New Zealand Curriculum (2007). Schools should, however, explicitly plan for curiosity, acknowledging the importance of learning over performance, by promoting and encouraging students to explore and expand their knowledge of the world and their place in it. Doing so will help their students to adapt to a future made up of uncertain economic situations, external societal pressures and improve their individual achievement.

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Attestation of Authorship

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgements), nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of higher learning.

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Chapter 1

Introduction

Curiosity is found as part of a cluster, "**innovation, inquiry, and curiosity**, by thinking critically, creatively, and reflectively" in The New Zealand Curriculum (Ministry of Education [MOE], 2007, p.10). Keown et al. (2005) identified the following concepts and ideas associated with the notion of curiosity: inquiry, curiosity, truth, wisdom, rangatiratanga, open mindedness, critical mindedness, flexibility, adaptability, innovation, entrepreneurship, beauty, aesthetics, and creativity. Following this suggestion, it could be argued that additional concepts and ideas connected with curiosity may include questioning, engagement, innovation, motivation, critical, creative and future focussed thinking, an ongoing desire to learn, and care and concern. Curiosity is mentioned in a joint statement made in 2014 by the New Zealand Minister of Science and Innovation and Minister of Education:

> We [also] need an environment that helps New Zealanders to use our natural curiosity to interrogate, decide on and make the most of new developments and technologies. New Zealand is a small, geographically isolated and well-educated country. To overcome the disadvantages of modest size, we must continue to maximise opportunities *to harness our curiosity* and cultivate our ability to be competitive and improve social and environmental outcomes. Our workforce must be skilled in science and technology to develop new high-value products, meet the demands of business, and mitigate and adapt to the challenges of a quickly changing world. (Ministry of Business, Innovation and Employment [MBIE] et al., 2014, p.5. Emphasis added)

In a 21st-century world, faced with an environment where the concept of what constitutes knowledge and the source of knowledge is always evolving, it is fundamental to spark curiosity in students; to create a 'hungry mind' for learning and achievement. While curiosity and learning can be considered to have a symbiotic relationship, the question remains, whether the existing education

system promotes students' natural curiosity. Viewing the education system as a vehicle for producing citizens for the future, a key focus is teaching students to learn how to learn, promoting and nurturing a person's curiosity and eagerness to find out more. Through the promotion of curiosity, students are prepared to ask and answer questions about things they do not know. Discovering the answers to these questions leads to both individual growth and the development of a bank of knowledge which can then be shared both within education settings and beyond the formal school context.

Since 2007, curiosity has been included in the list of values identified within The New Zealand Curriculum (Ministry of Education [MOE], 2007), where values are described as "deeply held beliefs about what is important or desirable" (p.10). These values are deliberately broad to meet acceptance from the diverse society that the curriculum serves. These values were promoted as those that society and communities would be able to agree on as important to all in a diverse society and world (Benade, 2012; Keown et al., 2005). It is these promoted beliefs that the Ministry of Education expects to be developed and expressed in the thoughts and actions of people in society if they are to achieve the vision of The New Zealand Curriculum (2007) to enable students "who will be creative, energetic, and enterprising; who will seize the opportunities offered by new knowledge and technologies to secure a sustainable social, cultural, economic, and environmental future for our country" (MOE, 2007, p. 8).

Each value represents a cluster of ideas and concepts (Keown et al., 2005). It is expected that schools will, in consultation with their local community, not only select but also define and express the curriculum values in a way that is meaningful to them (MOE, 2007). As there exists no singular meaning for curiosity, people subscribe to different views about not only the definition but the

nature of curiosity describing it in various ways including as a value, a disposition, a skill and a virtue. Looking within an educational context, curiosity has been identified in literature as being connected to academic inquiry and questioning as well as being closely linked to the virtue of care and concern (Baumgarten, 2001; Dewey, 1910; Guthrie, 2009; Loewenstein, 1994; Post & Walma van der Molen, 2017).

People are always learning, especially by being curious, by wondering and exploring, and by experiencing and playing (Engel, 2015). While the selection of a single word from The New Zealand Curriculum (2007) to become the focus of a research study may seem unusual, 'curiosity' is a concept with meaning and potential benefit for education and is currently neglected in education research. The development and encouragement of curiosity is considered to have potential positive function on an individual level by enhancing the ability to learn through the development of learning skill and dispositions including increased motivation. In addition to the clear links between curiosity and learning, Baumgarten's (2001) theory proposes a link between the level of a person's curiosity and their ability to form relationships which show care and concern for others. Curiosity is purported to increase social cohesion within society through increased citizen functionality and responsibility. It is also considered to promote the requisite skills needed to function in a changing economic world.

This thesis addresses the issue of the definition and justified inclusion of curiosity as a curriculum concept. The research question for this study therefore asks: **How is curiosity defined and described within the school context, and in what ways is curiosity evident in, and encouraged through, school strategic direction and policy statements?** The principal goal of this qualitative research was therefore to identify and describe the treatment of curiosity within the school

context through an examination of the ways curiosity is evident in, and encouraged through, school strategic direction and policy statements. The question has significance, as research should consider how the promotion of curiosity can influence students within the school context and in the future.

There is no one definition, no one truth of what curiosity within a school context should look like. Curiosity presents in many formats, for many functions. While I believe that there is potential benefit that can be gained from the promotion and encouragement of curiosity within school contexts, I also believe that the benefits will vary in different situations. The ontological position taken in this thesis is based on interpretation and hermeneutics. I believe that knowledge is constructed through the interpretation of the experiences and narratives of both research theorists, through the study of meaning and interpretation of texts, and school leader practitioners, through examining the subjective perceptions and individual interpretations and experiences in understanding social phenomena; in this case the role of values and the treatment of curiosity.

Research attempts to develop or contribute to an increased understanding of the phenomena studied. The main goal of research is ultimately the application of this increased knowledge to analyse and improve practice (Baldwin, 2018). Daniel and Harland (2017) state that all research starts with underlying beliefs and expectations about a phenomenon, and further claim that these beliefs, conscious or subconscious, are framed by the researcher's ontology; the researchers personal beliefs, views and values, and epistemology; and the procedures a researcher uses to come to know something (Daniel & Harland, 2017). My ontological and epistemological position is influenced by both my education and my professional experience as a teacher and a school leader.

This qualitative research is located in the interpretive paradigm which suggests that I sought to discover meaning as it is formulated within the living cultural context (Corbin & Strauss, 2008). Researcher decisions are based on their values, which adds a level of personal interpretation to the findings as the content is constructed in the form of an underlying narrative, filtering and interpreting the ideas and data (Daniel & Harland, 2017). Qualitative research is subjective; the researcher has an active role in shaping the research from question selection through to the interpretation and presentation of the findings. This requires the researcher to, firstly acknowledge this subjectivity and then to take a deliberate objective stance when analysing the data.

It is an ontological assumption that social reality is interpreted differently by multiple people creating multiple perspectives of the place of values within the curriculum and the phenomena of curiosity. The qualitative paradigm examines particular instances and experiences, including those of various individuals, and is more concerned with gathering implicit knowledge based on the personal experiences and professional intuition of both theorists and school leaders than trying to produce generalisations.

This research took a phenomenological approach by collating specific information about the role and treatment within individual school contexts of values, with a specific focus on the treatment of curiosity. While I realised that similarities may present themselves, my aim was to explore individual practice. Although some general conclusions can be drawn from the findings, these are school context specific, and are interpretive rather than descriptive, and therefore are not generalisable.

It is an epistemological assumption that knowledge is gained inductively through personal experience to create a theory. While people may construct individual meaning, knowledge can be formed by a consensus of co-constructors. It is constructed through interaction between humans and the world and is developed and transmitted in a social context. By examining the curriculum as policy and identifying influences in the formulation of curriculum at national and local level, I addressed the limitations of interpretivism by acknowledging the political influences on the development of knowledge and social reality.

To examine the notion of curiosity I was required to gather evidence in the form of descriptive accounts from a range of sources (Mutch, 2005; Newby, 2010). Through a review of research literature, I identified some of the global, national and local influences on the creation of New Zealand educational policy and local curriculum with particular reference to values. I sought to describe and define curiosity as described by research theorists and to identify the positive function of the promotion of curiosity for the individual, for education and for society in general.

Initial contextualised data was obtained by analysing publicly available strategic documentation from New Zealand schools. School websites include strategic and annual plans, graduate profiles, school policies and Education Review Office summary reports, and these can provide information on how schools view curiosity, including the aligned concepts and themes. While this survey of public documentation alone did not allow for in-depth examination of how curiosity was promoted or encouraged within the individual school context, it allowed me to initially identify individual concepts used by schools which could be linked to curiosity.

To expand my understanding of the phenomena of curiosity in the school context I selected a small number of school leaders through non-probability purposive sampling. The aim of this data collection was not to generalise from the sample to the population, but to gain insight and anecdotal knowledge to the value curiosity holds within their individual school contexts, and how this translated into local curriculum policy. The sample was chosen due to the evidence of importance given to curiosity following interpretation of their existing publicly available policy and strategic documentation.

I conducted interviews with these selected principals. I first examined how The New Zealand Curriculum (2007) was viewed as a policy document by school leaders, paying particular attention to the beliefs surrounding, and the treatment of, the values from within the curriculum. I inquired into how, based on their experience and beliefs, they viewed the role of values within a school before delving more specifically into the treatment of curiosity. This provided the opportunity for principals to share highly contextualised experiences of how they have promoted and developed curiosity in their schools.

This thesis is divided into six chapters. Chapter One, this introduction, provides the reader with the research questions, justification and the aspiration of this research. Chapter Two is a literature review providing a synthesis of the published literature consulted that highlights the role of The New Zealand Curriculum (2007) and its role as an example of education policy; it provides a review of changes that led to the creation of the revised New Zealand Curriculum (2007) with specific attention to the inclusion of values; and, it examines the idea of curriculum development and decision making at a local level in reference to values identification. It then follows with an examination of curiosity; defining the characteristics of curiosity; discussing the importance of curiosity and the

consideration of how to implement it at school level. Chapter Three provides my methodology. As a form of qualitative research, I utilised both document analysis and semi-structured interviews as my chosen methods and methodology for this study as it allowed my research to develop a big picture view of the inclusion of curiosity in school's strategic direction whilst also allowing me to explore and share the experiential knowledge of those principles involved. Chapter Four presents my research findings for both the analysis of the school documentation and the interview data from the three principals who participated in this study. Chapter Five is a discussion of my findings which elaborates on the themes that presented themselves. Chapter Six, the conclusion, provides the reader with a summary of this thesis.

Chapter 2

Literature Review

Introduction

> A society that believes in progress, innovation and creativity will cultivate it [curiosity], recognising that the enquiring minds of its people constitute its most valuable asset. (Leslie, 2015, p.8)

New Zealand schools have a potentially significant level of authority and autonomy in curriculum decision making around what and how is taught within their own schools. These decisions are the responsibility of the Board of Trustees and school leadership, ideally through a process of consultation with the aim being to reflect the needs of the students and school community. Nonetheless, these decisions are not made in a vacuum. While schools hold a level of autonomy and responsibility around the content and delivery of their local curriculum, this is underpinned by the state specified intent of The New Zealand Curriculum which is, in turn, influenced by global social and economic aspirations and expectations. The following review of current literature examines the role of curriculum as policy and the inclusion of values within The New Zealand Curriculum (2007). As a policy statement, the national curriculum specifies the expected outcomes, as identified by the state, that need to be contextualised for each school. The New Zealand Curriculum (2007), the result of wide-scale reform over the past four decades, aims to allow students to develop the skills, knowledge and attitudes that would enable them to be ongoing learners who can function effectively in society and the economy. To aid in this endeavour, one intent from The New Zealand Curriculum (2007) is that there is values education in schools.

One of the values identified in The New Zealand Curriculum (2007) is curiosity. There is, however, no single consensus of definition or description of curiosity, therefore, this literature review will explore the notion of curiosity to identify how it can be viewed and described within strategic documentation, including looking at themes linked to the notion of curiosity within educational contexts. Curiosity is considered to have potential positive implications for academic achievement (Dewey, 1910; von Stumm et al., 2011) as well as societal and economic benefits. This literature review will examine these benefits and the implications of curiosity for academic achievement.

Influences on education policy creation

Policies are operational statements of intent informed by the values of an authoritative power (Ball, 2011). Policy does not exist in isolation, free from the social, political and economic context. It is formed as various factions across and within the state dispute and struggle for control of content and meaning in defining what is important for society and what is necessary to reach the defined desirable future (Ball, 2011). Policy cannot be separated from the global, national or individual interests and conflicts within society (Ball, 2011; Yates & Young, 2010).

As an example of policy, education policy, such as a national curriculum framework, defines what counts as education, and what the state has identified as important and necessary but, as policy, cannot be separated from other social and economic policy (Ball, 2011). Educational policy promotes education's contribution to productivity and profit in future economic society as well as transmitting the desired culture and maintaining social and political order through governance of curriculum direction and allocation of funding to address the defined areas of need and importance (Ball, 2011).

An example of how education policy is influenced by global pressures, conflicts and ideologies, can be seen in the processes of measuring and benchmarking performance. This occurs at an international level, through such organisations as the Organisation for Economic Co-operation and Development [OECD] and its Programme for International Student Assessment [PISA] (https://www.oecd.org/pisa/). These global mechanisms require member states of the OECD to review how their national education policy and systems are preparing students for life in the 21st-century and to evaluate their own policies in comparison to 'high-performing states' that are achieving better resulting, leading to changing notions of how curriculum is defined and what should be included in its design and implementation (Yates & Young, 2010).

While forming and implementing policy under the influence of globalisation can make use of knowledge and ideas held by others, possible consequences of changing to meet global pressures can be a loss of national curricular tradition and distinctive features. By understanding the origin of the pressure for change and recognising the degree to which any reform has global rather than national origins, governments will have a greater awareness of alternatives and the value and importance of collaboration (Yates & Young, 2010). Curriculum design decisions are not simply a direct response to dominant interests but rather are a response to the complex mix of anachronistic, emergent and dominant ideologies of society at the time of creation. Education curriculum is formed through compromise between the inherited selection of interests, ideologies and ideas and the emphasis on new and emerging ideas (Ball, 2011; Yates & Young, 2010). Usually following some level of consultation process, resulting curriculum documents represent the beliefs of bureaucrats, politicians and teaching professionals. Each group can be considered both a source and a resource in

educational decision making (Ball, 2011). The New Zealand Curriculum (2007) is the educational policy that sets the guidelines for New Zealand schools to follow to achieve specific outcomes. It also communicates the big picture way the Ministry of Education as an agent of the state expects things to be done. The Curriculum describes broad outcomes identifying what they want to see happening in schools philosophically and pedagogically, and the knowledge, competencies and behaviours that they see as beneficial for students to display. Whilst the national curriculum tends to express these in the broadest terms, the detail is formulated at the local level, specific to those directly affected by the choices.

In recent years, in some contexts, parents have been given an increased voice in the design and implementation of the curriculum (Ball, 2011; MOE, 2019; Yates & Young, 2010). Potentially, this allows local communities the opportunity to provide input about what is important and valuable for inclusion in the curriculum for their child, providing a more direct relationship between the school as a provider of education and the family as the consumer of the service (Ball, 2011; Yates & Young, 2010). Widespread curriculum review followed the completion and presentation of the 1988 Picot Report (New Zealand Taskforce to Review Education Administration) and the state's response, commonly referred to as Tomorrow's Schools (New Zealand Department of Education, 1988). The Taskforce wanted to create increased opportunities for the community, in particular parents, to participate in the governance of their chosen schools. Among other resulting actions, this review instituted the establishment of individual school's Boards of Trustees consisting of community members, predominantly parents. This level of local governance gave local communities a significant voice around strategic direction and the setting of school priorities,

signalling a level of community involvement in curriculum decision making that had never existed before (Benade, 2012). As societies are evolving, and with it, ideas about what is considered educationally important in different communities, this consultation process is critical when designing a curriculum programme to meet the needs of individual groups, and indeed individual students. The focus of what knowledge, skills, and competencies are needed is continually changing as part of an evolving society. Therefore, schools need to continue to change what they do and how they do it if they are to continue to meet the needs of their community. A one size fits most curriculum is no longer relevant (MOE, 2019).

The declining role of knowledge

Meeting the needs of 21st-century learners in preparation for the future requires curricula to be reviewed, as there is considered to be the need for more curriculum integration and flexibility (Lundahl et al., 2010; Young & Muller, 2010) initiating a shift from a knowledge outcome focussed curriculum to one where the students themselves are the outcome. Global trends towards curricula focussing on encouraging the ability 'to do' rather than 'to know', have changed how knowledge is viewed. While knowledge remains key in providing conceptual markers to assess and ensure progress (Young & Muller, 2010), by thinking about knowledge in a way which sits outside subjects, the role of content knowledge has become less important in a new global economy (Yates & Collins, 2010). It is no longer the principal currency of achievement, but rather it is used to demonstrate a student's skill and disposition. Thus, the purpose of education seems to be moving beyond mere academic development, to include the development of student identity and character. If so, then moral education and the instilling of values is becoming a critical part of schooling (Dasoo, 2010). This new focus has the goal of producing competent and self-regulating citizens,

suggesting that this emphasis on moral education, including values, dispositions and metacognitive knowledge, is replacing the concept of segregated content knowledge, (Yates & Collins, 2010; Young & Muller, 2010; Yates & Young, 2010).

To fully develop the individual, education must go beyond knowledge, skills and competencies, or, as suggested by De Nobile and Hogan (2014), “there is an important place for values education to develop sound decision making capabilities in young people going into the future” (para. 23). Skills and competencies focus on the outward; what the student can do and how they act, whereas values focus on the inward; a student’s thinking, understanding, reflection and judgement. Without the balance of outward and inward focus, education can result in focussing on behaviour modification rather than critical reflection and personal development (Priestley & Biesta, 2013). Schools are powerful agents of moral education (Stengel & Tom, 2006), despite their traditional purpose of academic development. Moral education incorporates notions of values and virtues by focussing on individual student character and behaviour, individual teacher ethics, economic and social justice, cultural sensitivity, community support, educational efficacy and human wholeness (Stengel & Tom, 2006). Moral education underpins the relationships between teachers and students, curriculum choices, approaches and materials and in class and school rituals and practices (Stengel & Tom, 2006). Priestley and Biesta (2013) describe ‘the student as a learning outcome’, discussing the notion that it is the person themselves, and their formation as an individual and member of society that is the focus for education rather than the attainment of skills or the acquisition of knowledge. This supports the notion of a curriculum based on competencies, principles and values (Dasoo, 2010; Priestley & Biesta, 2013).

This student focussed approach to curriculum design was highlighted in the 2000-2002 review of The New Zealand Curriculum Framework. Following this revision, a revised New Zealand Curriculum was released in 2007. It required significant shifts from an outcomes-focussed curriculum to having the learner at the starting point. This change is embodied in the vision of young people as "lifelong learners who will develop the competencies they need for study, work, and lifelong learning and go on to realise their potential" (MOE, 2007, p.6). To demonstrate how the current curriculum evolved, the discussion will now consider the historical development of The New Zealand Curriculum with a focus on the inclusion of values education.

The New Zealand Curriculum: Shifting to an outcomes focus

In New Zealand, the national curriculum has been the subject of debate in recent years, both about what should be included, assessed and reported on and who should control curriculum (Mutch, 2005). In the mid-1980s the (then) Department of Education, following major public consultation, reviewed the existing curriculum with the task of creating an overall framework (Benade, 2012). The New Zealand Curriculum Framework was published by the newly formed Ministry of Education in 1993, bringing a significant policy shift from a focus on the content, teaching and learning experiences and activities to a policy driven by a focus on outcomes (Benade, 2012). It was viewed as an overarching policy document and was significantly and robustly reviewed in 2002. It was considered to be educationally effective and sound in terms of its educational integrity. The expectations set out in the documents were aligned to international curricula while maintaining flexibility for teachers to meet the needs of their students. While the academic structure and subject expectations were received positively, there were

nonetheless areas that the review identified as needing improvement (MOE, 2002).

The Curriculum Stocktake indicated a lack of assurance in the demonstration of the values and attitudes which support learning; there were high levels of absenteeism, verbal intimidation, physical violence and suicide among New Zealand students in comparison to students internationally (MOE, 2002). Globally, a degree of 'moral panic' had arisen, as concern was raised that both educational and socially established values systems were under threat (Garland, 2008). The perceived loss of traditional values and a pattern of inappropriate behaviour (Stengel & Tom, 2006) was deemed to be symptomatic of a social system needing change. To fully prepare 21st-century learners for the future, educators would have to understand and deconstruct what is desired and what is needed in raising the next generation, in both the academic and the moral sense (Stengel & Tom, 2006). The New Zealand Curriculum Stocktake was influenced by these emerging global concerns, the Ministry of Education presumably recognising that change within the education system was required as a catalyst for societal change.

The existing 'attitudes and values' within The New Zealand Curriculum Framework (MOE, 1993) were considered to have the potential to aid achievement, increase the participation of students in the world around them, and to improve the climate within classrooms. It was, however, felt that the curriculum did not necessarily support the promotion of values due to insufficient attention being given to values education within the curriculum itself, and there also being a lack of guidance around the expectations of what schools should be doing to promote and support community values (MOE, 2002).

Therefore, following the Curriculum Stocktake in 2002, and presumably under the influence of the moral panic suggested above, values were added to The New Zealand Curriculum to provide a moral compass for youth while also providing them with the desire and opportunity to realise their potential (Benade, 2012).The Curriculum Stocktake Report recommended that values needed to "have a more explicit role in frameworks and support materials" (MOE, 2002, p. 50).

Accordingly, The New Zealand Curriculum (MOE, 2007) identifies certain values linked to its purpose to create "young people who will be confident, connected, actively involved lifelong learners" (MOE, 2007, p. 6). The items in the list of values within the curriculum are not defined, described or elaborated. The list is arguably vague and is sufficiently broad to allow for the values to be acceptable to all school communities while still guiding students towards relational and citizenship goals and the development of personal dispositions (Benade, 2012). It is, however, unclear precisely what is to be valued or the approach that schools should take in the teaching of values (Benade, 2012; MOE, 2002).

School Boards are tasked with ensuring that their local school curriculum statements incorporate all outcomes from the New Zealand Curriculum (2007). This includes objectives to support and develop the vision, principles, values, future focus, key competencies and 21st-century pedagogy (Benade, 2012; Fastier, 2016; Hipkins & Boyd, 2011). Content standards alone therefore do not support the holistic education vision of The New Zealand Curriculum. Deliberate and considered attention to and expansion of both the moral and the academic is needed (MOE, 2007)

> As curricula are underpinned by values, it is possible for curriculum policy to promote positive attitude and values within schools. (MOE, 2002, p. 21)

Nonetheless, there is scope for variation in both the interpretation and the implementation of the curriculum at the local school level (Hipkins & Boyd, 2011). The New Zealand Curriculum states that schools "need to consider how they can make the values an integral part of their curriculum and how they will monitor the effectiveness of the approach taken." (MOE, 2007, p. 38). The expectation, from The New Zealand Curriculum, is that expressions of values within individual schools will be guided by dialogue between schools and communities (Benade, 2012; MOE, 2007).

Schools, working with their communities, are required to define the specific ways in which these values are promoted and reflected within the school and students. The usual place these understandings are communicated is the school strategic planning documentation already referred to, and which is a key source of evidence in this research study. Schools may need to reflect on whether community goals promote and encourage personal, national and global well-being.

> The specific ways in which these values find expression in an individual school will be guided by dialogue between the school and its community. They should be evident in the school's philosophy, structures, curriculum, classrooms, and relationships. When the school community has developed strongly held and clearly articulated values, those values are likely to be expressed in everyday actions and interactions within the school (MOE, 2007, p 10).

For schools to effectively communicate values to their students, they themselves must, however, have a clear understanding of these values. If interpretation is vague or insufficient or non-existent then communication is difficult and diminished and action is likely to be unresponsive. As noted by Stengel and Tom (2006), if values are not clearly and collectively defined within an institution, it may increase the chance that common misunderstandings will be formulated.

When students understand the values and are able to articulate their meaning on a personal level, evidence suggests that values should be reflected in their behaviour and used in conversations (Hawkes, 2010).

Although an important factor within values education is the teaching staff (Dasoo, 2010; Hawkes, 2010), there were low levels of evidence of 'values' in New Zealand teacher practice identified after the initial implementation of the revised New Zealand Curriculum in 2007 and insignificant movement following further implementation (Sinnema, 2011). The limitations of Sinnema's evaluation is that it only covers the two years directly following the implementation of the New Zealand Curriculum. There appears to be no contemporary or longitudinal research which would provide more current analysis of the impact of values education in New Zealand schools (de Nobile & Hogan, 2014).

One of the values in The New Zealand Curriculum (2007), that is the focus of this study, is curiosity. As noted, education policies are increasingly tending to implementing curricula for the 21st-century that are designed to promote curiosity (Post & Walma van der Molen, 2017). Although there is some consensus in examples of published literature on the benefits of curiosity on student achievement, and of curiosity as a predictor of academic achievement (Dewey, 1910; Guthrie, 2009; Kashdan et al., 2018b; Loewenstein, 1994; von Stumm et al., 2011), many teachers devote little time to promoting and encouraging it (MOE, 2002).

The characteristics of curiosity

There is no clear definition of the notion of curiosity, or its relationship to similar concepts such as interest, attention or intrinsic motivation (Dewey, 1910; Guthrie, 2009; Loewenstein, 1994). There is debate, for example, about whether curiosity

is a value, a disposition, a skill or a virtue, and what its role is in education (Dewey, 1910; Guthrie, 2009; Loewenstein, 1994; Post & Walma van der Molen, 2019). Children are said, by some, to be born with an innate curiosity (Berlyne, 1954; Dewey, 1910, Kashdan, 2015; Loewenstein, 1994; Robinson, 2006), though some argue that this can disappear when students are exposed to formal educational systems (Kashdan, 2015; Robinson, 2006). Children's innate state of curiosity is organic and is evidenced by their wonder and exploration of the world around them with little restraint (Dewey, 1910, Kashdan, 2015; Loewenstein, 1994; Robinson, 2006).

Baumgarten (2001) has argued that curiosity may be thought of as a virtue. The Ancient Greek philosopher, Aristotle, regarded ‘virtue’, as a sign of human excellence. He did not believe virtues were innate, but could be acquired by habitual learning (Aristotle, 2014). This habitual learning enables a person to act freely and knowingly in a certain (virtuous) way. Repeated learning creates cognitive knowledge (about the content of the behaviour and about when to demonstrate this behaviour), and leads the person to act freely and knowingly (Aristotle, 2014), or dispositionally. This thinking is echoed by Baumgarten (2001), who believes curiosity involves choice and judgement. Beyond intellectual or epistemic curiosity, he argues that curiosity is closely linked to care and concern, playing an important role in developing and maintaining relationships with others and social expectations of engagement.

Others argue that people learn from the epistemic endowment of society, initially their parents, and then teachers (Leslie, 2015). Therefore, on this view, by extension, curiosity can be said to be learned or nurtured. Through interaction and experience, a child’s curiosity becomes social; gaining experience and insight with the influence of others, beyond what they themselves have

experienced, through questioning. Whether it is innate or nurtured, curriculum can be designed to encourage curiosity through deliberate choices around structure, organisation and approaches (Chaulkian, 2015). In what follows, the characteristics of curiosity as it appears in examples of published research will be considered.

Curiosity is claimed to be pivotal to human motivation, emotion, engagement and cognition (Dewey, 1910, Kashdan et al, 2018b). Curiosity has a motivational force; that most people will take action to try and fill a void in their knowledge or experience; and that curiosity can be stimulated internally or externally (Loewenstein, 1994). It may be described as an intense desire to know and understand, and promotes significant learning and thinking by eliciting proactive and purposeful behaviours in tasks and situations that are novel, complex, and ambiguous (Chaulkian, 2015).

Concurring with the view that curiosity is a learned behaviour, it is viewed by some as a 'mechanism of action' rather than a state of mind, seeing curiosity as a disposition which attracts people to view novel and challenging situations as growth opportunities to action, positively embracing the challenge (Kashdan et al., 2004). People who are curious tend to pursue new knowledge and experiences, are more comfortable with uncertainty and display a greater willingness to embrace new ideas (Kashdan et al, 2004; Kashdan et al., 2011).

A related explanation is derived from Lowenstein's Information Gap Theory (1994), which embraces a cognitive constructivist pedagogical approach. This theory suggests that information gaps be used to provoke curiosity and improve learning, by presenting students with knowledge that contains increasingly elaborate information gaps. According to the theory, students can feel the need

to fill these gaps as a result. Presenting such information gaps is believed to generate interest and motivate the desire to learn (Lowenstein, 1994). Beyond satisfying an individual's thirst for answers, closing an individual's knowledge gap can also reduce an individual's level of uncertainty based on a feeling of deprivation (Lowenstein, 1994). When faced with the disruption of novelty, complexity or ambiguity, students may feel that they are deprived of knowledge, resulting in anxiety or uncertainty, which is indicative of a 'knowledge gap' (Lowenstein, 1994). When students feel they are close to resolving this knowledge gap, curiosity increases and anxiety decreases. Curiosity can therefore act to reduce or eliminate this ignorance or uncertainty, therefore, restoring cognitive or perceptual coherence and reducing negative emotions and tension based on uncertainty (Litman, 2005; Litman & Silvia, 2006).

It is also believed that people high in curiosity are inclined to seek out innovation and fresh ideas because exposure to new information provides them feelings of interest and excitement (Litman, 2005). This is likened to the satisfaction of an appetite for new knowledge based on a feeling of interest. People look for opportunities to have their curiosity aroused, attaining pleasure from gaining new knowledge and deriving enjoyment from discovering something new (Engel, 2015; Kashdan, 2009; Litman, 2008; Próchniak, 2017). It can be argued that both the satiation and the activation of curiosity could be rewarding for students. As curiosity can be seen as an appetite that needs to be satisfied, students will need to find a new subject for their curiosity as the desire for new knowledge is the driver rather than the acquisition of said knowledge (Litman, 2005). As this is related to a feeling of pleasure, this information is often seen as more entertaining and less essential rather than a need to know. This knowledge can, however,

lead to the development of expertise if the topic becomes an area of personal interest (Litman, 2005).

An alternate view is that curious people display a strong interest in understanding and explaining the world and question the ideas held by others (Baumgarten, 2001; Engel, 2015; Kashdan, 2009; Litman, 2008; Próchniak, 2017). This presents as a drive in people to know that which exists beyond what can be gained from attentiveness and interest in the world around them. Berlyne's work around the link between a child's intrinsic interest and learning is premised on the idea that curiosity is a drive; an appetite that needs satisfying. He proposes that this drive is ignited as a result of the occurrence of novelty, complexity, conflict and/or surprise. The key similarity among these four concepts is that they gain attention, a central mechanism in the process of learning. When this interest has a sustained life, this is curiosity. They ask questions directly, internally and in the spirit of observation. This desire distinguishes curiosity from 'taking an interest', leaving an unsatiated gap.

Thus, curiosity is also considered important in the development of intelligence (Prochniak, 2017; Renninger et al., 1992). In addition to the motivation to learn, curious people are thought to learn better than people who are not curious, displaying a tendency to have an appetite for knowledge attainment; they have a need to satisfy the unknown, or to fill in the 'information gap' (Lowenstein, 1994; Prochniak, 2017). Curiosity tends to support people to "carefully analyse information, retain that information for long periods of time, and show great persistence in their assimilation" (Prochniak, 2017, p. 1246). People have a natural need to be stimulated and seek out the novel, the complex or the ambiguous, involving feelings of interest rather than uncertainty, inducing a sense of reward and satisfaction (Lowenstein, 1994). Surprising gaps in knowledge or

unexpected events trigger curiosity and ignite the desire to fill the gaps or explain the event. Expertise is built on acquiring knowledge and the curiosity that results from the finding of inconsistencies and further gaps, forming a loop of learning (Engel, 2015). Curiosity becomes intellectual when the sense of wonder is applied to problems that cannot be instantly or easily solved (Dewey, 1910; Leslie, 2015).

Everyone experiences times when they are curious, however, the difference is the intensity, frequency, duration and scope of these experiences (Kashdan et al., 2011;). Experiences, approaches and factors which captivate one person's curiosity may, however, not captivate another person's (Sparkes, 2018).

Kashdan et al. (2018a) identifies five dimensions which describe the conditions and experiences which could promote and motivate curiosity:

- Joyous Exploration (open to new experiences and pursue opportunities to grow);
- Deprivation Sensitivity (engaging intellectually to think about complex and often abstract ideas);
- Social Curiosity (observing situations involving others);
- Thrill Seeking (looking for variety and complexity in experiences); and
- Stress Tolerance (accepting of the unknown or the obscure).

Returning to the opening comments relating curiosity to the character of dispositional virtue, Baumgarten (2001) allied curiosity to care and concern, suggesting it plays an important role in developing and maintaining relationships with others. This connects with the dimension of 'social curiosity', a theme that is particularly relevant to education.

Social curiosity

Curiosity can have a positive impact on the establishment and development of relationships and inversely, a lack of curiosity can have a negative impact on relationship development (Kashdan et al., 2011; Kashdan et al., 2004). Curiosity is vital to the virtue of care and concern for others as there is a social expectation that in relationships people will show mutual curiosity about each other's lives. This expectation enables people to go beyond being attentive or engaged in what can be observed or in what is presented to them to being active seekers of knowledge (Baumgarten, 2001; Kashdan et al., 2011).

Baumgarten (2001) states that "to care deeply about another requires a degree of knowledge, and both to care and to know demand the ability and desire to get outside oneself and engage with the world" (p.4). Much of what people need to know to understand another person or the world around them cannot be obtained by direct observation. A deeper level of care or concern requires a level of 'active seeking'. Baumgarten, (2001) gives an example of an ecosystem and different culture, describing how curiosity can shift interest to a deeper level of concern:

> A person who acts on a desire to *know* about an ecosystem or culture will come to a greater *understanding* of its distinctive features, which makes it more likely the person's coming to an *appreciation* of it and a *concern* about its preservation." (p. 6. emphasis in the original)

It could be argued that, as citizens, people have a duty to be curious or become curious when faced with situations in society; local and global, which are incongruous to the concept of living a good life or what is deemed to be appropriate responses to situations. There is a level of difficulty in being concerned about situations shrouded in the unknown, and there also exists the possibility of many things in the world that could be situations deserving of concern that, without curiosity, people would never have knowledge of.

Social curiosity can be viewed as an appetite to understand “the inner workings of the social world” (Engel, 2015, p. 147) and an interest in gaining new social information which motivates exploratory behaviours (Hartung & Renner, 2013). Social questioning and sharing of information are indicators of a curiosity focussed on what people think, feel and do, and are useful methods of collecting information. As people grow, so does their theory of mind; their awareness of others existence and differing experiences and views creating a more multi-layered understanding of the social world.

By exploring both what people do and discussing why they might act in these ways curiosity can reduce group conflict. Gino (2018) discusses how curiosity can encourage members of a group, whether in society or business, to display and act with increased empathy. By moving the focus from solely on their own perspective and taking an interest in one another’s ideas, collaborative work is more effective and conflicts are reduced.

Social curiosity can be described as twofold; “a general interest in the acquisition of new information about how other people behave, act and feel (motive) and an interest in interpersonal information that is obtained through exploratory behaviours (behaviour)” (Hartung & Renner, 2013, p.1). People learn about others through the sharing of experiences. Not all experiences can be shared first-hand, however: “Social curiosity represents a motive or desire, and gossip, a strategy to satisfy the desire of social curiosity” (Hartung & Renner, 2013). Gossip, a guilty pleasure, undertaken by many and admitted to by few, can be viewed as an essential function of communal life (Engel, 2015). While not advocating idle or hurtful gossip, there is potential value in interest in learning about others, social questioning, and the sharing of second-hand knowledge gained. Hartung and Renner (2013) believe that:

> in order to function efficiently in a changing and complex social environment, humans require information about those around them. Therefore, both social curiosity and the tendency to gossip are at the heart of social and cultural life (p.1).

Curiosity and gossip can thus be seen to mutually facilitate and encourage learning and understanding of social information (Engel, 2015; Hartung & Renner, 2013).

Gossip has the potential to exert both positive and negative influence on someone else through the disclosure and regulation of social norms. When sharing the actions and ideas of others, this retelling identifies and reinforces what is and what is not acceptable. People, in particular children, learn the socially accepted behaviours and ideas as well as learning what behaviours violate the social norms set in their community. When a person's actions or ideas are rebuked or retold in a negative tone to others, people learn that these behaviours or ideas are unacceptable in the community. The opposite holds true with positively recalled actions or ideas (Hartung & Renner, 2013).

Curiosity and education

Having considered the characteristics of curiosity, and considering some of its social features, the review now focuses specifically on the relationship between curiosity and education. The encouragement of curiosity has been related to the role played by education in preparing students for the workforce for the future. "In education and creative industries, ordinary workplaces and everyday life, curiosity is widely regarded as a good thing, worthy of encouragement and support" (Phillips, 2014 p. 493). In this regard, curiosity can therefore be seen as an important trait for active members in enterprise and the economy.

> As the workplace continues to evolve and as jobs become increasingly dynamic, complex, and nonlinear, having employees who are actively engaged with and are continuously exploring and adapting to their surroundings will become increasingly critical for individual and organizational success (Hardy III et al., 2011, p. 234)

Curiosity is linked to ingenuity and the creation of new ideas; and many discoveries and innovative ideas and inventions are attributed to curiosity (Baumgarten, 2001; Engel, 2015; Kashdan, 2009; Litman, 2008; Próchniak, 2017). Many of the same positive functions that curiosity plays at an individual and society level, are also relevant at an economic level. Curiosity leads to the generation of alternative and innovative solutions. By encouraging curiosity, employees may develop more trusting relationships with business leaders due to the increased level of autonomy given to the individual in the creative design process and in decision making (Gino, 2018).

The potentially positive implications of curiosity for academic achievement (Dewey, 1910; Kashdan et al, 2011; von Stumm et al., 2011) may be associated with many of the attributes of a 21st-century learner (Chaulkian, 2015). In this context, there are arguments that the promotion and stimulation of curiosity is key to learning more generally (Schmitt & Lahroodi, 2008); curiosity is instrumental to learning as it facilitates education and inquiry. Dewey (1910) identified curiosity as a significant factor in education; constantly searching for new ideas and providing an eagerness for experience and wonder. When people regularly act with curiosity, the act of curiosity contributes to their achievement; their exploration and discovery of the novel and the challenge of growth and achievement (Kashdan et al., 2011; Loewenstein, 1994). They are also able to self-generate enjoyment and interest in experiences and situations that are initially unstimulating (Kashdan et al., 2011). Students who are intellectually

stimulated are likely to be more satisfied and enjoy learning (Kashdan et al, 2011; Loewenstein, 1994; von Stumm et al., 2011)

Research that investigates the implications of curiosity on contemporary learners includes a large-scale study in the United States (Sparkes, 2018) that has identified impacts on achievement, related to a child's curiosity. Longitudinal paediatric research into academic achievement in young children (Shah et al., 2018) has identified the potential for curiosity to overcome the generalised deficits that exist due to low socioeconomic status, and to close the gap in achievement that exists due to socioeconomic status. Children from lower socioeconomic home situations who displayed high levels of curiosity achieved similar to peers from high-income families in the early years of school (Shah et al., 2018). While this research direction is new, further studies on what factors of early home life and schooling are present which lead children to become more curious are planned (Sparkes, 2018). This research will also search for links between curiosity and other social and emotional characteristics which are believed to improve academic achievement. (Sparkes, 2018).

To develop curiosity in students within an educational context, practices must be established deeply and firmly in educational principles (Morgan, 2018). As policy is intended to inform practice, these practices must be policy driven, establishing a link between the rhetoric and reality (Morgan, 2018), or between what is claimed and what is carried out. Schools should, for the academic benefit of their students, take opportunities to facilitate, encourage and promote curiosity in their students, but to do so, schools need to understand how curiosity operates. (Dewey, 1910; Guthrie, 2009; Kashdan et al., 2018b; Loewenstein, 1994; von Stumm et al., 2011). For example, due to the multi-dimensional nature of curiosity, teachers must be cognisant of the different motivations for students if they are to promote

and encourage curiosity (Sparkes, 2018). While schools may agree on the importance of teaching curiosity, as noted earlier, many teachers devote little time to promoting and encouraging it (MOE, 2002; Sinnema, 2011). It seems that everyday practices, both planned and implicit, lead children to develop misconceptions about the value of curiosity to their own education and within the education system, which may lead them to shift from their organic innate state of natural questioning and exploring (Kashdan, 2015; Ostroff, 2016; Post & Walma van der Molen, 2019).

Yet, by including curiosity in the curriculum, teachers have the freedom to provide opportunities for their students to follow their own interests and indulge tangential direction in their learning, straying in their explorations and learning.

> For children to feel curiosity they have to have access to topics and objects in which they have some interest, or in which they might develop some interest, and no one set of objects or topics will be equally interesting to all children (Engel, 2015, p. 114).

Teachers need to notice what interests their particular students, not assuming that the same topic will interest all students. An obvious starting-point for the promotion of curiosity is the strategic documentation of schools, which was a key data source in this research study. How that study was conducted, and the reasons for undertaking it in this way, are the subject of the following chapter.

Chapter 3

Methodology

Introduction

There is no theory of what curiosity within a school context should look like. The aim of this research is to describe the notion of curiosity as it is evidenced in and promoted through schools' strategic documentation. Drawing on a humanistic philosophy, it is focussed on understanding how curiosity is viewed and promoted rather than providing a quantitative measuring of the frequency and value of inclusion.

As there exists no singular meaning for curiosity it's characteristics may be contested. While it is referred to in The New Zealand Curriculum (MOE, 2007) as a value, there is debate about whether curiosity is a value, a disposition, a skill or a virtue as well as its place in education; whether it is predominantly linked to academic inquiry and questioning or whether it is better placed alongside the virtue of care and concern (Baumgarten, 2001; Dewey, 1910; Guthrie, 2009; Loewenstein, 1994; Post & Walma van der Molen, 2019). This chapter describes the actions taken to investigate the research question: how **is curiosity defined and described within the school context, and in what ways is curiosity evident in, and encouraged through, school strategic direction and policy statements?** In this chapter is an outline of the choice of research techniques used to source, identify, and analyse information, and a rationale for these decisions.

Research Paradigm

Values are moral and ethical statements. There is limited elaboration of the values in The New Zealand Curriculum and therefore it is teachers and school leadership who interpret these values within their context. This research is located in a qualitative paradigm which allows researchers “to determine how meanings are formed through and in culture, and to discover rather than test variables” (Corbin & Strauss, 2008, p. 12). Developing out of a fundamental shift of interest and focus from deductive scientific research to inductive people-focused research in the late twentieth century, a qualitative paradigm is more concerned with examining particular instances and experiences rather than trying to explore or explain general truths (Newby, 2010).

Qualitative approaches do not usually have theory as the starting point for the research. Although these approaches can exist within a theoretical framework, the starting point is usually the lived experiences, or the phenomena being researched. Qualitative researchers will often hold a relativist ontological position, believing that reality comes from the meaning that people attach to the truth. They maintain that the truth is formulated within and by the context of people’s experience. Relativists surmise that it is possible for varied and multiple views of truth and reality to exist at the same time, and that these can all be valid. As no one perspective is better than another, relativists work to interpret data with the aim to reveal these truths, presented as different points of view based on the experiences of their participants rather than prove or disprove a theory (Newby, 2010, Yates, 2004).

Miles et al. (2014) described the strength of qualitative research:

> the emphasis is on a specific case, a focused and bounded phenomenon embedded in its context. The influences of the local context are not stripped away but are taken into account. The possibility for understanding latent, underlying, or non-obvious issues is strong. (p.11)

Research Philosophy

Newby (2010) identifies a humanistic researcher as one who "would not see their main purpose as measuring [various experiences] but capturing the experiences that help us understand what we might do to change, manage or reproduce those experiences" (p. 36).

Phenomenology fits within a qualitative research paradigm. The concept of phenomenology, albeit not the name, is not a new concept. It existed in practice long before Husserl presented it as a philosophical theory in the early 20th-century with the publication of his *Logical Investigations* (1900-1901). In comparison to the famous 'Cartesian dualism' – the separation of mind and body, where people are believed to move through the world, their thoughts independent to their context – Husserl's philosophy posed a reality where our experiences always have meaning and are based on a connectedness between the world we live in and the experiences we encounter. This provides the famous phenomenological notion of 'embodied experience'. Phenomenology is the combination of the subjective (the experience in the mind) and the objective (the experience outside of human existence) and aims to create meaning from the connection between them (Matua & Van der Wahl, 2015; Vagle, 2014).

Heidegger created a philosophical fissure around phenomenology when he posited a move away from the descriptive phenomenology of Husserl to an interpretive phenomenology; considering phenomena as not existing in the mind

and the world, ready to examine the connection, but instead, phenomena are 'brought into being' by living in the world. Understanding and interpretation of experiences and connected decision making is formed by the perspectives gained through the context of time and space and relationships (Matua & Van der Wahl, 2015; Vagle, 2014).

This research study was based on a phenomenological approach, gathering together specific information about curiosity from strategic documentation and through interviews with school leaders; and by interrogating the values and assumptions that are prioritised. The starting-point in my data-gathering was content analysis of public school information on websites. Hesse-Biber & Leavy (2011) discussed how content analysis could be used, allowing many forms of texts to be used as "the starting point for understanding social processes and generating theories about social life" (p. 227). The collection and analysis of strategic documentation in this study provided opportunities to "learn about our society by investigating the materials produced within it" (p. 227).

What is embedded in cultural texts as well as what is omitted, marginalised or left out becomes a representation of the views of the group, whether shared or contested. (Hall, 2006; Hesse-Biber & Leavy, 2011). By examining strategic documentation to see what schools had included and in contrast, excluded, I gained insight into the dominant views of the authors. Strategic documentation is written to express the reality of what is happening in schools. This is twofold; it expresses both the current reality and also the reality the school aspires to. As strategic documentation sets goals and future direction, it is thus integral to shaping a new reality as well as reinforcing the work already occurring (Hall, 2006).

The aim of the content analysis was to examine findings and to discover patterns and common findings. Although some general conclusions can be drawn from the findings, these are specific to the school contexts studied and are interpretive rather than descriptive and therefore cannot be generalised. This research therefore combined an interpretive phenomenological approach with critical content analysis. Research into the notion of curiosity may not fit tidily into a critical theory approach as arguably it is not based on a strong political belief and the aim is not to instigate change or challenge inequity (Newby, 2010). As no policy is formulated in a vacuum, however, it could be argued that the development of the set of values within the New Zealand Curriculum is based on social, political and economic aspirations (Baumgarten, 2001; Benade, 2012; Morgan, 2018) and therefore warrants critique. Knowledge is formed from socially constructed understandings and political power within society and is shaped by ongoing critical questioning and influenced by a range of discourses and evaluation. The state provides a framework of important values in nationally prescribed curricula that it requires schools to implement. The resulting societal structures, while promoting values, constrain the way people behave individually and as a society (Newby, 2010).

Case Study Approach and Methods

> Case study is an in-depth exploration from multiple perspectives of the complexity and uniqueness of a particular project, policy, institution, programme or system in a 'real life' context. It is research-based, inclusive of different methods and is evidence-led. The primary purpose is to generate in-depth understanding of a specific topic (as in a thesis), programme, policy, institution or system to generate knowledge and/or inform policy development, professional practice and civil or community action. (Simons, 2009, p. 21)

One of the problems in defining case study is that there is no consensus of definition and is often considered an approach rather than a method (Chadderton

& Torrance, 2011; Yin, 2018). The benefit of the use of case study in research is that it enables researchers to explore a phenomenon by examining and analysing contextual examples and experiences of the phenomena in data sourced using multiple methods (Chadderton & Torrance, 2011). “Case study research is both the process by which research proceeds and the outcome of the research. Case study relies on triangulated methods employed for their fit to the problem or issue at hand.” (Hesse-Biber & Leavy, 2011, p. 275).

Yazan (2015) cites Merriam (1998), Stake (1992), and Yin (2002), as three formative methodologists in the area of case study, each providing differing perspectives on the design and implementation of the approach. Stake’s perspective defines case study as the study of a single object within defined contextual boundaries, with the view of understanding its activity and behaviour in a certain set of circumstances. Merriam takes a broader approach than Stake in defining the case, but places more emphasis on the boundaries which define the case; defining case study as the intensive description and analysis of a bounded phenomenon. The boundaries, rather than the context, are integral in defining the case. In contradiction, Yin’s perspective defines case study as an empirical inquiry of a phenomenon; which could be singular or plural and is treated more like a process, where the *how* and *why* questions are addressed (Yazen, 2015).

This research drew on Yin’s point of view: case study research takes an empirical approach to research, often used in social science disciplines as well as the practicing professions, including education, because it places the emphasis on the social construction of meaning within a context and the nature of the case as it is realised in social action (Yin, 2018). It is an approach used to explain and answer questions of ‘how’ and ‘why’ holistically, placing the initial focus of

research on description, seeking to identify and describe a social phenomenon (the case) in contemporary, real world contexts before trying to analyse and theorise, creating an explanation. It is a method that assumes the involvement of social, political and other contextual conditions can themselves impact the understanding of the case. (Chadderton & Torrance, 2011; Hesse-Biber & Leavy, 2011; Kumar, 2011; Yazen, 2015; Yin, 2018).

Defining and Bounding the Case

When undertaking qualitative phenomenological research, a researcher must first consider and define their 'case'; the phenomena that is the focus of analysis. While in case study research the focus is usually an individual, a small group, an organisation or an event, in this research it is the phenomenon of curiosity itself which is the case (Miles et al., 2014; Yin, 2018). Whilst I identified curiosity as the case, robust research practice indicates that "the desired case should be a real-world phenomenon that has some concrete manifestation" (Yin, 2018, p. 66). Yin (2018) goes on to discuss however, that a case can consist of a non-living entity; a concept could readily become the topic of the study if the research was accompanied by selecting a specific context ('case') to be studied and formulating the research questions and propositions about the context in relation to the concept, in this instance, curiosity. Therefore, the 'concrete manifestation' (Vagle, 2014) for this research can be considered to be *how* the notion of curiosity was manifested in documentation and experience in New Zealand schools.

Once the case is defined, spatial and temporal boundaries must be explicitly clarified (Yin, 2018). Stake and Merriam emphasise the importance of bounding the case with a level of definition that Yin believes is impossible, believing instead that boundaries between the phenomena under investigation and the context,

while they exist, are not able to always be clearly defined (Yazen, 2015). Once I defined the notion of curiosity as the case, it was important that I first develop an understanding of its position within its boundaries. By selecting a sample of New Zealand schools, I could define the boundaries within the case's real-life context, conforming to Yin's definition (Yazen, 2015; Yin, 2018).

Data Collection and Analysis

A case study approach relies on multiple sources of evidence, so that data can be triangulated (Hesse-Biber & Leavy 2011; Kumar, 2011). In this research study, I sourced data by reviewing current literature and undertaking content analysis of a range of schools' public, website documentation, national political policy as well as by interviewing individual principal participants. This allowed data to converge to provide a more comprehensive picture, between the micro and the macro, as well as enabling me to analyse data that could be used in the formulation of more generalised ideas. Some of the limitations of each data collection method was curtailed by comparing findings from different perspectives (Yin, 2018).

Content and Thematic Analysis of Documentary Data

> Document analysis is a systematic procedure for reviewing or evaluating documents—both printed and electronic (computer-based and Internet-transmitted) material. Like other analytical methods in qualitative research, document analysis requires that data be examined and interpreted in order to elicit meaning, gain understanding, and develop empirical knowledge (Bowen, 2009, p. 27)

Content analysis requires sourcing, assessing, evaluating and synthesising data contained in documents; initially on an individual basis and then cross analysed using themes. It is often used alongside other research methods to allow for the triangulation of data; providing a confluence of evidence and corroboration of explanation to increase confidence and credibility in the results. Content analysis is relevant and suited to qualitative case studies where research is attempting to

describe and explain phenomena. Documents of any type can provide insight and develop meaning and the analysis of non-technical literature. Websites and reports produced within the context being investigated are a potential source of empirical data for case studies, providing meaningful contextualisation for the case being studied (Bowen, 2009; Yin, 2018). An important source of documentary data is policy: “Policies impinge on practice – teachers do not just ‘choose’ what to teach and how to teach it – they teach within a context determined by curriculum and assessment policies and procedures” (Chadderton & Torrance, 2011, p. 54).

The Ministry of Education (2007) defines the role and purpose of the national curriculum document by stating:

> The New Zealand Curriculum is a statement of official policy relating to teaching and learning in English-medium New Zealand schools. Its principal function is to set the direction for student learning and to provide guidance for schools as they design and review their curriculum (p. 6).

School policy represents individual schools' attempts to implement national political policy. To develop an understanding of the ‘value of curiosity’ as it applies to education at a local strategic level and within the curriculum, in this research study, I critically assessed the notion of curiosity within the content of policy documentation at a national level including the New Zealand Curriculum and governmental and ministerial policies and documentation, and examined the initial context of values in the curriculum and the rationale and aspirations behind their inclusion. I sourced data using the parameters “Ministry of Education curiosity New Zealand” and “Ministry of Education curious New Zealand”. This data included, in addition to the National Curriculum and supporting documentation from the New Zealand Curriculum online, various reports from the

Ministry of Education and the Education Review Office (ERO). Supplementary texts were accessed using links and references located in the original documents.

A considerable amount of documentary data is in the public domain; publicly available on the Internet, including from school websites; ranging from semi-formal personal accounts, such as messages and descriptions on school websites, school newsletters and graduate profiles, to more formal reports including school strategic plans, annual plans, and ERO reports. To complete a content analysis of schools' strategic documentation, policies, and procedures, I sourced publicly available school strategic documentation using Internet searches with terms such as 'New Zealand school strategic plan curiosity' and 'curiosity curious school New Zealand'. An initial ten schools from across New Zealand were selected. These schools were a combination of primary and secondary, urban and rural, and large and small schools.

Analysis and interpretation of case study research takes place in an iterative way (Hesse-Biber & Leavy, 2011). Qualitative research requires the defining of an initial selection, however, as this research proceeded, further reviewing and refocusing on the study parameters was needed as there was insufficient information available from the initial selection. Case study research relies on a large amount of data. As documentary data was collected, coded, reviewed and summarised (Appendix C), I realised that more data was required, and so sourced an additional ten schools by repeating the initial search parameters.

Analysing the Data for Findings

The human mind finds patterns that it constructs from observations of recurring phenomena. Researchers must be able to determine whether to add evidence to existing patterns, create new patterns or note disconfirming evidence when it

appears (Miles et al., 2014). By working through texts from individual schools I expected that recurring patterns would become evident, pulled together from various pieces of data. Each school, while considered as a separate subject for phenomenological analysis, formed part of a singular entity made up of the total study population. Phenomenological studies are not so much concerned with how individuals construct things but are more interested in the data themes that enable the extraction of participant meaning (Kumar, 2011; Miles et al., 2014). As such, the participating schools are a source of data, providing access to manifestations of curiosity. While the context is important, it is the notion of curiosity that is the 'unit of analysis' rather than the individual schools (Kumar, 2011; Vagle, 2014).

Researchers employing a purely inductive approach believe that early engagement in research literature can narrow the analytic focus. By narrowing the focus too early in the research process there is the risk of missing potentially crucial data. In contrast, by engaging with literature through a more theoretical lens, subtle features of the data which will aid in the formulation of indicators and the location of components in the themed analysis may come to light in the analysis process (Braun & Clarke, 2006). Miles et al. (2014) present the argument for presupposed indicators and components against a more open, inductively grounded approach. It is suggested that, for beginning researchers, tighter design structures can provide clarity and create a more manageable research project.

Content and Thematic Analysis of Documentary Data

Through the content analysis process, I identified the main themes (Kumar, 2011). Using thematic analysis, I located expressions of the notion of curiosity

within school documentation as evidence of the inclusion, promotion or development of curiosity.

These initial indicators were selected based on key themes from literature. The use of themes located in literature later allowed me to compare the findings with previous research (Yin, 2018). While these themes were useful as a guide for defining the case, I added indicators and components during the ongoing content analysis process as each school was analysed. I condensed and summarised data from individual entities and developed a checklist matrix to display and analyse data of evidence of curiosity. The benefit of this matrix when exploring a new area is that initial indicators or components could be identified and more could be added to the matrix as I examined the data further (Bowen, 2009; Miles et al., 2014). Using the themes defined and refined through the themed analysis and the completion of the checklist matrix, I completed a content analytic summary table (Appendix C), gradually moving from content analysis of individual entities i.e. individual documents and schools, to combined analysis; a method that involved evaluation of connections and variations across specific contexts. This interpretive synthesis created clusters or groups of similar patterns and focussed on the content of the observations (Denzin, 2001; Miles et al., 2014).

Although not typical to qualitative research, with sufficient common themes and patterns, there may be similarities which can be generalised for similar contexts. This analysis can also aid in deepening understanding and explanation as similarities and differences become clear. These similarities and differences can be used to formulate or strengthen a developing theory. Care must be taken to ensure that, in the process of thematic analysis data is, however, not forced into components to show superficial comparisons without consideration of the original context. Interpretive synthesis formulated after data is analysed will be less likely

to be based on the assumptions of the researcher and more likely to be based on similarities in the data analysis (Miles et al., 2014).

As the nature of qualitative research dictates, conclusions and theories were formulated after data collection and analysis. Following on from the formation of the content analytic conclusions, I evaluated the indicators and components against literature to blend the understanding of the notion of curiosity within school strategic documentation with educational research theory. Pre-understandings of curiosity I had gained from published research were integrated with documentary data and data gathered from the interviews to achieve a deeper understanding (Braun & Clarke, 2006; Matua & Van der Wal, 2015). Whilst fledgling conclusions began to emerge from the beginning of data collection, final conclusions were not drawn until the data collection and analysis was complete. Interpretive researchers draw their conclusions representing the participant's understandings, having been verified by cross checking against the collected data and educational theory to ensure validity (Miles et al., 2014; Scotland, 2012).

Although I have presented the components of data analysis in a linear form, this process was a continuous cycle, iterative in nature. Critical methodology involves a recursive relationship between existing research theory, data gathered from content analysis and interpretations made using thematic analysis. I had to move continually between the original data, the themed analysis matrices and written analysis; checking, cross checking as indicators and components were added and reviewed (Braun & Clarke, 2006; Miles et al., 2014; Scotland, 2012).

My content analysis of documentary data provided me with multiple perspectives of the phenomena of curiosity in the context of New Zealand schools; however, it did not provide sufficient data required to generate a sufficiently in-depth

understanding. This motivated the extension of data collection to include participant interviews with school principals to provide both evidence and illustration. Interviews are deemed to be a useful method of data collection when the aim is to focus on and gain information about a particular topic of interest from individuals (Hesse-Biber & Leavy, 2011). They offer participants the opportunity to offer an insight and explanation of why things have come to be what they are as well as a description of the current situation and allow the researcher the opportunity to perceive and further explore causal inferences and explanations made by participants (Chadderton & Torrance, 2011).

Content and Thematic Analysis of Interview Data

Interpreting and applying the requirements of The New Zealand Curriculum to the local context often depends on complex decision making made by individuals; Boards of Trustees as policy makers, school leadership teams and teachers, and the school community as stakeholders. As part of the current education system in New Zealand, school principals hold a key decision-making position at all levels. “Achieving the desired impact of the revised New Zealand curriculum will depend on the leadership and initiative of principals” (MOE, 2008, p. 16). An understanding of how and why decisions are made is necessary for effective management of strategic goals and achievement. Interviews can be employed to understand the factors which influence decision-maker behaviour (Miles et al., 2014; Young et al., 2018).

In this research study, I undertook a small selection of individual interviews to explore the views and meaning held by principals, as policy decision makers. Interviews provide flexibility for the participant to explain their thinking and for the researcher to explore to understand the participants processes,

experience and beliefs. Interviews are an active and interactive research process. The interview transforms questions and answers into a jointly formed narrative, produced through collaboration between the interviewer and interviewee and contextually bound by both the interviewer and the interviewees experience (Kumar, 2011; Young et al., 2018). This makes them particularly suitable in qualitative research.

The purpose of the interviews was to further examine the notion of curiosity and the value it might hold in a school. This study utilised semi-structured interviews, giving me an opportunity to use indicative questions as a guide to explore the participants' viewpoints and experiences on the research topic, while also allowing for the use of follow up questions to clarify understanding and open up other explanations I did not foresee when writing the questions. This meant I had the potential to correct blind spots. (Miles et al., 2014). Asking a predetermined set of interview questions results in more uniform information, aided in the comparability of data as well as being more suitable for beginning researchers who may lack interviewing skills (Kumar, 2011). The flexibility afforded by the semi structured interview allowed me to develop an in-depth analysis from a small sample (Miles et al., 2014).

Sampling

While interviews are a popular method, several critiques have been raised in response to their use, including the lack of transparency in sampling strategy (Young, 2018). The three participants in the interviews for this research represent a purposive sample rather than a random sample (Hesse-Biber & Leavy, 2011; Kumar, 2011). I selected participants who had the experience and knowledge needed for this research topic. They were approached to be participants as their

schools, although not necessarily included in the documentation data set for content analysis, had strong indicators of the inclusion of curiosity in the strategic direction of their school. To ensure a diverse selection within a small sample, a range of contexts was achieved by selecting a primary school and a secondary school as well as an urban school and a rural school. By their agreement to participate they indicated a willingness to share their experience and knowledge.

Findings

I applied predefined codes to the content of each interview transcript. By having similar themes to those used in the analysis of the documentary data, data gathered by different methods could be integrated (Bowen, 2009).

Practical Limitations

A commonly viewed limitation of case study research is its seeming inability to form generalisations from the findings of case studies. The object of case study – to understand and make meaning of an idea rather than to bring about the ability to generalise it to a population at large – is both the object of case study, and a criticism of the approach. By retaining the focus on a particular case, it is argued that it is not possible to generalise the findings to the population under study as a whole. Many case study researchers argue that, whilst the findings may not be generalisable, they retain relevance as areas of interest (Chadderton & Torrance, 2011).

It can be considered that the role of qualitative researchers, in particular the inferences that they draw from the data, can affect the validity of the research findings within the case study approach (Simons, 2009). The subjectivity of the researcher in defining the case, the context and participants is seen, however, as an inevitable part of the process (Bowen, 2009). Hesse-Biber & Leavy (2011)

believe that by the deliberate act of selecting the contexts to be studied, researchers shape the research. It is important that researchers are aware of the context from where the data was located, and in selection of contexts, carefully negotiate the relationship of parts to the whole and the whole to the larger population. Case research should contain elements typical of the wider population (Hesse-Biber & Leavy, 2011).

Documentary data, such as school policy, can be examined for immediate content and the value given to a case by its inclusion in the documentation (Chadderton & Torrance, 2011). Policy reflects what is important and what the school wants the community to believe is important. In documentation published in written reports and on school websites therefore, author bias is likely.

The published documentation used in this study was unobtrusive to the research process as it was pre-existing; it was not created as a result of the case study. It also allowed for a broader coverage over settings. Published documentation, particularly in print form can be viewed as historical as it was the reality that held at the time of publication. Websites, while these may be viewed as more current, may still be viewed as an interpretation of the time of creation (Bowen, 2009). Whilst most of the documentation was stable and could be viewed and reviewed repeatedly, over the course of the research there were changes to individual school documentation.

Ethical Issues

Ethical issues may arise when undertaking qualitative research; in preparation and design, when undertaking data collection and data analysis and at the end of the research project. Educational research invariably involves ethical issues and ethical decisions as it involves collecting information about or from

people. Researchers must conduct themselves within ethical guidelines, ensuring that the process is transparent, and the results are reliable and valid. Research methods also are subject to ethical issues around how the data is collected, managed and presented (Punch, 2009).

Research has value in the contribution it can make, directly or indirectly, to the education field, outside of an individual's practice or professional knowledge. Research aims to solve a problem, highlight an issue or create knowledge in a given field (Mutch, 2005). Study being contemplated should provide clarity of outcome, identifying the potential benefit for the field. Research lacking in depth of significance will often lack depth in findings (Miles et al., 2014). Proposal approval is a robust practice to ensure that the research has external merit.

For quality research, researchers benefit from professional knowledge and skill training in the field of educational research. In addition to a specific set of skills and knowledge of the research process, researchers need an understanding of the strengths and limitations of various methodologies and methods. Researcher incompetence can lead to insufficient data collection, weakness in analysis and superficial conclusions (Miles et al., 2014; Mutch, 2005). For novice researchers, the completion of formal study on educational research and its application in practice as well as the allocation of a supervisor is key in providing support to ensure that the study is of good quality and has a robustness of quality research practice.

Researchers and participants benefit in different ways from the research. Participants in a research project are often asked to contribute their time and energy to participate. A researcher must reflect on the cost to the participants and the benefit that they are receiving (Miles et al., 2014). Time consideration and cost is significant for school leaders, so in this study, I prioritised flexibility of

venue and time, to allow for minimal disruption to school leaders. By providing information around the purpose, scope and process of the research, the interview participants were able to consider the perceived benefit of the research and consider their willingness to participate. They were also able to give informed consent. An ethics application was lodged with the Auckland University of Technology Ethics Committee (AUTEC), which approved the application 20/34 (Appendix A) to collect data from participants. Consent was obtained from all participants, on the understanding that the participants and their schools would be deidentified, and that the data would be handled confidentially.

While the identification of individual schools was not necessary to the study, in referencing strategic documentation within the content analysis, individual schools, although anonymous, may be identifiable. In the collection and analysis of documentation from the public domain there was no need to gain any participant consent. Expectation of privacy and anonymity would be rare as the information used is publicly available and the assumption is that it has been reviewed and approved for publication by the school leadership prior to publishing on the Internet. Nonetheless, I was sensitive to my ethical responsibility to interpret, to the best of my ability, the publicly available documentation as it was intended to be read. It is, however, difficult to know the intention behind documentation. This research study is premised on my assumption that the inclusion of curiosity within school strategic documentation is a necessary condition for the support and encouragement of curiosity within school practice. While there may be practices within the school context where curiosity is being promoted and developed, this research focussed on whether these practices were grounded in policy and strategic direction.

Conclusion

This research was shaped by the following research question: **How is curiosity defined and described within the school context, and in what ways is curiosity evident in, and encouraged through, school strategic direction and policy statements?** The research methodology utilised throughout this study was grounded in a phenomenological case study approach in which the phenomenon of curiosity itself was the case, and was underpinned by a review of the published literature which can be found in Chapter Two. This content analysis allowed me to examine findings and identify patterns and common findings. In the next chapter I will share the analysis of the findings from the school's documentation and the principal interviews using the following broad themes; the role of The New Zealand Curriculum in school planning, values within the national and school curriculum, characteristics of curiosity, curiosity within the school context and, promoting and encouraging curiosity.

Chapter 4

Findings

Introduction

This research study investigated what kinds of consideration is given by a selection of schools to the implementation of curiosity at the local school strategic level. In this study, I sought evidence of how schools understand the notion of curiosity through expressions in their strategic plans, policies and procedures. In discussions with a selection of principals, I wanted to investigate the measures their schools had in place to promote and encourage the development of curiosity within those schools. In this chapter, the analysed data gathered from the public, school strategic documentation, and interviews of school principals is presented. The insights gained from this study are presented in the context of curiosity as a value in The New Zealand Curriculum (2007).

Publicly available strategic documentation included strategic and annual plans, graduate profiles, school policies and Education Review Office summary reports, which provided information on how schools viewed curiosity, including concepts and themes aligned to it (Appendix C). The document analysis is enriched by the in-depth data retrieved from the interviews, and together, these sources of data create a broad picture of how curiosity is presented and included in strategic documentation. The interview process deepened the investigation and provided deeper insight to how curiosity is encouraged within three individual school contexts. The three interview participants are experienced principals who have all participated in the reiterative process of reviewing and formulating their school's strategic plans.

Table 1: Description of Interview Participants.

Principal A

- School has been recently opened to meet the needs of a growing population
- Growing school population; currently 500-600
- Suburban co-educational high school catering for students from Years 7-10
- Stable proportional ethnic representation; predominantly Asian
- Curiosity is part of the School's strategic statement

Principal B

- Rural school catering for children of local community and urban commuters
- Growing school population; currently 100-200
- Co-educational full primary school catering for students from Years 1-8
- Stable proportional ethnic representation; predominantly European/ Pākehā
- Curiosity is part of the School's vision statement

Principal C

- Longstanding established urban school
- Stable school population; currently 2000-2500
- Single sex high school catering for students from Years 9-13
- Stable proportional ethnic representation; predominantly European/ Pākehā and Asian
- Curiosity is one of the School's values

In analysing the data, broad themes emerged which will be explored in this chapter. These themes combine the analysis of both documentary and interview data. These themes were:

- The New Zealand Curriculum in school planning: its role and how the intent and content is interpreted and implemented within the local school context,
- Values within the national and school curriculum: how values are viewed, formulated and addressed within the school curriculum and their role in the context of school life
- The characteristics of curiosity and how it is defined

- Curiosity within the school context: how it described and its role and existence in school practice; and,
- The promotion and encouragement of curiosity.

The Role of The New Zealand Curriculum in School Planning

To scrutinise the value curiosity holds within school documentation I first examined how the New Zealand Curriculum was viewed as a policy document by school leaders, paying particular attention to the beliefs surrounding, and the treatment of, the values stated within the curriculum.

The New Zealand Curriculum provides the 'Essence of Learning'

> The New Zealand Curriculum is a clear statement of what we deem important in education. It takes as its starting point a vision of our young people as lifelong learners who are confident and creative, connected, and actively involved. (MOE, 2007, p. 4)

Documentary analysis identified links within schools' strategic planning to the New Zealand Curriculum. This was evident in the use of overt statements from a number of schools stating that their curricula and strategic plans were based on the New Zealand Curriculum. Reference to individual school identity has been removed for privacy.

> Learning will be rooted in the Vision, Principles, Values, Key Competencies & Learning Areas of the New Zealand Curriculum (School 3).
>
> The (School 10) curriculum follows the NZ Curriculum document as set by the Ministry of Education.
>
> Learning in our school (School 7) is informed by the New Zealand Curriculum.

Links to the national curriculum were also evident in the inclusion of terminology and elements of the New Zealand Curriculum such as the Key Competencies and Values. Education Review Office [ERO] reports from the majority of the schools used in this study for documentary analysis identified that ERO had seen sufficient evidence to confirm that the schools' curricula not only promoted and

supported student learning very effectively, but also reflected The New Zealand Curriculum vision, values and principles.

The 'front half' of the New Zealand Curriculum, encompassing the vision, principles, values and key competencies was viewed as 'the essence of learning'; a phrase coined by the principal participants. While there are many elements within the front section of the national curriculum, the participants could not pick out any one part that they considered to be more important than the other, stating that they are all parts, or pieces, that combine together to connect the whole learning of a child. Schools, it was argued, are thus able to look at a child's education in a connected way where all elements link together and contexts are not siloed. Principal C described her impression of the intent of the front half of the New Zealand Curriculum:

> it's expressing to all schools in New Zealand, primary, intermediate, and secondary, that learning at school is not just subject based, and that within subject contexts these things apply as well. So they can be additional to and within subject contexts.

There was strong agreement that schools should, as directed by the Curriculum itself, "look for the natural connections that exist between learning and that learning areas should be linked to the values and key competencies" (MOE, 2007, p. 16). This Curriculum directive was considered by Principal A as "the real gold."

The 'front half' is also viewed by the participants as prompting educators to look at the learner holistically to ensure that schools address the needs of the whole learner, beyond the academic. Principal B described this as a reminder to educators to "help us understand the child before we get into the actual curriculum based content". Whilst the learning areas in the latter half of the document are not seen as less important, they were viewed as less relevant when

considering the needs of the learner as a whole; they were rather viewed as the contexts to be used to meet the aims of the front section; different parts to the same puzzle.

The interview participants viewed the New Zealand Curriculum as providing the core of what is deemed important in national education policy and regarded it to serve as a foundational starting point for schools to construct a specific curriculum to meet the needs of their community. Two challenges were identified by participants; firstly uniting all aspects of the New Zealand Curriculum, essentially the wants and needs of the state, and secondly uniting these with the wants and needs of all sectors of the school community, including the needs of the individual learners. Principal B discussed this tension:

> You take the document as a foundation essence, but you also take your community, your localised area and your localised curriculum and then you say okay, let's have a look at an individual learner and see how we can try and get all three to speak the same language, which gets a bit tricky at times.

These comments seem to highlight the issue all participants identified, that the Curriculum, while significantly less bulky than previous versions, was broad in scope, but lacking in detail and description. This brevity was not necessarily considered to be a short-coming; instead, the principals saw instead the opportunity to localise and tailor their curriculum to their own school contexts, their community and their learners. All interview participants concurred that the Curriculum "gives you the green light to go out and infuse it in all of the learning that you're doing" (Principal A).

The New Zealand Curriculum Translated into Local School Strategic Planning

School policy does not come solely from the Government. Whilst the New Zealand Curriculum is considered a statement of official policy, it can also be

seen as a guiding document, giving schools direction for student learning and providing a framework for developing a local curriculum for individual school contexts. Using all elements of the New Zealand Curriculum, local curriculum design identifies and responds to the students and school community to address their priorities, preferences, and issues. In this sense, an individual school's strategic plan provides the direction for student learning based on the principles and procedures that are identified as important to the school community. A school's strategic plan reflects what is important and aspirational for its students and the school community and, by omission, what is not important. The aspirations voiced by the local school community may be influenced by the wider global community. Learning in schools starts with that which is in the strategic plan; the mission, vision and values of the school, the goals, the graduate profiles and the actions to be taken. The strategic plan is the "statement of how learning happens around here" (Principal C).

The participant principals explicitly identified the importance of aligning the strategic plan to the 'front half' of the New Zealand Curriculum. "To be able to implement not just what a teacher would do in a classroom, but to implement it at a strategic level, you would need to be able to validate that from the front part of the Curriculum" (Principal A). While it is supported by the New Zealand Curriculum to provide accountability for the profession in meeting the expectations of the state, the strategic direction is more aligned to the learner than to the objectives in the Curriculum. The principals believed that if they say in the strategic plan that they value certain things as part of learning, then these things are valued whether that is learning in different subjects in the classroom or whether it is on the sports field or the stage, in groups or clubs, or out in the playground, because learning is happening in and out of the classroom. "We feel

pretty strongly that if people in schools are not looking at the front end, that's a problem" (Principal C).

When the principals were outlining their process for constructing the strategic direction for their schools, a common theme to emerge was the importance of collaboration and of ensuring the plan was relevant to the desires of the whole school community. While embracing the elements of the New Zealand Curriculum, the Principals believed that authorship belongs within the school with the school community, present and prospective, being the intended audience. The principals discussed the importance of everyone in the community knowing "how we do learning around here" (Principal C). This consultation process highlighted to the principals the values that people were bringing to the school and those things that were a priority for them.

This raised another issue with the participant principals of how to amalgamate the ideas of the curriculum and those of the community to create a document that was accessible to all of the community. Principal B suggested:

> It was a game of semantics in the end because quite often you're saying, well, that actually fits in that, so that absorbs that, and we were trying to come up with it, but we're still not happy with it because it's too big and too wordy.

It was considered important that the school community have easy access to the vision and values of the school. It was suggested that the curriculum and older strategic plans were too 'wordy', 'weighty' and 'broad', creating documentation and ideas that were not easily accessible by all of the community with one Principal (A) stating "you have to go around looking at ways of defining what it is more specifically and how it might be implemented." Principal C identified the issue of access to the values in a previous strategic plan review. Having seven really long values, she found that no one could remember them. Following the

review these values were narrowed down, both in quantity and in length, to achieve greater brevity, allowing all levels of the community to be able to enunciate and remember them.

School strategic plans are designed to represent the collective values of the institution and there needs to be a level of understanding and agreement to achieve ‘buy-in’ by the community for the plan to be effective. Through the process of agreement, an environment is created which Principal A described as opening up the ability for people to be able to implement ideas and pedagogy which support and encourage the development of the collective values and beliefs about learning: “by holding these values and acting on them, we’re able to live together and strive.” Principal A summed up his view of the role of the strategic plan as a document that, “when it’s written and it’s in place and it’s believed and it’s honoured… it’s part of what we want to do as a school.”

Values within the National and School Curriculum

Values, both those in the New Zealand Curriculum and those in school documentation are seen as identifying what is most important. There is expectation from the state that these values will be evident in all aspects of the school organisation and curriculum, from the strategic direction to the classroom delivery.

Values Identify Priorities

Values are described in The New Zealand Curriculum (2007) as "deeply held beliefs about what is important or desirable. They are expressed in the ways that people think and act". They are deliberately broad to meet acceptance from the diverse society that the Curriculum serves. These values are those that society

and communities are usually able to agree on as important to all in a diverse society and world (Benade, 2012). The values are broad and rich. Each Curriculum value can be considered to represent a cluster of ideas and concepts. These linked concepts can reflect the interpretation of diverse groups within society (Keown et al., 2005). It is expected that schools will, in consultation with their local community, not only select but also define and express the curriculum values in a way that is meaningful to them (MOE, 2007).

Values identification featured prominently in the schools' strategic documentation reviewed for this study, ranging from a selection of the values from the New Zealand Curriculum to the direction and focus of professional learning. Participants commented on the potentially broad scope of teaching and learning prompted by The New Zealand Curriculum, but the identification of values enables schools to identify what is most important and where the focus should be across the school's local curriculum. Principal C summarised this by stating: "When an organisation or a school defines its values, people should be able to get a handle on what that organisation or school stands for." There seemed, however, to be a level of incoherence in what schools included as 'values'—some were aspirational actions, others desirable dispositions, yet others being graduate goals, while still others were a mixture of these. While schools identified 'values', a number also included areas within their strategic planning that could also be considered as aspects and attributes that they deemed important. An example of this is seen where one school (School 19) identified their Values as Respect, Resilience and Integrity and further in the document identified Student Agency, Teacher Agency and Community Agency as 'What we Value' and Inclusion, Collaboration and Connections as 'What we Stand For' indicating an incoherent understanding and use of the term 'Value'.

Participants believed that to successfully build values into the local school curriculum, and to implement them, not only in a classroom, but also at a strategic level, required the validation of the front part of the Curriculum. One participant (Principal A) described values as the “heart of the curriculum”, the part of the curriculum that focuses on and connects the whole learning of a child. When reviewing the list of values in the current New Zealand Curriculum, participants believed that most schools would reflect some or all of these values in their school values. The participants believed that the revised Curriculum (MOE, 2007) enunciated ideas that already existed in New Zealand schools across the country.

While viewed as universal, though neither exhaustive nor exclusive, the participants were all positively inclined towards the values in the New Zealand Curriculum, seeing them as worthwhile parts of a bigger social puzzle. They saw merit in the inclusion of each value stated in the curriculum and did not identify any values that they believed were missing from the list. There was a comment that, for the purpose of strategic planning and implementation, the values could benefit from being expanded upon to clarify their alignment to social and emotional intelligence.

Examination of values selected by individual schools sourced by interview and document analysis, showed school values were not always directly taken from The New Zealand Curriculum (2007) statement. There were, however, clear connections between the values identified by strategic documentation and the values from The New Zealand Curriculum (2007). Values were often particular to a school, arising from consultation with the community about what their vision and aspiration is for the school and the students. Interview participants, although not always using The New Zealand Curriculum (2007) values as a starting point

for defining their school values, did investigate how their school values aligned with those in the Curriculum. They saw some of the school values aligning completely while some were described as being ‘allied to’ the Curriculum values.

When participants were designing the direction and local curriculum for their respective schools, values were a key consideration and were at the forefront of their discussions. “Every interaction that takes place in the school reflects the values of the individuals involved in the collectives of the institution.” (Principal A). Having a set of values and beliefs about learning that everyone in the school agreed on was regarded as important. He went on to explain:

> We've gone through that process about what we believe about learning and that gives us the green light to be able to enact that, which is the gold. When everyone talks about the local curriculum, you can’t really write one until you agree on what you believe.

This shows how values were seen as a way of making the philosophy and vision of the school accessible to everyone. Values statements provide the participant schools clarity and consistency of purpose and identified what the school believed to be important.

Values were viewed as beneficial in building healthy communities. The role of the school in promoting values was described by Principal C as a function that society places on schools to encourage students to be, and become, good citizens. Values were described as what schools and their communities believe to be good things to do or as guides for the students as well as the school as an institution. Values can guide decisions, actions and interactions. Principal A agreed with this sentiment when he stated that, “by holding these (the school’s) values and acting on them, we’re able to live together and strive.”

Living Your Values within the School

Values also formed a key component in schools' practice, with participants stating that their school values are the essence of the school and are often formulated as the basis for reporting, reward systems and providing structure around which to build school systems and events. Values are thus the basis of decision making in what happens within the school and the curriculum as well as how learners are encouraged in their own choice of actions.

At the school of Principal A, the values are regarded as being for everyone, staff as well as students. There was significant effort and time expended by the community to define the values by considering each of the school values and asking what the community believed about this value, formulating not only a local definition of the values, but also what these look like in practice in the school. Principal B suggested that by having wide agreement, the values can be lived in all areas of the school. This level of agreement was possible because this principal's school has structured all its learning experiences based on its values; from the way the timetable and classes are organised, to the structures and processes put in place to monitor and manage student well-being and behaviour management.

The school of Principal B illustrated many ways that the values from the strategic plan were enacted in everyday practice. Values were used as part of the behaviour management process where students were rewarded with 'house points' when they displayed values in their actions; values formed the basis of assemblies; teachers reported on student displays of values in both formal and informal reporting. There were visual displays around the school and much of the school documentation has the values as a predominant element.

Values were thus portrayed as both markers of priority and aspiration, indicating a desirable outcome for students. While values are a more obvious part of the curriculum in some subject areas than others, participants believed that natural connections can be made between values and all learning and extracurricular areas. Within Social Sciences, including History and Geography, students often study social issues such as social justice and social action, where values arise very naturally and easily. Within English, studies of film and literature reveal strong values messages; some explicit and many implied. Values also are very naturally present in science; particularly surrounding ethics and choices such as ethics in biology, such as regarding the use of pharmaceuticals, chemistry and sustainability. Any inquiry process is thus closely connected to value based decisions around subject choice, value of inquiry and the research process.

The school of Principal C has worked with its staff and community to review what is taught and how it is taught in order to formulate and define its school values within its school context. While its values are aligned to the Curriculum, this school considers its values as part of its local curriculum. Values form the basis of discussions in middle and senior management groups when planning and reviewing the learning for the school as well as in discussions with the student body when considering initiatives and issues raised by students. Student leadership plays a significant part in the school, particularly in extracurricular sporting, community, arts and cultural areas. When meeting, the directive for the student leadership teams is to identify how others would see the school values in the actions, decisions and behaviour of the group. By reinforcing the values through all student groups the principal indicated that the values are taken on board by the students across all the different levels. The principal noted that, when issues arise, this provides another opportunity to think about whether the

messages about the values are getting through and whether they are understandable, whether they are clear enough. By reviewing this question when issues did arise, the school worked to ensure that the values were presented in a way in which people were able to pick up on them.

Characteristics of Curiosity

The Nature of Curiosity

Curiosity, even in a small sample of interviewees, was viewed differently. One of the interviewed principals (Principal A) identified it as a disposition that humans innately possess, while the other two (Principals B and C) described curiosity as a skill or mindset that can be learned or acquired by training. The participants did agree that curiosity is innate, suggesting that humans are naturally curious, like many other animals. Nonetheless, the principals also believed that curiosity could also be nurtured as a natural part of learning and a state that could be affected by environmental factors.

Although all three participants believed that curiosity was innate at a basic level, they could not agree whether curiosity could be taught. While one participant believed that curiosity cannot be taught specifically, another thought of it as a disposition; a person's inherent quality of mind and character, but a disposition that can be improved, or that could be killed off by a draconian system that is limiting or that discourages active engagement. This discouragement is observed when the curriculum is restricted to prescribed outcomes and when achievement is defined by the attainment of literacy and numeracy skills and the recall of knowledge. In this sense, the education system could be seen to be doing students and society a disservice by failing to develop the whole person.

Interviewed principals suggested one reason that some children did not present as curious was perhaps because educators have not 'ticked the right boxes' to engage them, one principal (Principal A) stating that "curiosity is there in everybody; it's about trying to find it." Participants believed that curiosity can be infused by providing an educational environment that fosters exploration and freedom, asking rich questions or by providing the opportunity for students to ask questions.

The participants believed there exists different strengths and interests within curiosity; some people are more curious than others, some are curious about how things work while some are more curious about choices and style and design. One principal (Principal B) commented that a child's curiosity could also be affected from outside the school environment. Some students came from home lives that foster curiosity, while others did not, and that this can change how a student approaches the world.

It was suggested that age may also be a factor. Young children are seen as being innately curious, described by one participant (Principal A) as having obsessions with aspects of life. It was posited by another that young children are more inclined to be curious because they are still in a cognitive growth stage. This participant (Principal A) believed that this growth slowed when children reached their teenage stage.

Defining Curiosity

There existed an absence of a standard definition of the term and a general lack of clarity in the reviewed school documentation over what curiosity is. No strategic documentation included a definition of the term. All participants were asked to define curiosity. "Oh, jeepers. Well, it's hard, isn't it?" (Principal C). As with the

strategic documentation that was reviewed, there was no consistent definition given by the participants. Rather than defining curiosity, they described what it meant to them: “curiosity is when you want to know more” (Principal C) and it is a “willingness or want to find out and to explore” (Principal A).

One (Principal A) described a curious person:

> somebody who has the ability to be tickled. If it’s innate, then you’ve just got to find the tickly spot on them. Because describing what a curious student looks like is the one that has the ability to cognitively, or even not knowing they have the ability to, want to find out about stuff.

Principals attempted to define curiosity by identifying various contexts where it might be observed in practice; or noticing its manifestation in cases such as explanations of how mechanical processes work, in the exploration of an abstract idea, or in being experimental in art.

Curiosity within the School Context

The various themes emerging from the participants’ descriptions of curiosity and how it presents within a school setting, included critical thinking and questioning, agency, engagement, care, exploration and wonder, creativity and innovation.

Curiosity and the Inquiry Process

Inquiry was another common theme across the reviewed schools. Inquiry, particularly student-led inquiry, was viewed as a vehicle for developing and promoting engagement, student agency, critical thinking and innovation as well as self-reflective practices and perseverance. One school (School 7) described the link:

> Inquiry learning is based on our natural curiosity to understand the world around and beyond us. It is a dynamic approach to learning that involves exploring the world, asking questions, making discoveries, and testing those discoveries in the search

> for new understanding. The depth of understanding is greater and richer than other teaching approaches.

Schools with curiosity as a value often included inquiry as a pedagogical approach involving the students wondering, exploring and questioning. A few of these schools embraced the Play Based Learning approach or the International Baccalaureate Primary Years Programme, viewed by these schools as being approaches infused with the spirit of inquiry by recognising many different forms of inquiry based on the student's genuine curiosity and the students desire to know more about the world.

Strategic documentation identified the desire of schools to develop students who are engaged in their learning, are critical thinkers and consider others. One school (School 19) stated that its strategic direction was focussed on creating curious individuals who have both thinking capability and criticality and the ability to relate well to others, while another school (School 20) believed that critical, creative and caring thinking is a key requirement for preparing students for their future.

Student agency and critical engagement was identified by one school (School 1) as a key component to developing a student's intellectual curiosity. This belief was reiterated by another school (School 19), stating that every individual has innate or potential interests and strengths which need to be pursued, which it regarded as key to increasing learning and increasing enjoyment. Although not all schools identified all these foci in their strategic planning, these were reoccurring themes across the reviewed schools.

Curiosity and creative and critical thinking

The majority of the schools' documentation that was reviewed for this study, conflated the notion of curiosity with creativity, critical thinking and/or innovation, much as is the case in The New Zealand Curriculum (2007). One school (School 3) described a desire for its students to stretch themselves as learners and identify the ability to reflect, question, connect, think, be self-aware, wonder and be determined as key to their success. Another school (School 7), identified by the Education Review Office as having learning programmes that focus on developing student's curiosity, includes creativity and innovation as part of its core values and it states that teachers encourage creative and critical thinking effectively within inquiry-based approaches towards learning. In several cases, the school's vision aspires to encourage creativity underpinned by the school values which include curiosity.

Curiosity is seen as something that embraces the "oh, I wonder what would happen if…" (Principal A). The interview participants described their schools as environments where students are encouraged to question, to explore and to experiment; whether through collaborative cross-curricular formal projects, 'tinkering' with loose parts, participating in play based learning or examining and taking action around contemporary social issues. There was a shared understanding of the importance for students at all ages to interrogate their own understanding, judgement and actions. "We want students to be curious because we don't want them just to be conscientious and just to be accepting of things. We like them to question and so we try to actively teach them how to question" (Principal C).

The principals identified the view that children are critical in the wider sense of the meaning of the word; thinking about something, not just taking it at face value. Principal C stated that “in order to engage critically with something you have to be curious about it.” Curiosity was seen as part of this process as students question information and expand their thinking from understanding to analysing. Principal C concluded that the “critical faculty is so important because otherwise you’re flicking along the surface if you don’t get down and analyse something or go deep into something”.

Curiosity and Agency

Participants connected curiosity and agency, stating that students cannot have a true sense of agency without some degree of curiosity. Participants saw curiosity as students not being passive partakers in their education but being active in the learning process. “If I'm not curious, I won’t have agency. I’ll just blindly accept and be told and be compliant and perhaps acquiescent” (Principal C). To have self-authorship of their learning, students need to “know what to do and can lead their own way” (Principal A). It is important that students have the opportunity to make meaningful selections. For students to make decisions in and for their learning they must have curiosity… without curiosity they may not “go down an avenue and have a look at it“ (Principal B).

Students from two of the schools where the principals were interviewed (Principals A and B) are given significant choice and input into their learning choices and experiences where some students “actually run with completely their own projects” (Principal A). The focus on teaching and learning is investigating how to solve problems or questions posed by staff or raised by students and developing the skill set needed to be able to find a solution. Principals A and B

believed that if students were not curious about what they were learning or did not wonder about things, then their learning was situated in the lowest form of cognitive development; “tell me what you want me to do and I’ll do it” (Principal A).

Curiosity and Engagement in learning

Principal participants all stated that they want their students to be engaged in their learning and the consensus in both the interviews and school documentation was that critical engagement requires initial curiosity, displaying the propensities to pursue knowledge as well as pursue and participate in opportunities for increasingly complex cognitive activity with some level of enjoyment and interest. This was summed up by one school (School 16) as “We encourage students to be actively open to learning”. Principal C described curiosity as an opportunity for students to become self-motivated and engage in learning:

> I think most kids [sic] are curious about something and that’s a lovely way in. If a kid [sic] is a reluctant learner, there’d be something that they're curious about that’s a way in to seeing that they could apply that skill in another area.

For this participant (Principal C), reluctant learners, especially older students who may have lost their childlike curiosity, present schools with the opportunity to transfer their curiosity around a topic in one aspect of school where they are engaged to other contexts in the school.

Principal A discussed the situation where students do not seem to be curious and do not want to be involved. He surmised that this could be because the school has not “ticked the right boxes for them yet” or perhaps that “their brain isn’t at a place that allows that to just get going”. He believed that both a curious mind and engaging provocations are important to engage students, and both are needed for innovation to occur. In a school that promotes curiosity through the philosophy

of play based learning, Principal B commented that students who display curiosity do not experience boredom, finding that students who display higher levels of curiosity will display higher levels of engagement and autonomy in their learning. He described students that attend to tasks more quickly and persevere with tasks that they find challenging, commenting that, rather than waiting for a task to be given, such students initiate activities for themselves. An example given was of children who built a mini putt course out of old bits of carpet and bits of wood and down pipes. “You can put anything in front of them and they suddenly get all exploratory and loving it, where the ones who are struggling will just sit there and go, well, I need your guidance. I don’t know what to do, I'm bored” (Principal B).

Curiosity and community

The principal participants thought that curiosity does not only lead to students being intellectually curious about academic solutions, but that curiosity also leads students to thinking about the world that they are members of, questioning and reflecting on their actions and beliefs and those of others around them. “We’re really pleased when the students show curiosity because it shows that they're engaging with the world they live in” (Principal C). They see the role of curiosity in relation to community as important as it encompasses a level of interest in more than self and leads to acts of justice and care for others. Students show curiosity when they actively contribute to their own and to the wider community. Strategic documentation from one school stated that by exploring their curiosities extended the reach of learning experiences outside of the school day, enabling students “to connect with and build community.”

Examples were given where student-driven initiatives were undertaken in response to a situation within the community, both local and global. The

Principals believed that it was students' curiosity which led them to examine not only the event, but the wider issues relating to the cause and effect and how this might affect others. Social actions were undertaken in response to this, which the Principals believed moved the level of engagement in the community from a passive level to an active level. An example of the effect of curiosity on a community is when students from one school (School of Principal A) made heart rate monitors from off-the-shelf electronics components which they then took to a Pacific Island and taught medical personnel and local villagers how to build and use the heart rate monitors in outback village communities.

Encouraging and promoting curiosity

Education is the highest and most elaborate response to our native curiosity; "how does a little child learn anything? They're curious. They investigate." (Principal C). Schools are founded as an institutional response to the human need for knowledge. In this regard, Principal B indicated that the pursuit of curiosity is an important part of the philosophy behind both strategic and pedagogical decisions including the implementation of play based learning and unstructured exploration and inquiry outside the classroom. He argued that if schools continually design the day, then children will follow the prescribed design and not display or use curiosity; "It's just basically follow the leader" (Principal B). Curiosity was therefore seen as more than just a value, but also as effective pedagogical practice; as the driver behind, as well as an outcome of, inquiry learning, with one school (School of Principal A) stating "students are taught, and develop the skills of being curious". According to this principal (Principal A), students need to have the unguided time to fully support the development of their curiosity by providing opportunities for interdisciplinary and interconnected student inquiry that become the focus, rather than the learning process being

solely content driven. Students must have the time to think and explore ideas of what they could do.

For each school principal interviewed, curiosity was clearly an area of importance and value, as their selection was based on the existing inclusion of curiosity in their school's strategic direction and documentation. In the interviews, the data revealed that they were all pursuing ways to encourage and promote curiosity in their schools and in their students. When considering the shift from an expression of the importance of curiosity in documentation to an expression in the actions and behaviours in school staff and students the emphasis was weighted towards fostering curiosity by providing opportunities for students to display their own curiosity.

Where schools' strategic documentation did have multiple references to curiosity it appeared to be a well embedded philosophy within the school. One school identified curiosity as a vision principle, used the spiral of curiosity as a strategic programme and identified 'Creating and Cultivating Curiosity' as a foundation for their curriculum decision making. The Education Review Office stated in 2015 that "the school's four vision principles (curious, collaborative, connected and capable) underpin teaching and learning programmes, and provide a framework for many other aspects of school operations" (School 16).

There was consensus among the participants that curiosity is 'knocked out of' students by maturity, peer pressure, society, parents and possibly schools. As people mature, they can limit or lose their sense of childlike curiosity; "when children are little they're always looking around… that whole kind of optimistic 'what are the possibilities'?" (Principal C). The Principals believe that their responsibility is to ensure that does not happen. They suggested that if students

are to thrive in times of local and global change, then schools have a significant role to play. Principal B stated:

> Most of us will cruise through and never ever challenge or develop that sense of innovative curiosity. We will just plod along. But if you're forced or dropped into it, you would be actually really surprised at what you came up with, and you could end up with all sorts of things.

The school's role was seen to be about finding a student's curiosity and fostering the ability to develop curiosity and inquiry and innovation in a classroom; presenting a creative curriculum, giving students time – guided and unguided – to learn, promoting inquiry and play based learning, asking rich questions and giving students the opportunity to ask questions of their own.

The Principal participants argued that a key component of encouraging curiosity is allowing the teachable moments to come naturally. When students show curiosity, they need to be able to engage in that curiosity, and the teacher's job is to "recognise when that teachable moment occurs and not take it over, but it's just in feeding that curiosity" (Principal B). To fully promote curiosity, however, the participants believed that the decisions and actions of teachers in their classrooms need to be supported within an environment which supports and encourages the development of curiosity in learning across the school. For Principal A, at a strategic level this is about "putting it [curiosity] to the forefront" and creating a systematic approach which allows students to be curious schools by ensuring that learning is not so heavily structured that the direction for learning is predetermined, and that the student's learning journey and experiences are preplanned. A key aspect identified was the key role that student agency and teacher flexibility had in creating the environment for curiosity to flourish.

Conclusion

Values (that include curiosity) are an element within The New Zealand Curriculum (2007) deemed sufficiently important by the Ministry of Education for it to stipulate their implementation. The values are to be encouraged and modelled by teachers and explored by students, and as such, schools are tasked with successfully transmitting these values as part of their curriculum programme and delivery. Although the examination of strategic documentation in this study only provides a superficial view of what may be happening within those schools, it does identify, as local curriculum policy, their priorities and direction. As a result of this analysis of strategic planning documentation, I identified several gaps between the curriculum delivery programme and the mission, vision and values of the schools. Strategic documentation provides little evidence of the undertaking of overt and explicit programmes of values education which could indicate a minimal and disingenuous expression of moral values for the intent of enhancing one's own image or as is colloquially put, ‘paying lip service’ to the idea. In comparison, through the interview process, the principal participant responses suggested that there was a desire to engage with values, including curiosity, in a more substantive way.

For each interview participant, their treatment of curiosity within the strategic documentation and direction in their school was clearly an important area of their school vision and direction, one which they were keen to “get higher on the agenda” (Principal A). They believed that, through the promotion and encouragement of curiosity within their schools, both students and society would benefit. Curiosity was not seen as being subject specific, but as being able to translate across all subject areas and all aspects of life. It was viewed by the

interview participants to be something worth encouraging for its benefits across a wide range of contexts; whether at an intellectual level to deepen knowledge and understanding and to create new knowledge by looking at literature and ideas and concepts, whether it is curiosity about an issue that is facing society where students examine their existence and role in the world, examining the impact their decisions have on others, or whether it is curiosity in technology and science where students focus on discovery, innovation, invention and problem solving. Curiosity was seen as a key aspect of answering needs in society.

Chapter 5

Discussion

Introduction

The recent nationwide Education Conversation/Kōrero Mātauranga engagement (https://conversation.education.govt.nz/) identified curiosity as one of the top ten values that people would like to see woven into the future of learning in New Zealand, stating that "students should be resilient, capable, resourceful, independent, socially competent and curious" (MOE, 2018, p. 11). In a joint report from the Ministry of Business, Innovation and Employment and the Ministry of Education (2014), the Minister of Science and Innovation and the Minister Education recognised the importance of promoting the development of curiosity, stating that "we must continue to maximise opportunities to harness our curiosity and cultivate our ability to be competitive and improve social outcomes" (p. 5). Curiosity is, however, as this study has shown, a perplexing concept that defies easy definition. If asked if they know what curiosity is, many people will say they do, but this study has highlighted a lack of depth or clarity in these responses.

This research study aimed to provide a clearer understanding of how curiosity is characterised in schools' strategic documentation and the implications this has for the design of a local school curriculum. Taken together, the findings from literature, document analysis and participant interviews support the proposition that The New Zealand Curriculum (2007) value of curiosity has a place in a school's strategic decision making and curriculum design. These play an

important role in the translation of curiosity from a value into specific attitudes and behaviour.

This chapter opens with a discussion on how The New Zealand Curriculum (2007) is used in the design of local curriculum with specific focus on values. This research study found consensus in how The New Zealand Curriculum (2007) is viewed and its role in the planning and design of local school curriculum. The findings indicated that the front half of the curriculum is viewed as the essence of learning. Values are regarded as important, particularly the local school values. There was agreement that the values identified within The New Zealand Curriculum (2007) are given some consideration, but schools viewed ***their*** values to be the driving force behind decision making within their schools as they designed their learning priorities and programmes.

The second part of the chapter will focus on how curiosity is articulated in schools' strategic direction and documentation and consider the benefits of promoting curiosity. The findings of the research on which this thesis is based indicate that curiosity has a place in national and local curricula. Its benefit exists in its potential to enhance knowledge, support the functioning of society and contribute to economic sustainability.

Values in The New Zealand Curriculum: A reprise

The role of a curriculum, whether at a national or a local level, is to identify priorities and give direction to what is taught in schools. The Ministry of Education has the expectation that all New Zealand state and state integrated schools will consider their values when making decisions relating to what is taught, how it is taught and how the school operates. How schools express these values (their

priority, how they are worded and how they are communicated within the school), while based on the values listed in The Curriculum (2007), are the result of consultation and dialogue between the school and its community. They become the collective values of the school (MOE, 2007).

Through the evolutions and iterations of school curriculum statements and syllabi, values have become increasingly significant in addressing the concerns at both state and local level in preparing students to meet the needs of a changing society and a changing economy (Keown et al., 2005). Seen as beneficial for a healthy society and a key component in developing citizens for the future, values have become one consideration when making decisions around curriculum in schools.

> Values are the ideals that give significance to our lives, that are reflected through the priorities we choose, and that we act on consistently and repeatedly (Hall, 2006, p. 39).

Whilst values are only one aspect of The New Zealand Curriculum (2007), their inclusion in the Curriculum is considered essential. In the latter 20th-century there were increasing expressions of concern that "the New Zealand school curriculum did not reflect the current and future social, cultural and economic needs of New Zealand society" (Phillips, 1993, p.156). The review of the New Zealand education system in the 1980s and the subsequent creation of the New Zealand Curriculum Framework in 1993 resulted in a shift of focus that placed greater emphasis on ensuring the development of essential skills deemed necessary for a changing society, particularly the evolving workplace, creating more concrete links between education, society and the economy (Benade, 2012). The Framework (1993) was constructed following consultation with schools, the public and the business and enterprise communities with the aim of creating a policy document which supported "the development of a work-force which is more highly skilled and adaptable, with an international perspective" (Philips, 1993, p. 158). It

also indicated a place for attitudes and values in the school curriculum: “Attitudes and Values, along with Knowledge and Skills are seen as integral parts of The New Zealand Curriculum” (MOE, 1993, p. 21)

Philips (1993) states:

> The framework also affirms the integral place of attitudes and values in the school curriculum, acknowledging that the curriculum should reflect what is valued by a society and a school community, while respecting and being sensitive to the rights of individuals, families and groups to hold values and attitudes which may be different from students' own attitudes and values (p. 159).

Further review followed the implementation of The Curriculum Framework (1993) which continued to reinforce the desire for more than academic outcomes. The Curriculum Stocktake Report (MOE, 2002) recognised the “importance of balancing the social outcomes of education with a focus on academic achievement, triggering an international resurgence in citizenship and values education” (p.1). The inclusion of Vision, Values and Key Competencies within the 2007 New Zealand Curriculum signalled a continued and significant shift in emphasis in education policy from a predominantly knowledge attainment focus towards one more inclusive of participation, connectedness and belonging and the development of an individual’s responsibility of themselves as well as that of a member of a community. There was an increased focus on individual competency and morality; aiming to develop the relationship between the learner and their community, local and global, and the world around them.

National and Local Curriculum

Curriculum in New Zealand schools is designed to be interpreted at three levels within the education system (MOE, 2007); at a national level, a schoolwide level and at the classroom level. The state, through the Ministry of Education, does not

currently provide a centralised curriculum. The New Zealand Curriculum (2007) was designed and is presented as a statement of policy and intent to give guidance and direction to all New Zealand state and state integrated schools. It is neither prescriptive or highly descriptive, giving local schools the opportunity to create their own localised curriculum. Participating school leaders saw this authority as key in giving schools, not only the authority to design and shape their curriculum so that teaching and learning is meaningful and meets the needs of their students, whānau and communities, but as offering a level of flexibility and scope not previously possible. They recognised that The New Zealand Curriculum enables schools to consider and make decisions about their own strategic direction and the future learning of their schools and to decide the means by which they will achieve these, including acting in accord with their school and community values (MOE, 2007). The state expects local curriculum design to incorporate community consultation to identify these priorities and values. Accordingly, schools are able to act in accord with their values, including those of their community, having the freedom to consider and make decisions about their own strategic direction and the future learning of their schools and to decide the means by which they will achieve these. Curriculum at the classroom level allows individual teachers the opportunity to design themes and learning objectives and plan for and deliver learning experiences at the class, and indeed at the individual, level to help their students achieve the strategic goals of the school community.

Table 2. The Role of National, Local and Classroom Curriculum

The National Curriculum

- the *New Zealand Curriculum* and *Te Marautanga o Aotearoa*
- a statement of official policy for teaching and learning for all state and state integrated schools in New Zealand
- a framework within which schools develop the detail for programmes and approaches to learning; less prescriptive than previous curriculums (Begg, 2006)
- sets broad expectations for all state and state integrated schools without being unduly prescriptive or restrictive
- reflects the current and future social, cultural and economic needs of New Zealand society as identified by the state
- gives more professional autonomy to teachers and schools (Begg, 2006)
- at the political or official level— identifies what the government of the day or its agencies consider to be of most importance (as displayed in written documents, regulatory requirements or funding decisions) (Mutch, 2009)

The School Curriculum

- all elements of the New Zealand Curiculum are woven together to create a **coherent whole** to ensure the needs of all learners are being met
- aligned to the New Zealand Curriculum
- designed by schools based on the national curriculum
- an appropriate match of curriculum components
- interprets components to express your school's area of focus
- reflect the intentions, preferences, ideas and understandings of individual schools
- bridge the gap between teachers' lesson plans and the national curriculum (Begg, 2006)
- consideration of the particular philosophy, special character, location or school population is given when selecting what is to be of most importance and what is ignored or rejected (Mutch, 2009)
- community or set of stakeholders have a role in this selection

The Classroom Curriculum

- interpreted by teachers aligned with the school curriculum
- curriculum at the enacted level - what gets taught, assessed and reported on, and how (Mutch, 2009)
- selection is influenced by available resources, teacher knowledge, student need or interest (Mutch, 2009)

The New Zealand Curriculum (2007) is a statement of official policy for teaching and learning in state and state integrated schools in New Zealand. It aligns with the expectations of the Early Childhood Education Curriculum document, Te

Whāriki (MOE, 2017) , as well as aligning to the New Zealand Qualifications Framework (New Zealand Qualification Authority, 2014), which establishes graduate profiles ranging from secondary to tertiary education. While the New Zealand Curriculum sets a common direction for teaching and learning in English-medium New Zealand state and state integrated schools, ensuring that every school curriculum be clearly aligned with the intent of this document, it also acknowledges the place and importance of individual school contexts.

The evolution of the New Zealand Curriculum (from the 1993 New Zealand Curriculum Framework and multiple syllabi to the 2007 New Zealand Curriculum document) represents a shift in authorship from centralised government to the local school community, empowering each school to craft a curriculum that is "responsive to the needs, identities, languages, cultures, interests, strengths, and aspirations of your learners and their families" (MOE, 2019 p. 5).

The findings of this research study support the theory that while the New Zealand Curriculum is used as the basis for strategic decision making in schools, it is viewed by school leaders as a framework for building a school curriculum that is relevant and specific for the individual schools while still reflecting the intentions of the New Zealand Curriculum. Interview participants identified the process of setting the strategic direction for the school and designing a local curriculum as one that provided a high level of flexibility to individual schools which they believed is critical in meeting the needs of their individual students and their local communities. This is in line with the intended purpose of the document as identified by the Ministry.

The findings were also consistent across both the document analysis and the principal interviews regarding the role of the curriculum in strategic planning. The

interview participants agreed that The New Zealand Curriculum (2007) underpins the local school curriculum, but there was less agreement on how they are linked, or on the ordering of the relationship between the national and local. The participants did regard aligning the national curriculum to the school curriculum as an iterative process, however, one school may begin the design process by formulating what is important from their community and then relating it back to the Vision, Principles, Values and Key Competencies of the Curriculum, while another may begin with the objectives taken directly from The New Zealand Curriculum document (2007) and evaluate these by reference to the desires and priorities of their community. Regardless, however, of whether the curriculum design and evaluation process begins with the local priorities or the Curriculum statement itself, common to both approaches in the schools analysed is the strong alignment between the two—the links were clearly evident in documentation and the processes of synthesising the desires of the community with the direction of the curriculum were apparent. This was also evident in the Curriculum Implementation Case Studies: Milestone Report presented by Hipkins et al. (2008):

> some schools came to the conclusion that the attributes and values they had previously developed were already well aligned with the curriculum. Others modified their charters to reflect the new understandings they had developed about the intent of the curriculum, and made connections with the language used in the curriculum to describe the values and key competencies. The result was then generally considered to be a good fit between the revised charter and vision and the intent of the revised curriculum (p. 14).

In reviewing the draft curriculum, Begg (2006) suggested that, as in the past, the initial sections of the curriculum containing the vision, principles, values and key competencies, while likely to be uncontentious and acceptable to school leaders, teachers and the community, are less likely to be given attention by schools as

they are not directly linked with the learning area objectives in the curriculum. This thesis research has in fact found the opposite to be true. In the formation of the school's strategic plan or charter, the front half of the curriculum was regarded by the participating Principals as fundamental to ensuring that their schools meet the needs of the whole learner, and it serves as a reminder to them that curriculum development be focussed on the learner, not the content objectives. This influence was discernible too in many of the reviewed public documents, where content objectives are described as the context for learning, rather than the key knowledge goal. This finding concurs with those of Hipkins et al. (2008), following the initial implementation of The New Zealand Curriculum (2007), who found the 'front end' of the curriculum was seen as powerful and that the inclusion of key competencies and the revised values statement was of particular interest and appeal to school leaders and teachers (Hipkins et al., 2008), with one principal stating to Hipkins:

> The front end of the document reinforces what we want to do and that we are going in the right direction. The biggest challenge is the pedagogical shift. It does not involve tweaking existing stuff. We will never get kids engaged if we do this. (Hipkins et al., p.13)

This thesis research suggests that schools emphasise the front part of the New Zealand Curriculum when formulating their local curriculum. The key message communicated by the interview participants was that the 'front half' of the curriculum was key in developing a local curriculum focussed on meeting the academic, social and emotional needs of their students. With the curriculum focus being on learning framed by the Principles, Values and Key Competencies, as agreed by all Principal participants, the lack of prescribed content standards allows flexibility for schools and teachers to design and adapt a curriculum tailored for their learners while addressing the broad achievement objectives which make up the Learning Areas (Ostroff, 2016). The Learning Areas identified

in the ‘back half’ of the New Zealand Curriculum, were considered by the principal participants to be the contexts that are used to teach the more important aspects found in the front of the Curriculum. There were strong feelings that if schools placed the emphasis on the Learning Areas, schools would be doing students a disservice. “We feel pretty strongly that if people in schools are not looking at the front end, that’s a problem” (Principal C). The Learning Area objectives were viewed by the participants, not as less important, but as less relevant to the needs of the learner when designing a curriculum programme. The content in the ‘front half’ of the Curriculum serves as a prompt for educators to look holistically at the learners as learners before focussing on the academic content and contexts. Whilst the learning areas in the latter half of the document are not seen as less important, they were viewed as less relevant when considering the needs of the learner as a whole; they were viewed rather as the contexts to be used to meet the aims of the front section; different parts to the same puzzle.

Values and School Practice

Described as the essence of the school, values were viewed by participating principals as essential to the strategic direction of the school and as having an effect on all learning areas within the curriculum. Individual strategic plans communicate what values are considered priorities for the school community and the specific ways in which these values will be promoted and encouraged. For community engagement and support of the strategic plan there needs to be a high level of agreement and understanding around the identified priorities of the school. Principal participants placed importance on the ‘unpacking’ of the values to ensure a common understanding of what each value is as it indicates what the school stands for. For values to be truly evident in a school’s organisational

culture, operation and curriculum requires “significant coordination and development of shared beliefs, understandings and practices in a school community” (Benade, 2012, p. 219). Clarity was not as strong in the reviewed public documentation, there being incoherent use of the term, ‘values’ and its related concepts.

It is the position adopted in this research that values are the big concepts adopted by schools and although the Ministry of Education define them as deep beliefs, they actually include elements of belief, attitude and disposition. Values are seen by school leaders as markers of priority and aspiration which formulate the outcomes that the school desires of, and for, their students. Schools are tasked with making values an integral part of the local curriculum and monitoring the effectiveness of the approach they take in promoting and encouraging the identified values (MOE, 2007). While values focus on the growth and development of the inner student (their thinking, reflection, and judgement), it is only by focussing on and observing student character and behaviour, attitude, and interactions with others that schools gauge the effectiveness of their transmission of values. While a number of values can be thought of as innate, what school leaders observe is perhaps the correlated dispositions acquired by habitual learning (Aristotle, 2014). Deliberate teaching and encouragement of the outward enactment of values enables a person to develop the cognitive knowledge to make deliberate choices around when and how they should exhibit behaviours indicative of their inner values.

There are multiple realms of values including aesthetic, economic, intellectual, political, environmental and moral values (Keown et al., 2005). The main focus within the curriculum is on moral values—those that govern personal dispositions

leading to individual behaviours and relationships among people as dictated by society as personally or socially desirable (Benade, 2012). These create school benchmarks for student behaviour in their learning and in their social interactions. Other values can be considered to be economic and socio-political with the goal being to increase productivity and profit in future economic society. These values focus on the disposition and skill development that is predicted to be important in the future. Supporting the declining role of knowledge and the trend towards a focus on what students can do rather than on what students know, these values are seen as having a role in developing strong decision-making capabilities, with the aim of producing self-regulating and competent citizens that can work independently and collaboratively.

The Treatment of Curiosity in Strategic Documentation

The New Zealand Curriculum (2007) states that students will be encouraged to value "innovation, inquiry, and curiosity, by thinking critically, creatively, and reflectively" (MOE, 2007, p.10). This research set out to explore the treatment of curiosity within strategic documentation. This research discovered that curiosity was poorly canvassed in strategic documentation, which may be due to their being limited agreed understanding among school Boards and their Principals of the concept, such as whether it is a value or a disposition. Close examination of the publicly available strategic documentation from a number of schools revealed minimal explicit references to curiosity; indeed, few schools acknowledge curiosity in their strategic documentation. Curiosity was often implicitly endorsed through inclusion in documentation in either their mission, vision, values or graduate profiles but was not examined in any depth. From those schools which did purport to consider or value curiosity, on deeper analysis, this research noted

few substantive references to curiosity. Further examination of the remainder of content within the strategic plans and charters, the annual plans, reports from the Education Review Office and other various documentation held on the school's websites, in most cases, revealed little or no direct reference to curiosity.

Theorists of curiosity characterise it as an innate and internal drive (Berlyne, 1960; Kashdan, 2009; Leslie, 2015; Litman, 2010; Loewenstein, 1994; Ostroff, 2016). There is general consensus among theorists and school leaders of the innate nature of curiosity. This analysis supports a theory that considerations of curiosity in school settings require educators to both clearly define curiosity and explain what it means. Curiosity may be considered to be as much a habitually-learned disposition as a state of being (Berlyne, 1960; Loewenstein, 1994), advocating for schools to fully utilise opportunities to stimulate and encourage curiosity. This analysis provides a new insight into the relationship between the innate state of curiosity and the disposition to display curiosity. While the interviewed school leaders disagreed whether curiosity can be taught, they did agree that curiosity can be both nurtured and developed, as well as be stifled and discouraged in educational and home settings.

Another argument put forward in support of curiosity being a disposition (rather than an innate state) is the perceived existence by school leaders of personal strengths (and by contrast, weaknesses) in curiosity. The principals observed that some children were seemingly more curious than others and surmised that this could be attributed to home environments not promoting curiosity, by restricting exploration and inquiry, or to schools not fully engaging them. The principals shared their belief that some children have strengths in different areas when it comes to curiosity, for example, natural, mechanical, technological,

environmental or art and design, further strengthening the idea that curiosity is not exclusively an innate state.

This research study indicates that while, arguably, it can be suggested that curiosity does indeed have an innate, genetic starting-point (Berlyne, 1954; Dewey, 1910, Kashdan, 2015; Loewenstein, 1994; Robinson, 2006), related behaviours can also be fostered. This could be by providing an environment that encourages and promotes curiosity, leading to learned behaviour responses which can increase displays of curiosity. By taking the position that curiosity can present as both a state in its innate form, and as a habitually-learned disposition, it could be argued that people can develop a cognitive understanding of what 'being curious' is. Therefore, people gain an understanding of why it is important and the circumstances where and when to use it, resulting in an inclination to act in curious kinds of ways.

Curiosity can be defined as an intrinsic need that people have to seek out new information and knowledge and explore new sensory experiences that motivate exploratory behaviour (Kashdan, 2009; Litman, 2010). My website analysis located, instead, concepts that echoed research (Baumgarten, 2001; Chaulkian, 2015; Dewey, 1910; Guthrie, 2009; Kashdan et al., 2011; Loewenstein, 1994; Post & Walma van der Molen, 2019) which aligned curiosity or its practice in terms such as wonder, creativity, critical thinking, innovation, questioning and inquiry, care and concern and problem solving. With no consistent definition, school leaders defaulted to describing curiosity rather than trying to define it by describing the attributes a person deemed to be curious may display, or describing specific contexts where curiosity could be applied such as critical

thinking and questioning, agency, engagement, care, exploration and wonder, creativity and innovation.

Curiosity is often conflated with the idea of wonder. It may, however, be more accurate to say that curiosity is born out of wonder. School documentation identified the desire for students to wonder and be inquisitive about the world. While the co-mingling of curiosity and wonder may aid in understanding curiosity, the two states are not synonymous. Schmitt & Lahroodi (2008), in exploring the value of curiosity for inquiry and knowledge, clarify how the terms, although often accompanying each other, differ. They defend an appetitive account of curiosity. While wonder may arise when faced with the surprising or puzzling, the unexpected or the unfamiliar, it is also easily suppressed or sated. Wonder exists when faced with cognitive conflict but does not usually lead to an attempt to relieve this conflict. Wonder endures whilst the initial cognitive conflict that initiated it continues, but ends when the conflict ends, when a state of familiarity is reached. One school leader alluded to this state (wonder) when talking about displays of what he described as innate curiosity in very young children. He described the obsession with differing aspects of life or topics, however, this obsession often ended when sensory discovery was complete and the topic of attention ceased to be novel (more in line with the literature definition of wonder) (Schmitt & Lahroodi, 2008). By contrast, curiosity remains even when familiarity is achieved. Curiosity is about being engrossed in the mystery to such an extent that, more than simple desire, there exists a need to know more. This does not necessarily mean that the perplexity presented is one of extreme difficulty or has high entertainment value, but rather it is one that ignites a desire to know (Schmitt & Lahroodi, 2008).

A common theme within the school documentation and interview responses was that curiosity exists when wonder is translated into action. In this sense, one does not *become* curious to remain curious; rather, within the state of *being curious* is the appetite to resolve the initial cognitive conflict. This desire to resolve cognitive conflict is what makes curiosity valuable epistemically, particularly in educational settings. The desire to know aids in sustaining attention to the matter and creating a situation where there is a higher likelihood that a resolution to the conflict will be reached (Ostroff, 2016; Schmitt & Lahroodi, 2008).

The tools that the schools in this study identified that can bring about desirable action behaviours and practices included, asking questions, hypothesising, critical thinking, playing to learn, problem solving, experimenting, inquiring and investigating. Questioning and inquiry were found to be commonly connected in this study, such as school documentation referring to *inquiry and asking questions*. The ability and practice of asking open and deep inquiring questions were noted in graduate profiles or illustrations of values. This aligns to one of the very basic definitions of curiosity, namely the desire to know more. Berlyne (1954) introduced the ideas of Perceptual Curiosity and (Specific and Diversive) Epistemic Curiosity. Perceptual Curiosity is evoked by sensory stimulation, particularly visual, auditory and tactile, presenting as a ‘drive to experience and feel’. It motivates people to make meaning by exploring, using their senses, the world around them (Berlyne, 1954; Von Stumm et al., 2011). The theory of Perceptual Curiosity aligns with Te Whāriki (MOE, 2017) and the play-based learning pedagogy where students learn via active exploration of their environment, generating working theories and developing their understanding of the natural, social, physical and material worlds (MOE, 2017).

Epistemic Curiosity, by contrast, can be viewed as a response to an internal drive to understand the world around them, that is, people are provoked by intellectual conundrums or undetermined scientific concepts to generate and evaluate new ideas to solve that which is unknown or unanswered. Epistemic Curiosity can be Specific; where the aim is to develop a depth of knowledge of a situation to reduce knowledge gaps or Diversive; where the aim is the proliferation of new ideas leading to the gathering of a breadth of knowledge relevant to the problem (Hardy III et al., 2017). Loewenstein (1994) illustrates the difference:

> Specific epistemic curiosity is exemplified by the scientist's search for the solution to a problem, and diversive epistemic curiosity is exemplified by a bored teenager's flipping among television channels. (p. 77)

Specific Curiosity motivates people to engage at an intellectual level by asking questions and testing hypotheses to acquire information to fill a gap in existing knowledge. Specific Curiosity information seeking behaviours combined with Diversive Curiosity idea generating behaviours allow people the ability to convert ideas and information into creative solutions. It is this seeking and collating of new and creative ideas that supports the problem-solving process (Hardy III et al., 2017; Litman, 2005; Loewenstein, 1994).

Problem-solving was also a recurrent theme emerging from the documentary analysis, with schools articulating the desire for their students to explore solutions to problems through the process of innovation and critical and creative thinking. As is the case in The New Zealand Curriculum (2007), where included in school documentation, the notion of curiosity was often conflated with the concepts of creativity, critical thinking and innovation. Schools identified the desire for students who could explore solutions to problems and were able to innovate to

problem-solve, with one school describing this process as “knowledge building for improvement and innovation”.

Schools also described their aspirations for their students to be *issue focussed*. One school described a curious learner as one who is inquisitive about the world and was reflective and responsive, being open to new ideas. Thus, students should learn to identify issues and challenges and explore significant future-focussed issues. These issues were not restricted to innovation, technology, and science, but also included environmental awareness and responsiveness to social justice issues.

While a small number of schools specifically include curiosity as a value, further investigation of their documentation, and the interview process, revealed that what they actually value are the *underlying attitudes towards learning.* That is, they value the motivation, drive and appetite to learn, which are believed by the schools in question to be linked to curiosity. Many schools examined in this study also identify the desired outcomes and describe the attributes of learners which they believe will emerge by fostering curiosity; specifically, students who are self-directed in initiating learning, engaged in their learning, creative and critical problem-solvers, reflective, responsive to social justice issues, environmentally aware and courageous and resilient. What these schools are appraising is the potential benefit that cultivating and developing curiosity has within the school context for students now and society in the future.

The Importance of Curiosity Promotion and Development.

> If the goal of school is innovation, creativity and authentic progress, curiosity is a blessing (Ostroff, 2016, p. 10).

Education in the 21st-Century is in a remarkable position. Students are being prepared for a fast-paced, constantly evolving, as yet undetermined future world, particularly in the realm of technology and the economy. The Ministry of Education (2007) desires young people:

- who will be *creative* and *enterprising*,
- who will seize opportunities to *discover and develop new knowledge*,
- who will be *connected with others* locally and globally,
- who will *be actively involved* in their *social and cultural* world as well as the *economic and environmental* future of New Zealand, and;
- who will embody the values, knowledge and competencies to be *lifelong learners.*

Table 3: Key points from published literature relating to the Positive Function of Curiosity

INDIVIDUAL closing the knowledge gap

- Motivates people to learn (Dewey, 1910; Engel, 2015)
- Increases perserverance and grit (Kashdan et al., 2018)
- Satiates an individual's appetite for answers raised by experiences of wonder (Litman, 2005).
- Drives people to know what is beyond the observable (Berlyne, 1954)
- Deepens engagement in tasks (Dewey, 1910; Kashdan et al., 2018)
- Enhances intelligence (Kashdan et al., 2018)
- Pursue new knowledge and experiences (Kashdan et al., 2004; Kashdan et al., 2011)
- Improves the individual by leading to an increase of knowledge or ability (Loewenstein, 1994).
- Curious people learn better than people who are not curious (Próchniak, 2017; Renninger et al., 1992).
- Develops critical and creative thinking (Dewey, 1910; Próchniak, 2017)

SOCIETY social cohesion

- Promotes citizen functionality and responsibility (Engel, 2015; Hartung & Renner, 2013)
- Questions the ideas held by others (Baumgarten, 2001; Engel, 2015; Próchniak, 2017)
- Interest and care and concern for others and the world we live in (Baugmaten, 2001)
- Acquire information for the purpose of building and establishing relationships, and control of the social environment belonging (Hartung & Renner, 2013)
- Helps regulate social norms (Engel, 2015)
- Develops awareness of differing views and experiences (Engel, 2015)
- Form interpersonal attachments and facilitate feelings of belonging (Hartung & Renner, 2013)

ECONOMY economic success

- Call for enterprise (MBIE, 2014; von Stumm et al., 2011)
- Generates alternative and innovative solutions (Gino, 2018)
- Attitudes and behaviours needed in an economy faced with increasing emphasis and reliance on Science and Technology (MBIE, 2014; von Stumm et al., 2011)
- Requisite skills needed to be employable in a changing economic world (von Stumm et al., 2011)

While it was expected that this study would show a correlation between many of the aspirations of The New Zealand Curriculum (2007) and strategic

documentation surrounding the cultivation of the notion of curiosity, there also appeared to be a correlation with ideas about curiosity in published literature, as indicated in Table 3.

Curiosity can be viewed as the very foundation of learning (Dewey, 1910), and in this regard, the interview participants indicated that without curiosity there is no impetus to learn and, at worst, students adopt a passive role in learning where the content is imposed. Principals held the opinion that without opportunities to explore and question (giving the students some level of agency over the content, context, and direction of their own learning), learning is reduced to the superficial memorisation and retention of observable or provided knowledge. Such learning lacks any meaningful engagement between the subject matter and the student's individual context. They believed that this lack of engagement may restrict further learning. In contrast, they agreed that encouraging curiosity stimulates engagement with and exploration of possibilities opening opportunities for deeper, more meaningful learning.

Curious people display a strong interest in understanding and explaining the world and questioning the ideas held by others (Baumgarten, 2001; Engel, 2015; Kashdan, 2009; Litman, 2008; Próchniak, 2017). This presents as a drive to know that which exists beyond what can be gained from attentiveness and interest in the world around them. Curious people ask questions directly, internally and in the spirit of observation. This desire distinguishes curiosity from 'taking an interest', leaving an unsatiated gap (Baumgarten, 2001). It is this characterisation of curiosity that connects the individual function of curiosity to that of society. Strategic documentation associated schools' promotion of curiosity with their desire for their students to be critical thinkers and global citizens, in addition to

taking an active role in the world around them and being responsive to social justice issues. The participant Principals directly related their schools' promotion of curiosity to social action student projects (such as the promotion and protest of social justice issues, the use of innovative technology and health initiatives for underdeveloped communities, or engaging in local environmental sustainability projects).

Curiosity functions in society to establish a multi-layered understanding of the social world. Through curiosity, people have the opportunity to create their own place in society through deepening their understanding of the social structure and its dynamic organisation (Hartung & Renner, 2013). Schools' strategic documentation referred to the aspiration for students who are enabled and encouraged to connect to and engage with a world outside of their own, and to build community. The Principals saw curiosity as key to assisting students, particularly adolescents, in adopting more harmonious relationships and resolving social conflict more effectively. They considered that the drive to understand others opens up the potential for greater and deeper care and concern and the opportunity to develop multiplex social networks, where individuals develop relationships and understanding in and across a range of social contexts. The interview participants believed that by promoting curiosity, their students developed the capacity to uncover the inner workings of their societal microcosms. In this way, they argued, their students gain a deeper understanding of social norms, and in the process, appropriate and desirable behaviours are reinforced. Principals believed that without the inclination to enhance one's awareness of others, isolation and a lack of community are more likely to result.

Curiosity is seen as a major driver of innovation where people are empowered to explore and adapt to possibilities within a rapidly changing economy (MBIE et al., 2014). As in The New Zealand Curriculum (2007), innovation and creative thinking are most commonly linked to curiosity in the reviewed strategic documentation. This strategic documentation reveals a desire for students who are "equipped to participate in and contribute to their own society and the wider world through being able to explore significant future-focussed issues" (Primary school strategic plan - citation withheld). Curiosity is not bound by the status quo; it embraces unrestricted potentiality. The provision to students of the time and opportunity to create (through free play, meaningful structured learning and personal choice) was viewed by schools (interview participants and school documentation) as key in fostering curiosity resulting in innovative solutions.

The value of curiosity is also relevant for sustainable employability (MBIE et al., 2014). Interview participants saw curiosity as key to supporting students to be 21st-century learners and providing an education that would create employable citizens in the future. They believed that the promotion and cultivation of curiosity enables individuals to develop the relevant attitudes, behaviours and skills needed to ensure their continued employability in an unpredictable economic environment. This, along with a focus on generating alternative and innovative solutions, contributes to a sustainable economic future for New Zealand.

Conclusion

> You don't need to teach a child curiosity. Curiosity is innate. You just have to be careful not to quash it. This is the challenge for the teacher- to foster and guide that curiosity.
>
> Sir Paul Callaghan (MBIE et al., 2014, p. 2)

The New Zealand Curriculum (2007) provides schools with a unique opportunity, to design a curriculum to benefit and meet the needs of their specific community. Whilst the Curriculum identifies the national priorities of what the state deems to be important for all New Zealand state and state integrated schools and students, there is a flexibility and scope afforded to individual schools to listen to the aspirations and identify the priorities of their local communities. Taking these into consideration, schools and school leaders are able to establish learning goals and design learning experiences to meet them.

Included within The New Zealand Curriculum (2007) is an emphasis on values; broad concepts identifying what is considered important in a holistic education for individuals and the community. Curriculum values are multifaceted with a particular emphasis on moral values. The specified values aim to promote habitually-learned dispositions leading to socially desired behaviours and relationships. These, as with the learning goals and learning experiences, are also expected to reflect and be influenced by the priorities of the local school community.

Curiosity has been a value in the Curriculum since 2007 and is deemed to be important. Curiosity is, however, a pre-existing, innate state (Berlyne, 1960; Kashdan, 2009; Leslie, 2015; Litman, 2010; Loewenstein, 1994; Ostroff, 2016). From infancy children embrace their journey of wonder to discover and make sense of the world around them and develop an understanding of their place within it. Although it cannot be taught, schools can support and scaffold the development of behaviours that encourage curiosity. Findings highlighted the active nature of curiosity, defined in literature as an intrinsic need that people have to seek out new information and knowledge. Curiosity motivates people to

learn and prompts exploratory behaviour such as asking questions, hypothesising, critical thinking, playing to learn, problem solving, experimenting, inquiring and investigating. These behaviours reify underlying attitudes towards learning which schools view as embodying curiosity; the motivation, drive and appetite to learn. The promotion of curiosity has a wide-ranging impact on the individual, their role in society and their contribution to a sustainable economic future.

Chapter 6

Conclusion

Significant policy and practice implications arise when schools consider what they value before they make decisions for their learners, their school and their community. Being able to reflect on what educational values and beliefs are deemed to be important and how these values and beliefs can influence a school's strategic direction is a paradigmatic shift from the centralised policy driven decision making of the latter 20th-century in New Zealand education. As a policy statement, The New Zealand Curriculum (2007) identifies what the state deems to be important in education. "Its principal function is to set the direction for student learning and to provide guidance for schools as they design and review their curriculum" (MOE, 2007, p. 6). It incorporates the content knowledge, values, competencies and behaviours that the Ministry of Education, as agents of the state, see as beneficial for students to display.

This research study examined the articulation of The New Zealand Curriculum value of curiosity by schools by answering the research question of **how the value of curiosity is defined and described within the school context, and in what ways curiosity is evident in, and encouraged through, school strategic direction and policy statements**. The evidence from the research suggests that there is inconsistency and ambiguity around the understanding and definition of curiosity as a general concept as well as how it is defined within the school context. The findings indicate that while the value of curiosity lacks definition, it is often conflated, as in The New Zealand Curriculum (2007), with the notion of curiosity with creativity, critical thinking and/or innovation. It is described as an innate state that drives people to seek out information to understand and

make meaning of the world around them. However, it can be argued that by prioritising curiosity through strategic planning and providing opportunities through curriculum design and implementation for students to explore and question, schools can establish an environment which promotes and develops curiosity in their students. Based on the conclusions from the study, recommendations are made on how schools can promote curiosity. Finally, the limitations of the study and potential areas for future research are considered.

Conclusions

There is not a widely-used, standard definition of ‘curiosity’ in either the research literature or in the evidence studied during this research. In general, there is a lack of clarity over what curiosity is. On one hand, curiosity is viewed as an intrinsic need that people have to seek out new information and knowledge and explore new sensory experiences that motivate exploratory behaviour. On the other hand, curiosity can be seen in the school context as a habitually-learned disposition, that can be developed through deliberate pedagogical choices and learning experiences where people have the ability to develop a cognitive understanding of curiosity, identify the circumstances of its beneficial application, and develop the behaviours associated with it.

The review of published literature provided broad insights into how research theorists describe and define curiosity. These included attributes such as critical thinking and questioning, agency, engagement, care, exploration and wonder, creativity and innovation. Using these themes allowed for a targeted analysis of publicly available strategic documentation from New Zealand schools. Based on a qualitative analysis of school strategic documentation, it can be concluded that while the term curiosity is poorly canvassed in school documentation, themes

drawn from literature that theorists stated as being linked to or evidence of curiosity were present and were identified as desirable attributes for their learners.

Research literature presents curiosity as an important factor to consider when designing and implementing the curriculum. On examination of these themes and in discussion with school Principals, it was found that they believed that fostering curiosity will produce students who are self-directed, able to initiate learning, be engaged in their learning, be creative and critical problem-solvers, who are reflective and responsive to social justice issues, are environmentally aware, courageous and resilient. This was reiterated by the expression of desired student outcomes in strategic documentation as identified through the schools' mission and vision statements, graduate profiles and strategic objectives.

This research study has identified that curiosity has great potential benefit for teaching and learning, having a positive impact on the individual learner, their place as a member of society and as future global citizens. It also contributes to their role in developing and maintaining a sustainable economic future for New Zealand. Therefore, the promotion and development of curiosity should be a principle that school curricula are designed and implemented around. Strategic plans and local curriculum are key in setting the direction and priorities for schools. Identifying and agreeing that curiosity is of value is an important first step in creating an environment where school practices and classroom procedures support the cultivation of curiosity for every student.

As this research takes the stance that while curiosity is innate (and therefore can not be taught), the display of habitually-learned curious behaviours can be promoted and encouraged, so it follows that there is a need to address this in the curriculum. To leave it up to students to engage in self-directed experiences

which provide opportunities to express and develop their curiosity is, to some extent, leaving the development of curiosity to chance. School leaders interviewed for this study, believed that proactively designing a curriculum which makes space for curiosity will enable students the opportunity to explore their curiosities through immersive and both teacher-directed and self-directed experiences.

Recommendation

This research concludes by raising the following recommendation for curriculum planning and practice to promote curiosity in the school context. The cultivation of curiosity in the school context is made possible by the emphasis given to curiosity in the strategic documentation. The strategic documentation of a school and the creation of its local curriculum will not in itself define what schools should do to promote curiosity. If, however, there is no room for curiosity in the strategic documentation, there is no room for it in the classroom (Engel, 2015; Ostroff, 2016).

Although the value and treatment of curiosity was initially discussed at the strategic level, when asked to elaborate on curiosity within the school, the Principal participants all commented that to develop curiosity in students, it had to be considered down to the level of the design and delivery of the curriculum. It was at the design and delivery level that school leaders saw that a deliberate focus on curiosity would make a real difference for the students. A school's curriculum must enable teachers to adapt and plan for the changing interests and triggers of curiosity for the students. These triggers may present in real time and create tangential changes to the direction of learning. When teachers recognise

and grasp the teachable moments, and when students are given unguided time to explore and create, student curiosity develops.

A key to cultivating curiosity is the encouragement of discussion; allowing students to ask questions, answering questions and allowing students to pursue a line of questioning until they are satisfied, allowing students to feel the resulting satisfaction from fulfilling their curiosity. Schools need to create an environment that is permissible and encourages conversation. By noticing the conversations that children have and building on them, teachers can learn about the curiosities of their students. Through the identification of these curiosities and the encouragement of exploration, students can be supported to guide and monitor their own learning and make decisions about what and how to learn.

Einstein described curiosity as “a delicate little plant”; to flourish it needs to be nurtured. Curiosity is deemed to be critical to educational development and achievement as well as personal growth. It is associated in the Curriculum (2007) with inquiry, creativity, innovation and critical thinking. With deliberate nurturing by teachers, it has the power to motivate learning and assist students to fulfil their potential, academically, personally, socially and professionally by developing the necessary knowledge, skills, relationships, and behaviours.

Areas for further research

The evidence from this study confirms the importance of promoting curiosity for students and society. If the government wishes to produce citizens that are innovative and enterprising, research suggests that curiosity is the key. It is therefore recommended that further research is undertaken to discover how school leaders and teachers can make space for curiosity in a busy curriculum,

exploring pedagogical choices which promote knowledge and skill around curiosity and develop curious habits.

There remains ambiguity around both the definition of curiosity and it is description as a value. Another area for potential future research could be to assess where curiosity sits within the curriculum, whether it is indeed a value, or if it sits better as a principle or a competency.

Limitations of the research

Publicly available documentation provided limited access to data and necessitated the redesign of the research methodology. While content analysis of documentation provided a broad understanding, it was very superficial. To further understand the phenomena of curiosity in the school context, interviews were conducted with selected principals. Due to the nature of the interview process, there was the opportunity for more responsive data collection; specifically clarification and further explication.

Discussion with school principals provided insight and anecdotal knowledge of the value curiosity holds and how this is translated into local curriculum policy within individual school contexts. Principals shared their decision making process around the selection, defining and implementing of their schools values and the consideration around the inclusion of curiosity in their strategic planning, based on their experience and beliefs. They shared and justified examples of how they had promoted and developed curiosity in their schools.

There are two identified limitations in this study that could be addressed in future research. First, school selection was based on evidence that the school prioritised the development of curiosity as indicated by inclusion of the term curiosity in their

strategic documentation. This process identified a methodological limitation in this research, the initial design being flawed given the scarcity of information in the public documentation. There was an inadequate sample of schools due to the limited use of the term curiosity, therefore, the research relied on examination of related concepts taken from literature. This necessitated an increased level of interpretive activity during the data collection process, thereby increasing the risk of increased researcher subjectivity.

Second, the primary limitation to the generalisation of these results is the limited number of interviewees. The study utilised interviews to focus on deep scrutiny of curiosity within specific school contexts by collecting context specific anecdotal information for analysis in relation to themes and concepts found in existing literature. In taking a phenomenological approach to this research, the aim of this data collection was not to formulate a generalisation, but rather to explore the beliefs and experiences of the school leaders. Future research would benefit from utilising an increased number of interviews.

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Appendices

Appendix A: Ethics Approval

a) **Approval for Ethics Application 20/34**

b) **Approval for Amendment to Ethics Application 20/34**

Approval for Ethics Application 20/34

24 February 2020

Leon Benade
Faculty of Culture and Society

Dear Leon

Re Ethics Application: **20/34 Curiosity: Its strategic treatment in school policies**

Thank you for providing evidence as requested, which satisfies the points raised by the Auckland University of Technology Ethics Committee (AUTEC).

Your ethics application has been approved for three years until 24 February 2023.

Standard Conditions of Approval

1. The research is to be undertaken in accordance with the Auckland University of Technology Code of Conduct for Research and as approved by AUTEC in this application.
2. A progress report is due annually on the anniversary of the approval date, using the EA2 form.
3. A final report is due at the expiration of the approval period, or, upon completion of project, using the EA3 form.
4. Any amendments to the project must be approved by AUTEC prior to being implemented. Amendments can be requested using the EA2 form.
5. Any serious or unexpected adverse events must be reported to AUTEC Secretariat as a matter of priority.
6. Any unforeseen events that might affect continued ethical acceptability of the project should also be reported to the AUTEC Secretariat as a matter of priority.
7. It is your responsibility to ensure that the spelling and grammar of documents being provided to participants or external organisations is of a high standard.

AUTEC grants ethical approval only. You are responsible for obtaining management approval for access for your research from any institution or organisation at which your research is being conducted. When the research is undertaken outside New Zealand, you need to meet all ethical, legal, and locality obligations or requirements for those jurisdictions.

Please quote the application number and title on all future correspondence related to this project.

For any enquiries please contact ethics@aut.ac.nz. The forms mentioned above are available online through http://www.aut.ac.nz/research/researchethics

(This is a computer-generated letter for which no signature is required)

The AUTEC Secretariat
Auckland University of Technology Ethics Committee

Approval for Amendment to Ethics Application 20/34

6 April 2020

Leon Benade
Faculty of Culture and Society
Dear Leon

Re: Ethics Application: **20/34 Curiosity: Its strategic treatment in school policies**

Thank you for your request for an amendment to your ethics application.

An amendment to extend the method of data collection to include the option for 1-1 interviews using online electronic conferencing applications, eg. Zoom, Skype is approved.

I remind you of the **Standard Conditions of Approval**.

8. The research is to be undertaken in accordance with the Auckland University of Technology Code of Conduct for Research and as approved by AUTEC in this application.
9. A progress report is due annually on the anniversary of the approval date, using the EA2 form.
10. A final report is due at the expiration of the approval period, or, upon completion of project, using the EA3 form.
11. Any amendments to the project must be approved by AUTEC prior to being implemented. Amendments can be requested using the EA2 form.
12. Any serious or unexpected adverse events must be reported to AUTEC Secretariat as a matter of priority.
13. Any unforeseen events that might affect continued ethical acceptability of the project should also be reported to the AUTEC Secretariat as a matter of priority.
14. It is your responsibility to ensure that the spelling and grammar of documents being provided to participants or external organisations is of a high standard.

AUTEC grants ethical approval only. You are responsible for obtaining management approval for access for your research from any institution or organisation at which your research is being conducted. When the research is undertaken outside New Zealand, you need to meet all ethical, legal, and locality obligations or requirements for those jurisdictions.

Please quote the application number and title on all future correspondence related to this project.

For any enquiries please contact ethics@aut.ac.nz. The forms mentioned above are available online through http://www.aut.ac.nz/research/researchethics

(This is a computer-generated letter for which no signature is required)

The AUTEC Secretariat
Auckland University of Technology Ethics Committee

Appendix B Tools

a) Participant Information Sheet

b) Consent Form

c) Interview Tools

d) Transcriber confidentiality agreement

Participant Information Sheet

Date Information Sheet Produced:

15/03/2020

Project Title

Curiosity: Its strategic treatment in school policies.

An Invitation

My name is Marina Binns, I have been a primary school teacher for the past 23 years. I am currently undertaking study to complete my Masters Degree in Education. As part of this study I am researching curiosity and its place and use in strategic documentation and school policy.

I would like to invite you to participate in a face-to-face interview to gain a fuller understanding of what this looks like in schools. I would appreciate your participation and insight into the inclusion of curiosity in your specific school policy and strategy.

What is the purpose of this research?

Curiosity is considered to have potential positive implications for academic achievement and is presented as a value in the New Zealand Curriculum, however, the list of values within the curriculum are not defined, described or elaborated. The list is arguably vague and broad to allow for the values to be acceptable to all school communities while still guiding students towards relational and citizenship goals and the development of personal dispositions. It is unclear what precisely schools are to value or the approach they should take in the teaching of values. Through document and critical analysis, this research will investigate how the notion of curiosity, stated as a value in the New Zealand Curriculum, is defined and implemented within school strategic documentation and policy.

This research seeks to investigate how curiosity is defined and described within your individual school context. It will investigate your understanding of the notion of curiosity in a school context, and specifically within the context of being a value in the New Zealand Curriculum.

The prime purpose of this research is the completion of a thesis for my Masters Degree. The findings of this research may be used for academic publications and presentations.

How was I identified and why am I being invited to participate in this research?

After spending time reviewing strategic documentation that was available on school websites, a balance of types of schools was selected to represent the balance of schools in New Zealand.

Your school was selected using the following criteria.

CRITERIA

1. Curiosity is one of the school's values.
2. The vision of the school incorporates the word, 'curious' or 'curiosity'.
3. The Mission of the school incorporate these words.
4. The school has a learner profile which incorporate these words.
5. Strategic goals incorporate these words.
6. Mission or vision incorporate one or more additional concepts and ideas connected with curiosity as identified by previous research include questioning, engagement, innovation, motivated learner, critical thinking, creative thinking, future focussed, ongoing desire to learn and care and concern.
7. The school learner profile incorporates one or more additional concepts and ideas connected with curiosity as identified by previous research.
8. Strategic goals incorporate one or more additional concepts and ideas connected with curiosity as identified by previous research.

How do I agree to participate in this research?

If you are happy to participate in this research, I ask that you respond by email to marinab@sjmb.school.nz to allow us to make a time for the interview which suits you.

You will need to complete a consent form, which will be collected at the time of the interview.

Your participation in this research is voluntary (it is your choice) and whether or not you choose to participate will neither advantage nor disadvantage you. You are able to withdraw from the study at any time. If you choose to withdraw from the study, then you will be offered the choice between having any data that is identifiable as belonging to you removed or allowing it to continue to be used. However, once the findings have been produced, removal of your data may not be possible.

What will happen in this research?

During the face-to-face interview I will audio record the interview. This will then be transcribed and a written copy provided for you to review and return. You are able to make any additions, deletions or changes that you wish.

The completed data from the interview will be collated with findings from publicly available data in the writing of my Masters thesis.

How will my privacy be protected?

Participants will have confidentiality. Transcripts will not contain names of participants or schools unless stated in the answers by the participants. This identification will be removed from any and all information before it is compiled and used in research findings.

What are the costs of participating in this research?

The anticipated time for the interview is one hour. A written transcript will be sent following transcribing which you are welcome to review and modify.

What opportunity do I have to consider this invitation?

If you are happy to participate, please let me know by email by 27 March.

Will I receive feedback on the results of this research?

You are welcome to receive a copy of the findings. Upon completion of the research you will be offered a 1-2 page summary of the research.

What do I do if I have concerns about this research?

Any concerns regarding the nature of this project should be notified in the first instance to the Project Supervisor, Dr Leon W Benade, leon.w.benade@aut.ac.nz, ph: 921 9999 ext: 7931

Concerns regarding the conduct of the research should be notified to the Executive Secretary of AUTEC, Kate O'Connor, *ethics@aut.ac.nz* , 921 9999 ext 6038.

Whom do I contact for further information about this research?

Please keep this Information Sheet and a copy of the Consent Form for your future reference. You are also able to contact the research team as follows:

Researcher Contact Details:

Name: Marina Binns
Email: marinab@sjmb.school.nz
Phone: 021 207 6691

Project Supervisor Contact Details:

Name: Dr Leon W Benade
Email: leon.w.benade@aut.ac.nz
Phone: 921 9999 ext: 7931

Approved by the Auckland University of Technology Ethics Committee on 24/02/2020, AUTEC Reference number 20/34.

Consent Form

Project title: ***Curiosity: Its strategic treatment in school policies.***

Project Supervisor: ***Leon Benade***

Researcher: ***Marina Binns***

◯ I have read and understood the information provided about this research project in the Information Sheet dated 15 March 2020.

◯ I have had an opportunity to ask questions and to have them answered.

◯ I understand that notes will be taken during the interviews and that they will also be audio-taped and transcribed.

◯ I understand that taking part in this study is voluntary (my choice) and that I may withdraw from the study at any time without being disadvantaged in any way.

◯ I understand that if I withdraw from the study then I will be offered the choice between having any data that is identifiable as belonging to me removed or allowing it to continue to be used. However, once the findings have been produced, removal of my data may not be possible.

◯ I agree to take part in this research.

◯ I wish to receive a summary of the research findings (please tick one): Yes◯ No◯

Participant's signature: .....

Participant's name: .....

Participant's Contact Details (if appropriate):

……..

……..

……..

……..

Date:

Approved by the Auckland University of Technology Ethics Committee on 24/02/2020 AUTEC Reference number20/34

Note: The Participant should retain a copy of this form.

Interview Tools

Questions

How would you describe the purpose and role of the New Zealand Curriculum?

In the front section of the curriculum there are different ideas and aspects. What do you see as the most important ideas contained in the first part of the curriculum?

What value do these add when developing the local curriculum?

What challenges do these add when developing the local curriculum?

What is your role in setting strategic direction?

Could you briefly outline the process you undertake when setting the strategic direction of your school?

The curriculum identifies values as “deeply held beliefs about what is important or desirable. They are expressed through the ways in which people think and act.” It states that “every decision relating to curriculum and every interaction that takes place in a school reflects the values of the individuals involved and the collective values of the institution.”

What are your thoughts about this statement in relation to the work you have done on your strategic plan?

Participants are given a list of values from the New Zealand Curriculum

What are your thoughts around the values included on the list of values from the New Zealand Curriculum? Are there any that you think should not be prioritised as values? Do you believe there have been any omitted that should be included?

How did you decide on your school values?

When you were deciding, did you take the curriculum values into consideration?

What role to the school values take in your school?

How are the values evident in the school philosophy, structure and curriculum?

How do you explore and model the values in your school?

Do you consider values to be part of the curriculum or an outcome?

Exploring the value of curiosity a bit further. what does the term ‘curiosity’ bring to mind?

How would you define and interpret the value of curiosity from within the New Zealand Curriculum?

If curiosity is a value: Why was curiosity selected as a school value?

How would you describe curiosity in a school context?

How do you think the New Zealand curriculum influences curiosity in students?

Is curiosity included in your school curriculum? Why/ Why not?

How do you think your school curriculum influences curiosity in students?

What are the qualities /attributes you see in curious students?

How do you, as a school, model curiosity for students?

Can you tell me of an example from your experience where a student’s curiosity was assisted?

What do you see are the benefits of developing curiosity in students?

What do you consider to be the outcomes of developing and encouraging curiosity for the students/ staff/society/future?

Is there anything you can think of that the school could do more of to encourage curiosity in students?

If curiosity is a value: What is difficult about implementing curiosity as a value?

If curiosity is not a value: What is difficult about encouraging and developing curiosity in students?

Recording Protocol

The interview will be recorded using the audio recording function on a mobile phone. It will then be transcribed, and a copy sent to the participants for any addition, deletion or alteration.

Confidentiality Agreement

Confidentiality Agreement

Project title: ***Curiosity: Its strategic treatment in school policies.***

Project Supervisor: ***Dr Leon Benade***

Researcher: ***Marina Binns***

- ✓ I understand that all the material I will be asked to transcribe is confidential.
- ✓ I understand that the contents of the tapes or recordings can only be discussed with the researchers.
- ✓ I will not keep any copies of the transcripts nor allow third parties access to them.

Transcriber's signature: T.K. Mendey

Transcriber's name: Tracy Mendey (Digital Fingers

Transcriber's Contact Details (if appropriate):

Tracy Mendey digitalfingers01@gmail.com

Date: 14th April 2020

Researcher Contact Details:

Name: Marina Binns

Email: marinab@stjohnsmairangbay.school.nz

Phone: 021 207 6691

Project Supervisor Contact Details:

Name: Dr Leon W Benade

Email: leon.w.benade@aut.ac.nz

Phone: 921 9999 ext: 7931

Approved by the Auckland University of Technology Ethics Committee on type the date on which the final approval was granted AUTEC Reference number type the AUTEC reference number

Note: The Transcriber should retain a copy of this form.

Appendix C Strategic Documentation School

Summary

School 1		
Location:	School type:	Roll:
Main Urban in Auckland	Contributing (Y1-6)	700-800

A large, urban, predominantly European primary school in a high socio-economic area, this school identified their students as learners who are curious. Like the New Zealand Curriculum, they linked the notion of curiosity with creativity and life-long learning. Within their vision statement they expressed the desire to think and also to consider others. While the strategic documentation identified the goal of engaging students and encouraging innovation, there was no further mention of curiosity within the strategic documentation available.

School 2		
Location:	School type:	Roll:
Main Urban in Auckland	Contributing (Y1-6)	300-400

A mid sized, urban, predominantly European primary school in a developing mid to high socio-economic suburb of a larger city, this school did not include the term curiosity or curious in their charter, however, they identified their school as having a learning culture where care for others was valued. They described their curriculum as future focussed and one that extended and accelerated the student's learning capacity by delivering a curriculum that enabled all students to become active, confident, creative and innovative learners and thinkers. They described both their curriculum and their pedagogy as innovative, however, when reviewing the goals within the charter both the curriculum goal and the teaching and learning goal focussed on developing understanding and instructional, evaluative, adaptive (teaching) and digital capability. They commented that motivation to learn would be achieved through increased engagement; by seeking student voice and by the students taking more responsibility for their learning. Creativity was linked to activities to express their culture.

School 3		
Location:	School type:	Roll:
Main Urban in Auckland	Full Primary (Y1-8)	400-500

A newly built mid sized full (Y1-8) urban multicultural primary in a new master-planned suburb which is focussed on serving each student to ensure that learning takes place for each individual. Their strategic direction is focussed on creating curious individuals who have both thinking capability and criticality

and the ability to relate well to others. They describe a desire for their students to stretch themselves as learners and identify the ability to reflect, question, connect, think, be self-aware, wonder and be determined as key to the success of this desire. Future focussed strategic thinking is evident in the focus placed on developing the learning process. They describe a teaching and learning process as one that will push boundaries and use predictions and trends to evolve and change based on need. They identify the desire to motivate and extend, to be flexible and creative, to be innovative and to undertake student led inquiry. They see creating room for student led innovation, entrepreneurship and problem-solving opportunities within the school and wider community is engaging and motivating for learners. They identify the belief that every individual has innate or potential interests and strengths which need to be pursued, which they see as key to increasing learning and increasing enjoyment. ERO noted the innovative and explorative approach to curriculum and the emphasis on care and concern for others.

School 4		
Location:	School type:	Roll:
Main Urban in Auckland	Intermediate (Y7-8)	900-1000

A large, urban, multicultural intermediate school in a well established suburb, this school provides, according to ERO, a rich and innovative curriculum that is responsive to student feedback. The school identifies their curriculum as one that engages and challenges learners who are self-motivated, engaged, reflective, persevering explorers. They believe that individual growth comes through challenge and learning, and as such incorporate the inquiry model into each unit of work.

School 5		
Location:	School type:	Roll:
Minor Urban Canterbury	Full Primary (Y1-8)	600-700

A mid sized, multicultural primary school in a satellite town, this school was built to cater for the recent growth and development in the area. The school considers itself to be future focussed and cutting edge. Their vision for their learners includes the ability to be skilled thinkers who will think critically, creatively and reflectively and who will ask questions, take risks and challenge assumptions. They identify being curious as one of their competencies, defined as life-long learners who are eager to know or learn something. They are curious about the world we live in and someone who is innovative, future-focussed and an out of the box thinker. The other competencies include characteristics that literature links to curiosity; striving for excellence, care for

others and creative thinking. The school aims to grow innovation and states that it encourages innovation and creativity, with creativity being a strategic goal; fostering imagination and the pursuit of novel ideas. It also aims to use a variety of digital tools and resources to enhance creativity and curiosity. ERO commented that the school's curriculum actively engages students and successfully supports their learning and that the impact of this is most evident in the extent to which students are motivated to learn.

School 6		
Location:	School type:	Roll:
Main Urban in Auckland	Secondary (Y9-13 Girls)	2200-2300

A large, longstanding, multicultural high school for girls located in the inner city, this school's strategic documentation states that it fosters courage, compassion, curiosity and community, which are the school values. It defines compassion as caring for others and for yourself and curiosity as encouraging students to be actively open to learning. Its vision for learning incorporates innovation, in the context of technology, and aims to build students' agency and critical engagement in learning and see this as evident in the student's intellectual curiosity as well as their engagement in new technologies, production of high quality outcomes and sense of social responsibility. There is the expectation that students will be proactive in their learning but this is expanded to focus on their needs, awareness of their culture, their physical pursuits and creative expression. As well as the values, critical, creative and caring thinking is identified as a key requirement for preparing the students for their future through engendering a love of life-long learning.

School 7		
Location:	School type:	Roll:
Main Urban in Auckland	Contributing (Y1-6)	600-700

A large, urban, multicultural primary school in a well established, high socio-economic area, this school aims to empower students to become motivated and future focussed. It states that it will develop critical thinkers and competent life-long learners and learners who will care actively for the wellbeing of others. Its core values include creativity/ innovation. According to ERO, while priority is given to literacy and numeracy learning, curriculum review is ongoing and results in learning programmes that focus on developing students' competence, curiosity and independence as learners. They also state that teachers encourage creative and critical thinking effectively within inquiry-based approaches towards learning resulting in students that are motivated and highly engaged in their learning.

School 8		
Location:	School type:	Roll:
Minor Urban Northland	Composite (Y1-10)	100-200

A small, predominantly Māori, composite school, this longstanding school is located in a low socio-economic area, in a semi-rural town servicing local primary industry and farming. The schools vision aspires to encourage creativity and to develop life-long learning, underpinned by the school values which include curiosity, which they expand to Inquiring, critical thinker, innovative, interested, adventurous and respect which is expanded to respect for self, others, the environment and property, caring, accepting of diversity and empathy for others . It aims to develop critical and caring thinkers. ERO report that the concept of aroha, manaakitanga and whanaungatanga are evident in the school. An identified school belief is that children have a right to innovative learning opportunities.

School 9		
Location:	School type:	Roll:
Main Urban Waikato	Restricted Composite (Yr 7-9)	700-800

A large urban, predominantly Māori and European restricted composite school, situated in a well established, average socio-economic suburb within the city centre. It delivers the New Zealand Curriculum through the International Baccalaureate Primary Years Programme (PYP) which is said to be infused with a spirit of inquiry, which is the leading pedagogical approach and involves the students exploring, wondering and questioning. It strives to develop learners who are inquirers, knowledgeable, thinkers, communicators, principled, open-minded, caring, risk-takers (courageous), balanced and reflective. The school sees the PYP curriculum as recognising many different forms of inquiry, based on students' genuine curiosity and on their wanting and needing to know more about the world. It is most successful when students' questions and inquiries are genuine/honest and have real significance in moving them in a substantial way to new levels of knowledge and understanding. It values innovation and future focussed learning and aims to foster an ability to think critically and creatively as well as an openness to life long learning. ERO reported that learners are confident and curious to explore their understanding of the world around them.

School 10		
Location:	School type:	Roll:
Main Urban Auckland	Full Primary (Y1-8)	900-1000

A large urban multicultural inner city suburban school, this school is situated in a high socio-economic area and caters for students from Years 1 to 8. The school's vision aims to develop learners who are curious, confident and connected. This is supported by the school's key habits of thinking, persisting, creativity, managing self and communicating, based on the NZC key competencies. The school is developing its understanding of how to teach across the curriculum with an inquiry approach. To support their vision the school believes that all students are full of curiosity and creativity and that it is the role and responsibility of the teacher to fabricate the necessary environment to address the diverse ways children learn and construct meaning. ERO identified that children are active participants in their education where curiosity, challenge, critical thinking and creativity are valued outcomes and that they demonstrate curiosity, confidence and collaboration in their active engagement in learning. ERO also reports that evaluation, inquiry and knowledge building are embedded in school systems and practices.

School 11		
Location:	School type:	Roll size:
Urban Auckland	Contributing (Y1-6)	200-300

A longstanding, semi-rural school on the fringe of the Auckland region, this school is predominantly Māori. The school was originally built to service local industry and farming; however, the area is now experiencing renewed development and growth. They aim to ensure students are engaged in motivating, authentic challenging curriculum programmes which encourage student curiosity, participation and a desire for further learning.

School 12		
Location:	School type:	Roll size:
Rural Auckland	Full Primary (Y1-8)	<100

A small rural school in a coastal area outside of Auckland. They value the connections and close links they have to their local community and the local environment and see this as an important aspect in developing students who have a strong sense of belonging and self-worth. There is a strong focus in their strategic documentation around learning. This is linked directly to both gaining knowledge and learning how to learn.

Curiosity is one of the school's values and a desired attribute in their learners. Curiosity in their akonga-students is linked to ako-learning and is seen as a measure of success of individualised learning through the provision of

equitable learning opportunities through digital technology use, culturally responsive pedagogy and a local curriculum.

They describe their learners as confident and expressed the desire for them to be enthusiastic and motivated learners who show initiative. A goal for their learners was to be curious about the world; thinking critically, creatively and reflectively. To achieve this the school aims to develop students' ability to sustain engaged learning, questioning, thinking and self-assessment skills. Strategic documentation identifies 'curiosity learning' as a priority and identifies free play, meaningful structured learning, and personal choice as important for students to be successful at school.

School 13		
Location:	School type:	Roll size:
Rural Canterbury	Full Primary (Y1-8)	400-500

A large well established school that has a diverse, suburban and rural mixed community. They describe their learners as curious, respectful, motivated, reflective, team players. The school expects the students to know and demonstrate the learner attributes in and around the school on a regular basis and reports on learner attributes to the Board of Trustees. The school describes success as incorporating an ongoing desire to learn. Part of the vision they have for their school is that it is seen as a school that focuses on innovative practice. Curiosity is identified as an outcome of developing resilience. Particularly around making informed decisions. They link being curious to having GRIT- Duckworth and Zolli's work around resilience which is described as being linked to Optimism, Confidence and Creativity. They believe that through increasing learner agency, the student's will be more engaged in their learning and initiate and build their own learning.

School 14		
Location:	School type:	Roll size:
Rural Otago	Full Primary (Y1-8)	500-600

A newly established school built within a new housing development, this school strives to "not limit the imagination of the children." Believing that learning is underpinned by collaboration, curiosity, a growth mindset, thinking and joy they aim for each child to be engaged in the curriculum, to think creatively and to explore.

Their vision is to create a climate of possibility so that students will leave their school "knowing that they can pursue the possibilities" based on the work of Ken Robinson and, in particular his presentation, "How to escape Education's

Death Valley" The expected outcomes are for students to be competent, self-managing, collaborative, curious learners who are resilient and have a desire for ongoing learning. While they do not directly talk about increasing student agency, they see part of their role in education as empowering students to maximise their potential; people who can learn to learn, make connections, demonstrate high levels of interest and motivation.

There is a significant focus on the schools values. They group their school values into categories; core values (which they believe are, not only the most important, but that they are already in existence and are strongly evident within their school), aspirational values (which they are something they aspire for all of the school community) and Permission to Play values (which are for staff only, to inform their pedagogical practice and their behaviour and conduct within the school).

They directly state that curiosity is an aspirational value, aligning it with innovation stating that they "value **innovation and curiosity** by encouraging creative thinking and drawing from the beauty and diversity of the natural alpine environments found in the richness of our heritage and the legacy of our partnership with Tangata Whenua." As an aspirational goal, the school believes that, while important, no one is able to reach a point where they can say they always display curiosity. They believe that these values are developed over a lifetime.

They believe that a degree of challenge and struggle is part of the learning process; that children learn from failure and taking risks.

School 15		
Location:	School type:	Roll size:
Main Urban Auckland	Contributing (Y1-6)	500-600

A long-established urban school catering for a multicultural student population from Year 1 to Year 6. The school community includes a large number of ESOL learners for whom English is an additional language. There is a strong emphasis on wellbeing and the belief that this has a positive impact on student engagement and learning. They claim to value and celebrate: the community, personal responsibility, success, diversity, curiosity (linked with) creativity and commitment by creating opportunities for curious, critical thinkers who continue to learn and make a difference in their world. They believe that curiosity and creativity is celebrated in their children.

A key to promotion of curiosity is a curriculum which has a strong focus on the inquiry process, and, as a result the teachers are encouraged and able to let go of traditional approaches. Teaching staff are open to sharing knowledge of

effective collaborative approaches. Risk taking and innovation is encouraged and technology is used to better the outcomes rather than reconstructing old ways of working.

School 16		
Location:	School type:	Roll size:
Main Urban Auckland	Contributing (Y1-6)	600-700

Curiosity is included in the vision statement alongside connected, capable and collaborative. The school believes that by nurturing innovation and valuing questions more than answers curiosity will be encouraged within the students.

The school's four vision principles underpin all curriculum decision making and provide a framework for aspects of the school operational procedures. Exploration and wondering are seen as key factors for creating and cultivating curiosity.

School 17		
Location:	School type:	Roll size:
Rural Auckland	Full Primary (Y1-8)	100-200

The school states that it aims to be a "nurturing community of adaptive, creative, curious, lifelong learners, who confidently achieve excellence through integrity and perseverance". It also aims for its students to develop the competencies of the New Zealand Curriculum (NZC). The school values excellence, innovation, inquiry and curiosity, diversity, community and participation, ecological sustainability, integrity and respect. ERO found that many of the children demonstrated that they are confident, actively involved and curious learners and that the children also displayed achievement of other valued outcomes. This is credited to teachers successfully establishing learning environments that encourage children to take part in constructive discussions and engage with the curriculum.

The school describes itself as a nurturing community of adaptive, curious and creative lifelong learners who confidently achieve excellence through integrity and perseverance. An innovative and caring staff who are dedicated to helping children reach their potential is viewed as a key component in encouraging and developing curiosity in students. They believe that, from a solid foundation of literacy and numeracy acquisition, a broad, holistic 21st Century education that fosters critical thinking, inquiry learning, and creativity will develop. This is supported by a strong emphasis on a school wide virtues programme that encourages and fosters good social skills including honesty, politeness and respect for others and the environment where students learn to develop the

ability to think creatively, critically, strategically and logically, explore, with empathy, the values of others.

School 18		
Location:	School type:	Roll size:
Main Urban Hawkes Bay	Integrated Secondary (Y9-13 Girls)	300-400

The school states that curiosity is an important intellectual trait that is encouraged and embraced. They believe that being curious keeps your mind stimulated and opens up a world of opportunities. When defining their graduate profile, the school sees curiosity as a skill that will help their students successfully navigate their way in the uncertain and changing future by encouraging innovation and creativity. They see curiosity as an indication of forward thinking, being linked to critical thinking and global connection.

The teaching approach taken is one of inquiry-based experiences and projects making the most of flexi-learning and interdisciplinary opportunities.

They believe that the environment within the school is key and for curiosity to develop, innovation, creativity and collaboration need to thrive.

School 19		
Location:	School type:	Roll size:
Main Urban Auckland	Contributing (Y1-6)	200-300

A well established contributing primary school in suburban Auckland. This school states that their decision making is driven by their vision, their values and their graduate profile. It places a strong emphasis on innovation and high quality teaching and learning and aims to grow confident, creative, curious learners who are connected to the community and wider world, students who are confident in their abilities. The school believes that this enables students to be able to take risks and be innovators. The school envisages graduating students to be active seekers, users and creators of knowledge.

Student engagement and agency is viewed as an important and valuable part in the education process. The school strives to have students actively contribute to the curriculum, being actively involved in developing their learning programmes and knowing how well they are learning. The school aims to engage students in making decisions about their learning and using their interests to make learning more relevant. Teachers regularly ask students what they know and what they would like to know more about. Learning includes many practical experiences that are linked to assessment and what students need to know to experience success. Classroom programmes are

well planned, stimulating, meaningful and fun. Science is a feature of the curriculum and has become more hands-on for students. Students' opinions are regularly sought and used to improve wellbeing, learning and the environment. Students confidently express their opinions and negotiate with staff and each other to find the best solutions for issues that arise.

School 20		
Location:	School type:	Roll size:
Urban Waikato	Integrated Full Primary (Y1-8)	400-500

The school has identified their desired outcomes and described the attributes of learners which they believe will achieve those outcomes. The value based outcomes defined by the school for their students are that they will become connected by developing positive relationships, actively involved as moral contributors to wider communities and life-long learners and critical, creative and moral thinkers. This is supported by the objective that the whole school will be aligned through the attributes of the graduate profile which includes: having been engaged and curious learners, be critical and creative problem solvers with a growth mindset, be courageous, environmentally aware and responsive to social justice issues, and, have a highly effective set of inquiry skills that will enable them to be active participants in their own learning and feel empowered to make a difference in their family, school, church and wider community. They believe that all learners should become agents of their own learning.

The school expectations are that, within the school learning spaces, there will be visual evidence of learning experiences which are carefully planned to engage and develop curiosity for all students as well as evidence of school-wide, team and teacher planning acknowledge and explicitly plan for development of a way of inquiring that includes: triggering engagement, identifying issue or challenge, wondering and discovering, making sense of information, asking questions and investigating, taking action, and, thinking about learning.