

Sabbatical Report 2011

Brian Gower Beachlands School

“To investigate primary schools that have developed an effective environmental education programme that is authentic and engages students in learning.”

ACKNOWLEDGEMENTS:

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Background

Environmental Education is becoming increasingly important in the world we live in. With the growing global awareness of the need to look after the finite resources we have on our planet there are more and more people taking an active interest in the environment. This interest occurs at all levels from the international political level through to the way we live our lives on a daily basis. Due to this, the environment and related issues provides us with a rich resource to engage learners in our schools and make a real connection with the world we live in. Environmental Education provides the means through which children can be involved in authentic learning and achieve the skills of becoming an effective and contributing member of society. Through the use of Environmental Education many curriculum areas can become more purposeful and connected with the interests and passions of the students. This connection and purpose is missing in the way many curriculum areas are presented to the students because it is all about imparting a body of knowledge rather than making an authentic connection with each student and their prior knowledge. Environmental Education has and will continue to provide many authentic learning contexts for teachers and children to learn from. Environmental Education promotes the attitudes and skills required to become an effective learner and contributor to the world we live in. To be an effective learner is essential if we are to prepare students for tomorrow.

The need to engage our students in environmental education is summed up simply by the following belief outlined in the Guidelines for Environmental Education. “Environmental Education is an investment in our future. If New Zealand is to have a sustainable future, increased understanding of the environment and environmental decisions is essential” (Guidelines for Environmental Education page 5.)

In New Zealand Schools we need to be making our future generation more aware of the responsibility they have towards the care of the environment as well as encourage them to actively participate in maintaining and improving the local, national and international environment. This point is reflected in the Environment 2010 strategy “To encourage environmentally responsible behaviour and informed participation in decision making by promoting Environmental Education throughout the community” page 7.

Beachlands School has been a Green Gold School for the past seven years through the Enviroschools programme. We have been learning through the environment for the past eleven years. Beachlands School is surrounded with wonderful natural

parks and coast which lends itself to using the environment to bring maths, reading and writing alive for students. Our wonderful environment is the real world and by bringing it into the classroom the children realise that learning does not exist just with the school but occurs in many different ways in our local community. Through the media, invited guests, experts and programmes which promote the environment, the students are given a range of opportunities to explore the thinking of others and in turn develop new ideas and solutions to the problems that are posed.

In order to make a difference to the world we live in Environmental Education requires a high degree of collaboration amongst parents, teachers and children. With a great deal of energy and investment in developing a high degree of collegiality and collaboration, Environmental Education has become embedded in the daily practice at Beachlands School and is not seen as an extra added to the curriculum.

Environmental Education is more than just completing projects as it is based upon a clearly define set of values, it embeds the key competencies and provides clear guidance in using the future focussed themes.

The foreword, written by Karen Sewell, Secretary for Education, contains the following; “*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**. It includes a clear set of principles on which to base curriculum decision making. It sets out **values** that are to be encouraged, modelled, and explored. It defines **five key competencies** that are critical to sustained learning and effective **participation** in society and that underline the emphasis on **lifelong learning**.” The NZ Curriculum’s purpose is set out on page 6, “the principle function is to set the direction for student learning and to provide guidance for schools as they design and review their curriculum.” At Beachlands School we have purposefully designed our school curriculum to embed Environmental Education and Entrepreneurship to ensure there is a high level of connectedness between the students and what they are learning. Some of the overt aspects of this curriculum are listed below;

Some of the Key Aspects Shown in an Environmental School

- Environmental Education policies are included in the school charter;
- Environmental Education programmes are taught at all levels;
- Waste-minimisation programmes, such as recycling, composting, and worm farms are implemented;
- Energy - and water-saving strategies, such as signs on light switches and computers reminding people to turn them off, are used;
- Planting, revegetation, or habitat-enhancement programmes are practiced;
- There are regular environmental audits of sustainable practices relating to waste reduction and recycling, purchasing, management of toxic materials, energy conservation, water conservation, and transport;
- There is school-wide recognition of special events such as Arbor Day, World Environment Day and Conservation Week;
- Students participate in community activities, such as cleaning up beaches or preserving historical sites;
- A student environmental group is supported;
- Environmentally friendly products are used throughout the school.

Purpose

The purpose of this study is to consider the need for schools to engage students and staff in an effective learning community through Environmental Education and Entrepreneurship which both provide many authentic contexts. It is also an opportunity to consider and reflect upon the aspects of the learning community that need to be in place in order for this to happen.

Key Questions I wish to answer

What is the importance of values which are acted upon?

Why is there a need for a clear vision of what you are trying to achieve?

How important is it to have a highly effective and collaborative school community involving staff, students and parents?

How important is it to have the skills to have high quality conversations at all levels?

Why is it important to have a high level of student voice in the process of learning?

How do the key competencies support Environmental Education?

Why there is a need for an effective inquiry learning process to be embedded through all actions taken by the learning community?

How the attributes above can lead to the development of effective personalised learning?

Methodology

Through reading widely and visiting a variety of schools and having conversations at all levels I wish to explore the potential for Environmental Education to provide an exciting future in the continued development of an effective and engaging education system. In my conversations with Environmental Education practitioners I have kept the following key ideas in mind because in order to reflect on what is Environmental Education we must be able to put the following ideas into practice. There must be an emphasis on concepts such as: education “in, about, and for” the environment”; student empowerment, responsibility, and decision-making; “action competence”; the recognition of environmental problems as society and community-based problems; and a growing acceptance of pluralistic viewpoints about the environment.

The student needs to become the centre of learning and their needs are developed through what is of interest and relevance to the student. If a student is not interested and is not given a personal purpose to their learning, there will be disengagement by the learner and therefore time is wasted and limited learning occurs.

To be able to put Environmental Education at the centre of any learning organisation there are many prerequisites in order for the learning to be sustainable and have a long term impact upon the learning by the students in the organisation. Schools which have made Environmental Education sustainable have made Environmental Education at the centre of their practice and are looking for new ways to bring issues up which are relevant and allow the students to become active learners through being in a position where they can make a difference now and in the future.

I visited a range of schools here in Auckland and Melbourne and through conversations with the leaders and the teachers I was able to gain more insightful answers to the questions I set out to explore. It also provided me with the time to reflect upon the current practice at Beachlands School and look for further areas of development to be assured our practice was at the cutting edge of engagement and high level learning.

What is the importance of values which are acted upon?

Values are at the centre of all that we do and without firmly anchoring our practice in a set of values then our practices are not sustainable and will often drift according to outside pressures. The values outlined in the NZ Curriculum are excellence, innovation, inquiry and curiosity, diversity, equity, community and participation, ecological sustainability, integrity and respect. Every school has the permission to develop these values in order to ensure that all members of the learning community are aware of them and their practice reflects them on a daily basis.

The schools which give values only surface attention will not be able to embed the practice around Environmental Education as they have not explored and embedded the beliefs and values of their key members. That's the students, parents and teachers. If there is a lack of belief in the values that are being expressed through daily practice then it is impossible to implement fully the values and practices which make an effective environmental school. Many schools espouse a set of values but they are not always evident when moving around the school and making observations in the way members listen and talk to one another and in what they spend their time talking about. Values need to be living and need to be shown on a daily basis. Nobody is perfect so there are many examples throughout a day where values are shown or not shown and if everyone owns the values and acts upon them then the people in the organisation are empowered to have conversations with those around them to talk about how values work and why they are important to our school.

At Beachlands School we have the FERN values which stand for Friendship, Encouragement, Respect and Nurture. These values have been unpacked by the staff and children many times and, at the beginning of the year when we induct staff, we unpack these values and share what they mean to one another. This is very important as it forms the agreement of how we will treat one another, the parents, staff and children. Throughout the year many conversations are had where and when these values are not seen to be upheld.

These values support the learning of environmental issues and the acronym of FERN has taken on a meaning of its own over time which children and adults talking about when someone's behaviour was FERN or not. These values apply to everyone who belongs to our learning community and are ever present at assembly times, forming class agreements and working with children with behaviour difficulties. There are also numerous visual reminders throughout the school in the form of Maori pou and murals which portray the values we believe in.

The inclusion and alignment of Māori knowledge and values in Environmental Education is very important as this allows students and teachers to realise there are other perspectives which also support the care and understanding of the environment. By having a range of perspectives it brings a richness and empathy for other cultures and allows students to become more aware of the diversity of ideas and needs around them. It is important for students and teachers to be given the opportunity to unpack these values and come to a clear understanding of them as this will allow them to see the importance and impact that values can have upon themselves and the people around them. "In dialogue no idea is silly. During such interchanges everybody reflects and reveals what they think. As a result of this process meanings are clarified resulting in the building up of a common understanding" (Bruce Hammonds 2011)

Why is there a need for a clear vision of what you are trying to achieve?

The vision of the NZ Curriculum outlines the areas of confident, connected, actively involved and lifelong learners. These aspects can be shown strongly through the engagement in an environmental programme.

The purpose of a vision is so it can be used to articulate a clear purpose in the development of your learning organisation. With the constant bombardment of innovative ideas the vision acts as a filter to decide whether new ideas will assist or detract from the achievement of the vision. Schools which do not have an active vision which is referred to on a daily basis will often be high-jacked by ideas from the Ministry and external organisations which often do not relate to the school context within which you work. With a vision which is alive and clearly understood by all parties it is easy to form agreements and implement ideas as the key purpose is to enhance the vision for the school. By taking the key words out of your school vision and unpacking them it helps to align your strategic plan and break it down into an annualised plan of action. All actions should lead back to the overall achievement of the school vision statement. "School leaders should tap the power of invention within the school through a process of collaboration and dialogue. Those closest to the reality of the students are best able to identify and address what is problematic" (Bruce Hammonds 2011)

The vision at Beachlands School is **OUR LEARNING COMMUNITY WILL BE BASED UPON EFFECTIVE RELATIONSHIPS WHICH DEVELOP SKILLS, KNOWLEDGE AND HABITS, that WILL BE USED TO THRIVE AND CONTRIBUTE EFFECTIVELY TO THE WORLD WE LIVE IN.** As you can see relationships is a key word which through the development of skills, knowledge and habits the children will be able to thrive and contribute to the world we live in. Where there are tensions and communication problems then the effectiveness of learning diminishes. Where students are not relating well with one another there becomes a great deal of negative emotional energy which impacts upon the student's ability to learn. It is important that the vision which is underpinned by the values is unpacked with students, teachers and parents so that everyone can be given the responsibility of creating the learning environment at School. When everyone is clear about the vision and it is provided with enough support and challenge for everyone to be part of it then it can be amazing what can be achieved. When a leader has everyone facing the same way and the thinking is aligned then the creative and innovative energy can really start to show. There are many cases where students, teachers and parents have acted upon the vision of Beachlands School, supported by the values and have developed a number of creative ideas and programmes. Where there is action upon the values which are aligned with the vision then a great deal of trust and integrity is developed which enhances the professional practice of our learning organisation.

Due to effective relationships being at the centre of our vision we spend a great deal of time and investment training and practicing the way we talk to one another. We deliberately listen, pause, and paraphrase before we inquire as this leads to having an effective conversation where people are not listening to talk but are listening to understand. Learning conversations and the skills these entail are central to the development of the teachers and student and the relationship we have with the parents.

The Beachlands School vision statement allows us to focus on these key aspects to ensure that as a learning community we are constantly reflecting and reviewing our practice to ensure we are participating in a way which will enhance these aspects.

People become the focus and not the systems within the organisation as systems are there only to support the people in it.

Environmental Education and Entrepreneurship have allowed us to contribute to the world we live in and at the same time for the children to improve their reading, writing and mathematical skills in a meaningful and authentic way. The conversations that are had due to high trusting relationships lead to a high level of innovation and creativity amongst the teachers and students. Teachers work collaboratively to plan big ideas and integrate learning areas as there are so many skills, habits and knowledge that work across all the seven learning areas. The student and their interests and learning needs become central to conversations and the curriculum is purely a vehicle for enhancing the skills and attitudes they require.

Our motto for Beachlands School is “Preparing for Tomorrow” as we believe the only competitive advantage we will have in the future is the rate at which we can learn. We aim to connect the learning areas as much as possible so the students do not see learning in subject silos but their learning has a means to an end. “I am reading so I can find out information I need in order to solve this problem” Reading and writing are developed within the areas of Science, Technology, Social Studies and Health. Science, Technology, Social Studies and Health are developed through Learning Pathways which provides a myriad of learning paths for students with a wide range of abilities and needs to explore. We realise that children need to see that learning is connected and purposeful and when this happens there is greater emotional connection and therefore learning will last.

How important is it to have a highly effective and collaborative school community involving staff, students and parents?

The principles of the curriculum come alive through the people involved. The principles are high expectations, learning to learn, Treaty of Waitangi, community engagement, cultural diversity, coherence, inclusion and future focus.

To have students, staff and parents all aligned and seeing the purpose of what you are doing through the vision, your values and subsequently your actions are critical to ensuring a high level of engagement. Today it is necessary to take the time to educate parents on the principles of teaching and learning that occur at school because there are so many ways that the parents can help to bring that learning alive and apply it to so many contexts outside of the classroom.

Through the use of Environmental Education it is easy to have a positive impact not only on student knowledge and attitudes but also their motivations for learning. Through conversation it is easy to engage people in what their interests are and work together by developing an environment which allows for their interests to take effect. Some people are interested in animals and insects while others are interested in vegetation. As you spend time to explore the interest people have there is always some way to engage them in adding value to the environment. If you believe all learning should result in some action then there are often multitudes of ways in which we can impact upon the local, national and international environments. From the classroom environment to the local environment we encourage everyone to have input and participate in its development. Over the years at Beachlands School we have had a lot of input from a wide variety of groups to develop the environment within which the students and staff work and play.

Environmental Education contributes to a better school and/or community environment, and to positive relationships between the school and the community. Generally everyone has some interest in the environment that they live in and work

in. By using this common interest and sharing plans with the parents there is often a great deal of support that can be gained through time and or product. When the child is at the centre and the intent is to improve outcomes for the children many people are keen to come on board and support us. When parents and children have had input into a local project it generates a great deal of ownership and commitment to the school. All the children at Beachlands School contribute in some way to the school environment and through a number of projects to the local, national and international environments. This type of action allows the children to realise the ownership they can have when they are committed to making a difference for themselves and others.

When teachers, students and parents are able to form agreements and work collaboratively to achieve their goals the beginning of a learning community emerges. The forming of agreements is paramount to build good relationships due to the fact that when the relationship comes under stress you can always go back to the agreement. The forming of an agreement takes time but in doing so you are building relationships as well as commitment to ensuring you are working as a team. This leads to high trust and as people work within their roles there is a high level of connectivity and support. With this; Environmental Education does not rely on one person but rather a collective effort where all the people involved are able to contribute according to their strengths and abilities. Through training in dialogue and holding learning conversations then practices such as Environmental Education can occur across the school at all levels with a high degree of participation by all staff, students and parents. With agreements comes ownership and this is critical to getting commitment and building greater competencies within the learning community. Students need to know how to work together. By planning a wide varied of collaborative exercises with children they learn to interact positively with all members of their class when required to do so. Students working together become a very powerful learning team as they create new ideas by listening and responding to one another. This is a taught process as we often listen in order to speak rather than listen to understand. When students learn to ask good questions after paraphrasing they learn so much more as they are emotionally engaged and they are doing the thinking and responding rather than the teacher. It is known that the person who is doing the talking and questioning is the person doing the learning. Teachers need to be aware of this and reduce the time they spend doing this. When students are the ones generating the ideas and working collaboratively to problem solve and working through to a solution then you have powerful learning occurring. There is also high motivation as the students get to see the results from their learning as they complete their inquiry by acting upon their learning.

At Beachlands School we have invested a great deal in professional learning not to enhance our curriculum knowledge but rather to enhance our skills in building collaborative relationships and questioning and guiding children in their thinking. At the heart of all conversation the child is central as that is what we have in common and through dialogue and discussion we are able to come up with actions which will solve any problem that has arisen. When you can move past personalities and past issues and know how to engage with those around you then it can be amazing what can be achieved within a school context. "The greatest challenge for schools is to let go of the comfort of adopted behaviours and to develop the patterns and practices of adaptivity." (Bob Garmston 2009) We must develop practices within our own communities which are real and have a high level of ownership.

To have a highly effective learning community is not only about the words but about the actions that are required and the commitment and courage to have the difficult conversations with those around you when the need arises. No longer can we afford to feel our classroom is our little kingdom as the children will be the ones that suffer when the teacher fails to engage with those around them.

There needs to be an emphasis on creating and building relationships within and between schools, and extra school agencies (e.g. regional authorities, conservation and environment societies, and other interest groups) There are many groups in our society due to having a poor or no relationship with we often miss out on many learning opportunities. Too often we are found teaching things in isolation without connection to the student's prior knowledge and experience let alone acknowledging the variety of learning styles within a classroom. The best resource within the school is the people because through the relationship with them you are able to build commitment and ownership in order to achieve a strong and positive learning environment for the benefit of all.

There needs to be explicit leadership and endorsement of a "whole-school" approach to environmental education from the time a teacher is interviewed for the position through to the time they are given school wide responsibility for leading a class or school environmental project. With everyone on board and moving in the same direction it is surprising what creativity and enthusiasm by all staff, students and parents can be harnessed. When everyone is on the same page there is a greater energy developed and through this people are willing to commit and give of their time and expertise.

How important is it to have the skills to have high quality conversations at all levels?

This is an area in which teachers are given very little support and training but it is so essential for their effective day to day teaching and learning practice. Teachers do not need to go off to the next course to learn something when they can sit down with a trusted colleague and have a conversation in such a way where they will be able to effectively identify the issue and come up with an appropriate solution and have the support to follow through on it for a successful outcome. Too much time and money is spent sending teachers to one day courses which have little relevance and follow through on to the specific context within which they teach. Professional learning can take on many forms but the more the learning is specific and personalised to the learning situation that the teacher is involved in, the greater the level of learning that will occur and be improved over time. This is also the way we should view children's learning as there is a great deal of time wasted teaching to children who already understand or who need a more tailored learning programme in order to break the learning down into manageable steps. When children do not understand quickly then they will disengage with the teacher especially if there is not a strong relationship or they have struggled to understand in the past.

Teachers need to be attuned to the responses of their students and to be willing to inquire and check and invite feedback on their teaching. For example "what have I not explained clearly enough?" is where the responsibility for good communication stays with the teacher and instead of saying "Is there anything you do not get yet?" Many children will not respond to this as they feel they are at fault for not understanding.

Language is critical in developing a positive classroom where the children have good relationships and high expectations of themselves and one another. The use of

“Circle Time” is a great way to develop inclusive language which leaves the power with the speaker and not the teacher. Too often teachers use language to reinforce their position of power within the room. When this language is used then the student never assumes responsibility and is very wary of showing any initiative as they are constantly reminded of the subservient position they are in. When language is invitational then often the response from the students is more genuine and engaging as they feel they are doing the learning for themselves and not according to the teacher’s expectations. Teacher’s expectations become a powerful motivating tool only when there is a strong relationship between the teacher and child.

At Beachlands School, the staff has been trained to use learning conversation skills. Teachers are able to form agreements because they feel they have been listened to. The work facilitated by David Anderson and through the “Learning Talk” books by Joan Dalton have made us consciously aware of the way we think and talk to one another. Through using the skills and techniques in these books we have been able to enhance the level of communication and collaboration across Beachlands School. Many of these practices have also been applied in the classroom so teachers are more confident in the way they build agreements with students and have developed a greater level of trust and collaboration within the classroom. This is happened to the extent that in some cases the teachers encourage the students to provide feedback on the appraisal goals they have set for themselves. As the staff have developed these skills of effective learning talk then many agreements are formed and acted upon with confidence. Within any day there are many opportunities to practice the skills of effective learning talk, from a formal meeting to informal conversation while in the staffroom, playground and classroom.

Why is it important to have a high level of student voice in the process of learning?

This is an area which needs to be developed in order to allow children to accept and develop greater responsibility towards their learning. Student’s voice is something grown over time so the children are able to see and believe in it. It is something that should not happen on a spasmodic basis but should be built into daily teaching and learning practice. When children are giving an active role to participate in their own learning rather than a passive one they begin to understand themselves as a learner. This participation enhances the concept that we are all lifelong learners and learning is central to our development. This practice of being actively involved rather than a spectator will encourage the students to make the most of the opportunities that present themselves throughout life.

To develop an effective environmental school it is important to have a strong student voice as the students are the ones who see the need for further development around the school. With knowledge of the environment the student’s ability to be creative and problem solve grows. Many ideas for further environmental development have come from the students and their needs. Through capturing this student voice the implementation of an idea is so more motivating as the teachers, students and parents can all work collaboratively to achieve something beneficial to the students and their learning. When it comes to developing the school gardens each spring it is the students voice that brings the parents into the school to provide their time and labour to get them ready and planted. The environmental group at Beachlands School representing students from each of the classrooms is the spring board for ideas to be developed either across the school or within their class.

While principals and staff at most schools talked about the importance of student leadership and responsibility, the degree to which this was manifested in practice varies. At several schools, there was a clear and consistent commitment to student leadership and encouraging students to take responsibility for their own learning and behaviour. One school principal aimed to develop a “school of leaders”, and felt that every person in the school, from students to teachers, should have a say in deciding what and how things happened in the school. Teachers need to take pride in the level of trust and responsibility given to students and to allow this to be part of their daily expectation of their students. Without this opportunity students do not grow and accept responsibility for themselves let alone for others. Other ways in which student leadership and responsibility can be manifested in schools includes: students being encouraged to give speeches and presentations to audiences outside the school (for example, students and teachers from other schools, or regional councils); and classroom “values contracts”, devised by teachers and students as a set of expectations and principles for acceptable behaviours.

If teachers have the realisation that the students are the ones who have the direct impact of what they have given in terms of teaching and learning then surely the students are the ones if given the right tools able to provide the most effective feedback to the teacher. If teachers are willing to treat the students in the same way they would like to be treated then some practices within classrooms could be questioned. When students realise they can have a real impact upon the way the class is organised and the expectations that are required then they will often grab this opportunity for ownership. There are too many cases where students complain that the other students do not listen to the teacher, they are too noisy and they are unable to complete their work. The student does not know how to go about effecting change as they see the teacher as having all the power and they are not given the opportunity to share their frustrations and then follow through with some genuine action with the support of the teacher. Students that come to school wish to learn and do well and are often frustrated by other students who do not have the same level of engagement and expectation in learning. By forming agreements with and between students, teachers are able to create a strong student voice within the class and those students who struggle are able to share what they need and how these needs can be met in order to learn.

How do the key competencies support Environmental Education?

The key competencies as outlined in the New Zealand Curriculum are thinking, using language symbols and texts, managing self, relating to others, and participating and contributing. These competencies are essential in developing a student who is able to actively participate in today’s world. To do so the student must be able to see the purpose in what they are learning and the connection it has to the real world.

At Beachlands School we have embedded the key competencies under the Beachlands Learner. The Beachlands learner has four main attributes. They are communicator, contributor, lifelong learner and leader. These are the attributes which the parents wished their children to display after the eight years of education they have had at Beachlands School. Through communication the students are able to express their point of view through a variety of media, around an environmental issue and the impact it has upon themselves and others. Through being a contributor they are able to develop a plan of action which will lead to a change and improvement in the environmental issue. To do this they must show leadership by building and leading a team and being prepared to make a difference to the world

they live in. All these attributes put the student in a place of lifelong learning as we are constantly faced with new circumstances and new issues and it is how we react to them and learn from them that will make us the person we want to be.

These competencies are broken down into skills so the teacher is able to share them with the students and help them recognise the skills they are using while they are learning. These skills are often transferable across all curriculum areas and operate over a continuum as the students' progress through the years. With the introduction of new ideas and programmes we need to link them back to how they will enhance these aspects of the Beachlands Learner otherwise if not they will tend to be an add on and simply overcrowd the curriculum. This overcrowding of the curriculum leads to surface teaching and not in depth teaching due to the time constraints within a school day.

Through the establishment of these four aspects of the Beachlands Learner we are able to implement the key competencies in a meaningful way and not allow them to be seen as another add on. These aspects of the learner are constantly referred to through assemblies and presentation of certificates. They are also part of the reporting system and on-going conversations in the classroom as the students choose who has shown a Beachlands Learner attribute for the presentation of a certificate. By building in the Beachlands Learner as part of daily practice and conversations then the growth of the students and the development of these attributes can be achieved as they progress through the school.

Why there is a need for an effective inquiry learning process to be embedded through all actions taken by the learning community?

In the NZ curriculum the following points have been highlighted as effective pedagogy. To create a supportive learning environment, encourage reflective thought and action, enhancing the relevance of new learning, facilitating shared learning, making connections to prior learning and experience, providing sufficient opportunities to learn and teaching as inquiry. These are all powerful concepts which when fully implemented provide the school organisation to be self-sustainable and highly adaptive to the constant changing needs of society.

The contexts within which Environmental Education are wide and varied from the tradition of education in using the natural (and local) environment- e.g. through school camps, field trips, and learning experiences outside the classroom; to the frequent selection of certain areas of content "about" the environment in school Environmental Education programmes (for example, biodiversity, local flora/fauna, nature conservation, water, air, waste and recycling, tree-planting and bush studies, and various aspects of gardening)

It is very easy through Environmental Education to develop an integrated approach to the relationship between and the content of curriculum statements in the seven learning areas of the curriculum framework. With a dominate numeracy and literacy focus the other learners areas are integrated through an inquiry approach using the model of **What** (the knowledge we need) **So what** (now we know some things what questions do we have) **Now What** (Now we have answers or solutions what do we need to do about it). This inquiry model applies to all contexts across the school such as professional learning, appraisal process, student learning, review processes and forward strategic planning. The teacher as a guide unpacks the process with the students providing them with the skills to find and locate knowledge required from a multitude of sources. Once students have gained an understanding of the area of interest then key questions are asked to take their knowledge and understanding

further. If these questions are posed well the students can often create new knowledge. Once they are at this stage it is important for the students to have the opportunity to apply their knowledge as this will really cement the learning in their memory and also test the depth of understanding. Through this process the development of lifelong learners occurs and it provides confidence in the students to know they can learn new things as they follow a process. This process allows the students to move forward in their learning as they set their goals and plan an action plan to achieve the goals. It also allows the student to realise that learning is an everyday reality and the better we become at it the more adaptive we will be with what the future holds for us. The attitude of inquiry and investigation should be at the heart of all that we do as it allows us to confirm and question the assumptions that are made around us on a daily basis.

With inquiry embedded in daily practice the opportunities for learning grow very quickly as it is seen as part of everyday practice.

How the attributes above can lead to the development of effective personalised learning?

Personalised learning is a concept which varies widely from school to school. To truly have personalised learning then the student needs to be the starting point and there needs to be a strong understanding of the needs of that student. Another word for personalised learning is individualised learning and to be effective as a teacher then this is the level that needs to be looked at. It is not good enough to teach to the average student or to just those who are interested. It is important we respect the needs of each student and put in place for them a programme of work which will enhance their potential and allow them to grow as an individual to the extent that they are able to contribute to society. We must remember that we cannot teach all monkeys to swim and all ducks to climb trees therefore we aim to build the strengths of each child and through this also build on the areas which they need further development. Teachers need to spend time building relationships and managing relationships with the students in their class. At the primary level there is a strong advantage in doing this as we have fewer students to interact with throughout the day. Within the primary school system it is also possible to work across the curriculum to develop a depth of knowledge and understanding.

When you have the type of learning community where there is a commitment to one another and competency in providing solutions then there is a greater chance of implementing an effective personalised programme where the learning needs of all individuals are catered for through a strong collaborative approach. Teachers need to be mentors and facilitators, interested in the whole child and what they bring to the class. Through FERN students are given the opportunity to be part of a learning community where they are seen as individuals and they are given the time by a teacher to facilitate their learning needs. As the teacher works in partnership with the student they empower the student to become more responsible of their learning and often more motivated as the students feels committed and a sense of belonging. Students have pride in their learning community when they are given the opportunity to contribute and build a relationship with those in the community.

Through such aspects as shared learning intentions, building success criteria, goal setting and co-construction of learning using the New Zealand Curriculum, teachers and students are able to work collaboratively on the learning needs that are identified. With personalised review sessions at Beachlands School, teachers and students are able to spend time talking about the students learning and the needs

they have. As the range of needs is revealed through this conversation, goals and programmes of work are put in place to meet those needs. This may be done through the Correspondence School; it may mean a change in a group level; it may mean developing an individual action plan with clear lines of follow up and accountability; it may mean the student is given the opportunity to learn something outside the curriculum knowledge areas but with clear learning outcomes and attributes. This is shown and developed further by the student through the opportunity to meet with the teacher and the parent in order to share their learning through their achievements and future goals.

As the teachers explore opportunities to personalised learning with individual students there becomes less whole class conversations and children are given the time to think and respond to the expectations placed upon them. The person who does all the talking does all the learning and thinking. It is important that the students become the centre of all the learning that is taking place and the teacher becomes the guide on the side and not the sage on the stage.

With knowledge so available and with teachers willing to share the power of accessing this knowledge, providing the skills to inquire further and using the passion and interests of the student then learning becomes a powerful mechanism for personal growth both academically and emotionally.

As we continue to explore and develop the practice of personalised learning then the students at Beachlands School will be able to develop to their potential. The use of Environmental Education as a vehicle for this to happen suits the context of Beachlands School. The local environment provides many opportunities to engage the students in something of personal interest to them and at the same time blend it with the New Zealand Curriculum requirements.

Conclusion

To develop an effective sustainable Environmental Education culture within a school organisation the schools' values, culture, and philosophy need to be consistent with the goals and aims of Environmental Education espoused in the international literature and the *Guidelines*. In environmental schools, "values" were an explicit feature of the school's language and culture. Typically this involved "valuing and respecting oneself, valuing and respecting others, and valuing and respecting the environment". The knowledge and values of all cultures need to be intentional and visible. Schools need to have proactive approaches to staff professional learning, and encourage student voice through leadership and responsibility.

Environmental Education in New Zealand schools would benefit from further strategies to support communication and dissemination of information about Environmental Education, including information about the *Guidelines*, and strategies to support networking and sharing of ideas and information about "effective" Environmental Education practice. Other areas for further consideration are: building on the initial professional learning support some schools have received in Environmental Education; further consideration of the role of curriculum integration with respect to Environmental Education; identification of specific areas where schools need resourcing for Environmental Education; co-ordination in the development and delivery of programmes and resources to support Environmental Education in schools; and consideration of the visibility and status of Environmental Education.

The values and culture of the schools need to be visible in the interactions between principals, teachers, other staff, and students; or in visual displays on the walls of

classrooms, staffrooms, or assembly halls. There needs to be a strong consistency of perspectives between principals, teachers, students, and others associated with the school.

The principal's and the leadership team's role is crucial for the implementation of Environmental Education in schools. The principal is a key player in instigating the school's Environmental Education and the leadership style he or she portrays is critical to the sustainability and impact that Environmental Education will have upon student learning within the school. When starting to implement Environmental Education it is important to be very clear about the purpose as this will be the trigger for change. The main need for change needs to be driven through the purpose of being able to meet the learning needs of the students. The scale and depth of change will vary, from re-examining the core values, and making many changes to policy and practice, to the gradual broadening in the kinds of learning experiences available to students.

The development of Environmental Education can become a fundamental component of the school's culture shift/reorientation. In changing culture of the school, where the values, and philosophy are aligned and all staff, students and parents are in agreement, Environmental Education becomes a strong link of ownership and collaboration across the school.

It is important to identify the school as "environmental" schools through a written vision statement which identifies "the environment" or "care for the environment" as a key pillar or core value of the school. Care and respect for the environment often sits naturally alongside the schools' emphasis on students' care and respect for themselves, and care and respect for other people. This is shown through developing collaboratively a care code so everyone is clear on the key areas for showing the evidence of Environmental Education at work.

Maintaining a safe, social and emotional environment for students is important in and the alignment of this with the values which underpin Environmental Education is very important. Using our FERN acronym at Beachlands School allows us to link our values clearly with the environmental responsibility which we wish to share with our students. Environmental Education links across all cultures so the links to including Maori culture and language is very easy.

Obviously, Māori knowledge and values underpinned the school culture and are shown through the following practices; using Māori words and names throughout the school; adopting Māori customs for welcoming visitors, blessing new spaces, or meeting with the community; compulsory learning of te reo Māori for staff and students; timetabling kapa haka or waiata practice into the school week; whānau (mixed age) groupings in classes; negotiating a special protocol for local kaumātua and kuia to come into the school; and considering the current and historical significance of the school's local environment for local iwi and hapu.

There are a range of issues and future challenges for environmental schools. At Beachlands we have established a strong foundation but for this to grow further we need to continue to build professional learning opportunities which allow teachers to know how to have conversations to build commitment from new staff members, to plan together in order to enhance authentic and real world learning experiences. Induction into Beachlands School is very important as it allows us to develop a range of key people to participate and lead aspects of Environmental Education from looking after the worm bins through to taking on new school wide initiatives. This means Environmental Education becomes sustainable as a practice at Beachlands School because we are not dependent on just one person. By building in

Environmental Education as simply that is what we do here, it is not seen as an extra and taking more time. All practices need to have identified learning outcomes which link back to the development of the Beachlands Learner. Practices are developed from the projects and the learning outcomes in the inquiry learning become adopted as part of our on-going practice. The Board of Trustees must see and support Environmental Education as what links the learning areas together and have an understanding of the how the inquiry approach works to engage students through the use of the environment and other entrepreneurial activities. Beachlands School has by linking Environmental Education with the development of entrepreneurial skills made the learning sustainable. From environmental fairs and market days to selling garden produce the money made has been injected back into sustaining projects and practices and implementing new ones.

In the future Environmental Education will become even more critical as we develop more and more young people prepared to take on the responsibility for the world they live in. With political initiatives such as carbon credits we can no longer sit in ignorance as to what is happening outside our own personal world but we must learn to take an active interest in order to contribute, communicate and provide leadership where and when possible.

To finalise in the words of Bruce Hammonds “Just imagine a transformed education system premised on developing the passions, talents and gifts of all students. Such a system would have the potential to contribute to ensuring New Zealand is a truly innovative and creative country”

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