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Title: Learning Today: Sustaining Tomorrow. Authentic collaboration between the education and business communities can produce a deeper understanding of sustainability.

Intended Category: Embedding Sustainability

Summary

“Can authentic collaboration between the education and business communities produce a deeper understanding of sustainability?” The answer to this driving question is yes. Most teachers understand the concept of environmental sustainability, but need a deeper understanding of social sustainability and economic sustainability in order to arrive at a holistic understanding of sustainability. The three elements of a holistic view of sustainability feature strongly in the New Zealand Curriculum, revised in 2007 for full implementation in 2010. Through the lens of qualitative phenomenological research, this paper describes and analyses how a collaborative project started in 2008 involving a school, an educational consultant and a global professional consulting business created a multi-level, cross-curricular, inquiry-based, integrated teaching and learning resource on sustainability aligned to the New Zealand Curriculum. It describes how the resource framed in this manner filled a void and how it produced a positive outcome for all the organisations involved.

Research approach used and questions asked in this paper

This paper describes and analyses, through the lens of qualitative phenomenological research, a Corporate Social Responsibility (CSR) (Wikipedia, 2010a) activity related to the holistic concept of sustainability undertaken collaboratively by a global professional business, a school and an educational consultant. As noted by CARP (2010) “phenomenologists tend to justify cognition (and some also evaluation and action) with reference to what Edmund Husserl (1929) called Evidenz, which is awareness of a matter itself as disclosed in the most clear, distinct, and adequate way for something of its kind”. Since the “goal of qualitative phenomenological research is to describe a “lived experience” of a phenomenon” (Waters, 2010), the qualitative phenomenological approach is the appropriate research method to be used in this particular context.

The driving question being addressed is: “Can authentic collaboration between the education and business communities produce a deeper understanding of sustainability?” Subsidiary questions are: “Would a professionally sound teaching and learning resource on sustainability be valued by teachers?” (driven by the sub-question “Do many teachers not understand the holistic concept of sustainability?”) and “Would the approach taken to produce a professionally sound teaching and learning resource on sustainability provide authentic professional development opportunities for those involved in its production?”

Introduction and Background

The New Zealand Curriculum

A holistic view of sustainability is a strong thread in the New Zealand National Curriculum for English-medium teaching and learning in years 1–13, revised in 2007. An outline of the structure is given in Figure 1 which is copied from the new curriculum. It is designed to ensure that all young New Zealanders are equipped with the knowledge, competencies, and values they will need to be successful citizens in the 21st century. Their learning is intended to contribute to the realisation of a vision of young people who will be confident, connected, actively involved, lifelong learners. A key element is a future-focus on sustainability: a holistic exploration of the long-term impact of social, cultural, scientific, technological, economic, or political practices on society and the environment. “*An understanding of the practices of sustainability is necessary for students if they are to become globally responsible citizens. Education about sustainability is internationally recognised as a prerequisite for economically and environmentally literate students*” (MOE, 2007).



Figure 1: The Structure of the New Zealand Curriculum (MOE, ibid.)

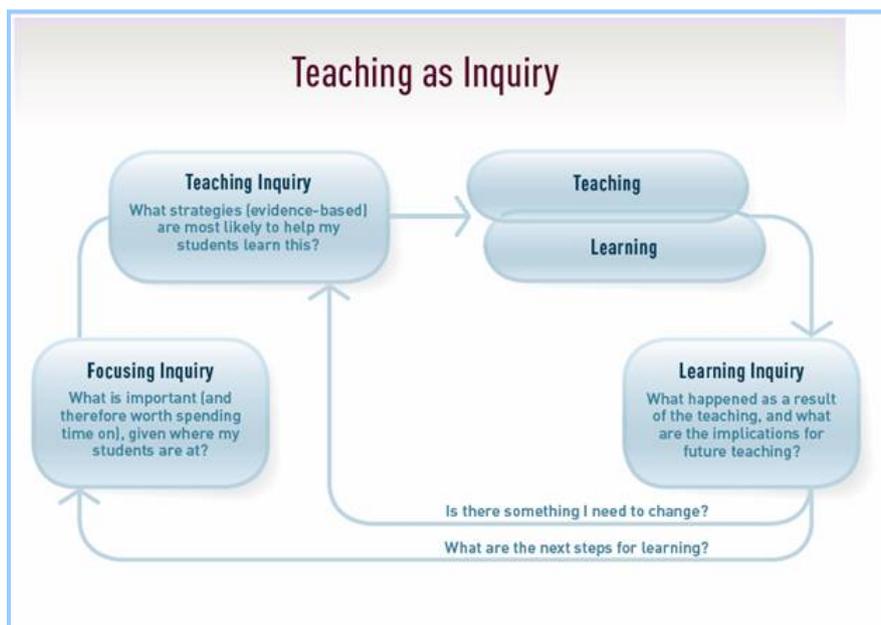


Figure 2: Teaching as Enquiry (MOE, ibid.)

The curriculum has, as its vision, a society in which young people will seize the opportunities offered by new knowledge and technologies to secure a sustainable social, cultural, economic, and environmental future for New Zealand.

Teaching is an iterative and reflective process as illustrated by Figure 2 which is copied from the new curriculum. Schools are required to revise their school-specific curricula so that, by 2010, they incorporate the principles of the revised New Zealand Curriculum. It is up to schools how they integrate the national curriculum into their own school's curriculum documents and procedures to meet these requirements.

Identification of a gap in understanding around sustainability

Many teachers and schools struggle with the concept of sustainability and do not have the resources to address this in an adequate or timely manner. The reason is that “... *one of the major drawbacks to implementing sustainability is a general lack of understanding of what the term means in practice*” (MfE, 2002).

In early 2008 the authors searched for, but could not find a teaching resource for primary schools which addressed the holistic concept of sustainability (the intersection of environmental, social and economic sustainability where actions or activities are bearable across all three concepts (refer to Figure 4). There were many “education for sustainability” resources but they invariably addressed only environmental sustainability in any significant depth. The authors recognised that, if this was indeed correct then there was an opportunity for the business community to assist schools as they grapple with the task of weaving sustainability into their curricula. For many businesses the notion of sustainability is critical to business development and socially responsible businesses have a well developed understanding of this notion which they weave into their daily practice. The authors hypothesised that for this assistance to be valued it should take the form of a teaching and learning resource which addressed the holistic concept of sustainability. It was also assumed that it should be designed collaboratively for teachers by teachers in order to have credibility in the public education arena.

It was noted that (in New Zealand) there existed a number of initiatives from other companies or organisations to develop resources for schools. These included initiatives such as “Enviroschools” (Enviroschools Foundation, 2010), “Newspapers In Education” (APN, 2010), “A Word on Waste” (ARC, 2010) or “Schoolgen” (Genesis Energy, 2010) but there did not appear to be any that focussed specifically on the holistic concept of sustainability.

The authors hypothesised that business, under the umbrella of CSR (Wikipedia, *ibid.*), might be willing to get involved in developing for primary schools a teaching and learning resource on sustainability that would be made freely available to everyone.

What type of support was proposed?

Their thinking was to design a resource around the New Zealand National Curriculum and anchor it upon best practice in delivering positive learning outcomes. It was believed that for such a resource to be useful for teachers it needed to involve people who had: (1) an understanding of best practice; (2) an understanding of the curriculum, and; (3) knowledge of how to build a teaching resource that would promote effective learning outcomes for students.

They therefore proposed that support be given for the creation and implementation of an Integrated Inquiry Model Teaching Resource based on the National Curriculum, covering Levels 1, 2 and 3 (primary ages 5-10). The aim being to “grow” the capacity of students and teachers who might understand, embrace and accept their responsibilities as global citizens. The resource was to address sustainability across the strands of Maths, English, Science, Social Studies and Technology. As noted previously, initial research carried out by the authors indicated that such resources did not appear to be freely available online.

It was recognised that the resource should be produced by teachers from a primary school, guided by an educational planning consultant and working collaboratively with employees of the sponsoring business. It was decided that the school should be Auckland-based since this is where the sponsoring business’s New Zealand’s headquarters are located. It was envisaged that the basic structure of the Integrated Inquiry Model Teaching Resource would encompass:

1. An Integrated Unit Plan Overview (a framework incorporating pedagogy based on best practice and research)
2. Investigative, hands-on activities planned and documented to support achievement of the Learning Intentions
3. Supporting materials such as:
 - a. matrices
 - b. diagrams
 - c. recording sheets
 - d. suitable reading materials
 - e. links to suitable sites
 - f. a list of available published resources (maps/graphs/books/journals etc), and
 - g. visual maps and self-assessment rubrics (such as those employed in the Differentiated Curriculum Model developed by Hooked On Thinking, and which are coded against the SOLO taxonomy (HOT, 2010)).
4. Assessment tasks that form an integral part of the resource.
5. Once the integrated resource had been developed and trialled successfully and modified as appropriate it was intended to make it freely available to other learning institutions.

Method

Selection of Participants

The business decided that it should select a school to work with in an open and transparent manner, and also involve a school that had a connection to the business in some way. It did this by first advising employees what it intended to do and then asking them to nominate schools. This resulted in a list of fourteen schools. It then selected a Project Manager from its employees (this was an enthusiastic young female engineer) and an implementation team based on employee responses to a request for participation.

Four schools were short-listed by ranking them according to several criteria including their:

- Link with the business
- A demographic profile reflecting that of Auckland as a city
- Link to a centre of teacher training and pedagogical research in order to tap into the centre’s resources and personnel if need be and to impact on future generations of teachers through participation in the trial by virtue of being on practicum at the school during the trial period

- Distance from the business office, and
- Positivity and professionalism.

It could be argued that the first and fourth of these criteria are arbitrary and for the convenience of the business, and therefore invalidate the research that this paper is based on. We argue that they do not, because the main intent of the CSR activity was to produce a quality teaching and learning resource that was rigorous and defensible. For this to occur there needed to be a prolonged commitment from all the parties involved and significant involvement and interaction over an extended period of time and these two criteria supported the involvement of the business.

In order that the resource created would be as useful as possible, the business felt that the school selected should preferably be one that (in addition to the preliminary ranking criteria):

- Is future-focused but firmly grounded in the current needs of its learning community
- Has enthusiastic support from the whole school community (staff (especially senior management) and students, parents, board)
- Is innovative and embraces new technology, believes in collaboration, is focused on student achievement and improving the quality of its teaching staff through professional development
- Offers evidence-based learning
- Promotes an inquiry model of learning
- Wants to grow students who understand, embrace and accept their responsibilities as global citizens
- Would benefit from a targeted activity that has a sustainability focus (such as “Reducing our school’s carbon footprint”), and
- Is willing to appoint a senior manager to be responsible for co-ordination within the school.

As part of evaluating each school’s position in relation to the educational criteria included above, the Educational Review Office reports for each school were studied.

An outline document describing the proposed initiative was prepared and it included a questionnaire which asked:

- 1 Please explain how your school serves the current needs of its learning community while maintaining a future-focus
- 2 Please give examples of how your school is innovative and has embraced new technology
- 3 What collaborative practices are your staff involved in?
- 4 How does your school promote a focus on student achievement?
- 5 How do you manage professional development in your school?
- 6 In what ways is your school representative of Auckland as a city?
- 7 Please describe any working relationships that your school has with an institute of teacher training or pedagogical research
- 8 How does your school differentiate for learning levels within classrooms?
- 9 Does your school use any particular “model of learning”?
- 10 How your school would benefit from a targeted activity that has a sustainability focus (such as “Reducing our school’s carbon footprint”)
- 11 What activities has your school promoted to grow students who understand, embrace and accept their responsibilities as global citizens?

The questionnaire also asked for confirmation that:

- Yes, our whole school community would enthusiastically support this initiative if our school was chosen.
- Yes, our school board chairperson would be willing to send the business a letter confirming the board's support should our school be chosen to participate.
- Yes, we are willing to appoint a senior manager to be responsible for co-ordination within the school if our school was chosen to participate in this initiative.

The short-listed schools were advised that the proposed approach to developing the resource was: *Having selected a school, some business staff will work collaboratively with senior administration and a selected team of teachers alongside an educational planning consultant. There will be consultation, brainstorming, deliberation and feedback and finally the framework for implementation will be agreed on. Implementation will most likely involve releasing a team of teachers to write the skeletons of the resource elements over one day and then, after review and feedback, to draft these elements in more detail over a contiguous period of several days. The resource elements would then be revised to their final versions after further feedback and review. The business will assist by covering the cost of the educational planning consultant and high-quality relievers so that the learning needs of the students of these teachers will not be compromised.*

Responses from the four short-listed schools were evaluated and Epsom Normal Primary School (ENPS) was chosen. The Lead Author recused himself from the short-list evaluation process so as to avoid a potential or perceived conflict of interest since his spouse was (and is) a Deputy Principal at ENPS. Through a consultative process ENPS selected a team of four staff to be involved in the process. These included a beginning teacher from the Junior School (years 1-2), an experienced teacher from the Senior School (years 5-6) who had taught at multiple levels including pre-school and an experienced teacher from the Middle School (years 3-4). The teachers were of mixed ages to represent a cross-section of the schools teaching force.

In parallel with the school evaluation and selection process, Hooked On Thinking[®] was appointed as educational consultants. Their brief was to ensure that the end product was rigorous and defensible as a quality teaching and learning resource. The consultancy had already worked with another business sector to produce a public resource for schools and was thus experienced in this type of activity.

Description of Participating Organisations

ENPS (<http://www.epsomnormalprimary.school.nz/>) is primary school of approximately 650 students located in the suburb of Epsom, Auckland. It is called a "Normal" school because it is an exemplar school with a close association with a tertiary education enterprise (Auckland College of Education) that trains teachers. It works closely with student teachers on teaching practicums on an ongoing basis as part of their professional development and appraisal. The school has a Decile 9 rating, indicating that most students come from a relatively high socio-economic sector of society although it must be noted that a decile rating is not an indicator of student capacity for learning. The ethnic composition of the school is:

NZ European/Pākehā 24%, Māori 2%, Chinese 31%, Indian 20%, Korean 4%, Sri Lankan 4%, Pacific 3%, Japanese 2%, other ethnicities 10% (ERO, 2010).

Hooked On Thinking[®] (<http://hooked-on-thinking.com/>) works with schools, businesses and learning communities to transform student learning outcomes. The owners of Hooked On

Thinking have extensive experience in education, directing Ministry of Education contracts and independent contracts across New Zealand. The focus of their work is on ensuring students achieve deep learning outcomes and “learn how to learn”. Hooked on Thinking uses the Structure of the Observed Learning Outcome (SOLO) Taxonomy (Biggs and Collis, 1982), as a model of learning (http://www.johnbiggs.com.au/solo_taxonomy.html) (HOT, *ibid.*).

The sponsoring business is Sinclair Knight Merz (SKM). SKM is an engineering, sciences and project delivery firm. Its stated purpose is to deliver a positive and enduring impact on the world. SKM (<http://www.skmconsulting.com/>) has offices across Australia, New Zealand, Europe, the Middle East, South America and Asia.

Resource Produced

Through a series of collaborative one-day working sessions a draft resource was produced. These sessions started with employees of the business presenting on various aspects of sustainability to the other two participant groups in order for them to first develop their own understandings of sustainability in a holistic way. The resource design employed an integrated planning model developed by Hooked On Thinking. It is a “backwards design” where the starting point is “where do we want the students to be in the future”. It is initially teacher directed inquiry learning, followed by student led inquiry.

The working group selected ‘big ideas’ that they thought were important to an understanding of sustainability. ‘Big ideas’ are ideas that will ‘stick’ with the learners for many years into the future. From these big ideas, ‘driving questions’ are developed and using the curriculum framework, ‘key competencies’ and ‘achievement objectives’ are chosen (HOT, *ibid.*). These provide the key ideas and processes to help build coherent understanding of the concept and context. Learning intentions were then developed and, through the use of SOLO Taxonomy (Biggs and Collis, *ibid.*), learning experiences were planned to support the development of understandings of sustainability.

The resource was prepared both electronically and in hand-written forms, word-smithed by Hooked On Thinking, and finally formatted by SKM. The resource in its draft form was loaded onto the internet website of SKM in August 2009 (and thereby made freely available to anyone on the worldwide web). It is structured in the following way:

A 2 minute lesson in sustainability

- + 3 examples of sustainability thinking and design
- + a sustainability mind map

Learning Framework Overview

- Contexts to explore
- Learning areas framework

Individual Curriculum Learning Area Sustainability Resources

- 1) English
- 2) Health and Physical Education – Community Resources

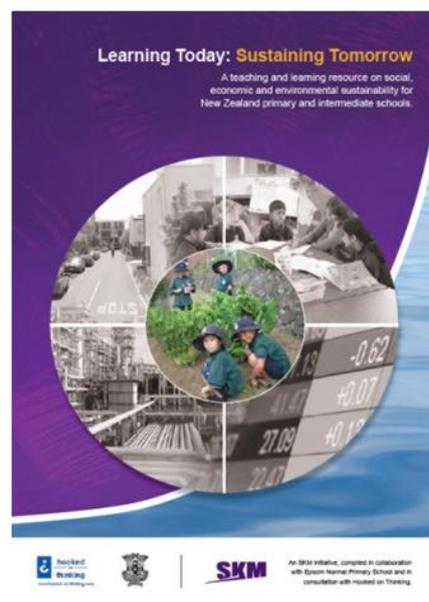


Figure 3. The front page of the resource (SKM, 2009).

- 3) Health and Physical Education – Rights, Responsibilities, Laws and People
- 4) Health and Physical Education – Safety Management
- 5) Learning Languages
- 6) Mathematics and Statistics – Geometry and Measurement
- 7) Mathematics and Statistics – Statistics
- 8) Science – Living World Ecology
- 9) Science – Living World, Life Processes
- 10) Science – Material World Chemistry and Society
- 11) Science – Physical World, Physical Enquiry and Physics Concept
- 12) Science – Planet Earth and Beyond, Earth Systems
- 13) Science – Planet Earth and Beyond, Interacting Systems
- 14) Social Sciences
- 15) Technology
- 16) Arts Resource

Additional Resources

Key Competencies Resource
What If Questions
Thinking Strategies Resource
ICT Resources



Collaboration at the business office



Business employees sharing knowledge on sustainability with teachers

Results

The driving question

As noted previously, the driving question is: “Can authentic collaboration between the education and business communities produce a deeper understanding of sustainability?”

Observations by the participants related to this question include:

From Hooked On Thinking

*“The **Learning Today: Sustaining Tomorrow** resource is unique in regards to the process from the inception to the completion of the project and this in itself is a gift to the students and teachers of New Zealand. The commitment from the business sponsor in allowing this to be a triangulation between engineers expert in their fields, teachers as practitioners and consultants in curriculum design has resulted in an end product that is rigorous in its integrity and ensured that several units of work across a range of curriculum areas have been scaffolded to support and challenge student learning outcomes. This resource has been designed to also support teachers in implementing the recently introduced New Zealand Curriculum through the many lenses of sustainability that were shared by the team from the business sponsor.*

Too often when schools are looking at teaching sustainability they tend to focus only on the environmental aspect but through this resource they are able to also connect into social and financial issues that are all part of understanding sustainability. When the engineers and planners shared their insights with the teachers they were able to share with them the many facets that underpin the concept thus allowing students to have a much wider focus. Through the generosity of the business sponsor we were also asked to present the resource to the trial school and by providing professional development on the resource to the teachers it gave them the key understandings and support to teach sustainability at another level.

The planning framework is faithful to the NZ curriculum. The eight principles of high expectations, Treaty of Waitangi, cultural diversity, inclusion, learning to learn, community engagement, coherence and future focus have all been incorporated. Each school is able to add their own values and key competencies. All learning experiences build in complexity and are supported by achievement objectives, learning intentions, assessment exemplars, ICT, thinking and questioning interventions. The curriculum framework that scaffolds this resource supports teachers in Directed Inquiry and also allows each school to select what sustainability issues are for their local community and explore them in depth. This freedom allows schools to address local issues and needs which in itself is very powerful and the idea of students discovering and becoming knowledge makers in issues pertaining to sustainability is a powerful idea.

*We were recently working in Rotorua when a deputy principal approached us and said that **Learning Today: Sustaining Tomorrow** was the best teaching resource she had seen. She said the whole staff had embraced the idea and had committed themselves to teaching **Learning Today: Sustaining Tomorrow** as a one year programme. The principal commented that the resource was very explicit and that her staff had liked the clarity in regards to defining sustainability” ((Mills, 2010), refer also to School 1 comment following).*

From ENPS

*“Participation by ENPS in the educational initiative **Learning Today: Sustaining Tomorrow** has been an extremely positive experience that has had both ‘hoped for’ and unexpected results. We hoped for and planned for building our learners understanding of the notion that their choices had consequences and that we are all guardians of our environment, our culture and our economic prosperity. This intention was achieved exceptionally well and in fact has extended far beyond the classroom to reach our wider community in a variety of ways.*

Sustainability has now been embedded in our teaching practice, planned for in all teaching unit plans, has become a strategic priority in all we do, with a management unit allocated to two teachers to lead other sustainability initiatives in our school. In other words,

sustainability has become an integral part of our school culture. For example, our new school logo and new signage includes the words, “Guardians of the past, present and future’.

Our participation has offered learning experiences and leadership opportunities for teachers, developed a deeper understanding of the New Zealand curriculum, enhanced our schools reputation, changed teacher and student behaviour and has improved our school environment.

We have had opportunities to collaborate within our own school and to share our learning with the wider community through both formal and informal opportunities. This has included presentations to other community groups focused on sustainable interests, presentations to other schools, the delivery of professional development opportunities for several groups of principals and deputy principals and leading a workshop about the experience and the resource at a education conference” (Quinlivan, 2010).

Subsidiary Questions

Subsidiary Question 1

“Would a professionally sound teaching and learning resource on sustainability be valued by teachers?” Rather than let the participants answer this question, here are some comments from other schools and individuals who learned about the resource independently.

School 1:

“The teachers in our 16 classrooms have been working with the concept of sustainability all year. I will ask them for some specific feedback and get back to you. What I can tell you at present is

- *the resource has been fantastic and the teachers have made extensive use of it. One of the best things for us is that the planning integrated SOLO. It has been very useful particularly as we are new to using SOLO*
- *I know the teachers found the brainstorm and definitions sections of the resource really helpful, and*
- *the resource helped scaffold our teachers with a new way of planning as using a concept curriculum was new to our staff last year” (Cato, 2010)*

School 2:

“As EfS lead teacher at Edendale Primary School I am charged with developing a curriculum for sustainability. Thus I was overwhelmed with joy to find that someone had already done it!” (Coleman, 2009)

School 3:

A Kura Kaupapa – Wharekura school (where all subjects are taught in Maori except for English) located in the Waikato region (central North Island, NZ) wants to use the resource for a full year in the near future and has approached Hooked On Thinking for Professional Development of its teachers related to this use (Mills, *ibid.*).

Individual 1:

“I have just left my position as the Education for Sustainability adviser to schools with the University of Canterbury and I set up Enviroschools in the top of the South Island, so I find the resource very interesting. My broad feedback would be:

- *this resource is very strong on inquiry, especially sequencing thinking/analytical skills - this is excellent in that it is strongly aligned to the new curriculum.” (Waddell, 2010)*

Sub-question to Subsidiary Question 1

“Do many teachers not understand the holistic concept of sustainability?”

Five presentations describing the resource and the experiences gained in its use have been made over the past 18 months (to October 2010): a group of principals in Auckland; a group of deputy/assistant principals in Auckland; a group of senior staff from a school cluster several hours drive from Auckland seeking professional development on this topic; attendees at an ICT conference in Christchurch in 2009 (ULearn 09), and; attendees at an educational leadership conference in Sydney in 2010 (ACEL 2010). At each of these presentations attendees were asked to write down their definition of sustainability. They were then given a presentation about the holistic concept of sustainability and then asked to put a dot on a Venn diagram (refer Figure 4), located where they felt their original definition sat best. Very few attendees in any of the presentations placed their dots outside that part of the diagram which was not 100% environmental.

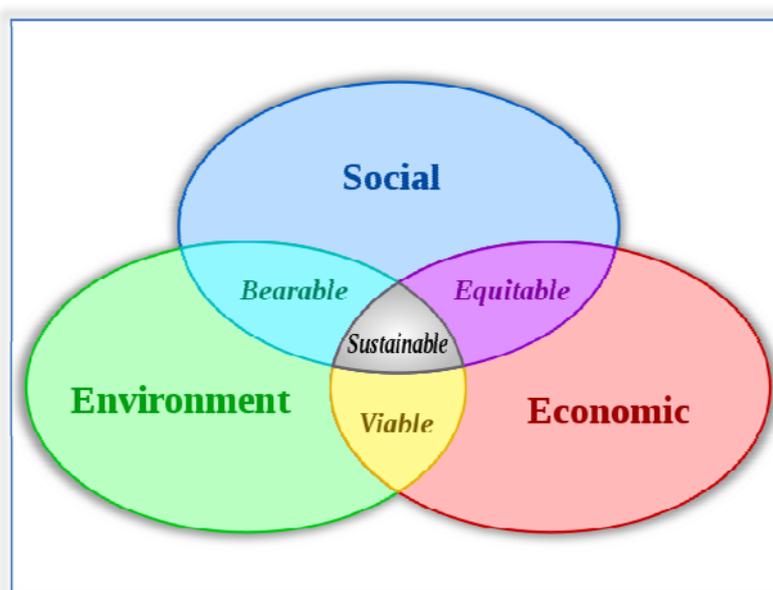


Figure 4: Sustainability (Wikipedia, 2010b)

Subsidiary Question 2

“Would the approach taken to produce a professionally sound teaching and learning resource on sustainability provide authentic professional development opportunities for those involved in its production?” Examples of professional development opportunities that have resulted from this process include:

- ✓ For the school teachers: All the teachers now have a much wider understanding of sustainability. The teacher from the Junior School has recently used sections of the resource to model the use of SOLO in a presentation to student teachers at the Auckland College of Education. The co-author of this paper has had the opportunity to present it to many of her peers via the presentations described previously.
- ✓ For the educational consultant: They now have a much wider understanding of how business can address issues of sustainability. They were pleased to have been involved in what they describe as “a sincere and collaborative, bottom-up (rather than top-down) initiative.”

- ✓ For the business sponsor: Staff involved in the resource have been co-presenters at several of the presentations mentioned above. This in itself has required them to hone their understanding of sustainability and their presentation skills.

Unexpected Results

A number of unexpected things have occurred. Several of these are described below.

From a community organisation:

A young student at ENPS (a 9 year old girl) was self-motivated to take an active part and persuade her family to attend an inner city stream planting. She learnt of the activity through a mail drop at her house. The organisers of the event ('The Friends of the Whau' (pronounced "foe")) were surprised to see the family group and they enquired as to why they had come to the planting. The young girl told them that she had been learning about sustainability



at school and she knew that it wasn't enough for her just to be sustainable at school and at home, but that she and her family needed to practice sustainable living in their community. This led the "Friends of the Whau" back to ENPS and essentially back to the resource. The organisers were so impressed by the actions of the young girl and her knowledge of sustainability that they presented her with a certificate at a school assembly.

From the Auckland Regional Transport Authority (ARTA):

'On behalf of ARTA's TravelWise School Travel Planners can I once again thank you for your presentation to the team. It was very valuable to get an insight into the process of developing the unit and in particular to hear what is required to make this successful in schools. Your talk certainly inspired the team and we are eager to ensure our work becomes "part of the day to day learning and not just an add on". One team member remarked just after you left, "That was the most valuable thing I've heard since I've been here" – and they were the most senior planner' (Vincent, 2009).

From ENPS:

	<p>The key concept understanding in the resource is "Our choices have consequences" and the driving question is "Am I a guardian (Me he mea ko hau te kaitiaki?)". This is reflected in the modernising of the school logo from that on the left prior to the initiative to that on the right. The tree represents the growing of learning at ENPS and also reflects the school's commitment to sustaining learning as guardianship in its most holistic sense. Because culture is an important element of social sustainability both are in current use, but new signage follows that on the right, emphasizing that ENPS stakeholders are enthusiastic "Guardians of the past, present & future".</p>	
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Lessons Learned and Incorporation of Feedback

It was confirmed that teachers need to have ownership of their daily work. The resource produced through this initiative was welcomed by teachers as a tool to help them prepare detailed lesson plans. As expected, the resource was used differently across the school with some teams using sections of the resource as written, especially the initial lessons on defining sustainability. As teachers got further into the resource they tended to focus on particular issues and themes and needed more detailed plans. The 16 resources expressly developed provide templates for them to explore similar but slightly different ideas and themes, personalising these to their own class interests and to meet the needs of students in the school community.

Other feedback included incorporating a section on Frequently Asked Questions, expanding the section on Teacher Directed Inquiry, and some “mind candy” on how the resource impacted a variety of stakeholders.

Benefits Expected and Benefits Achieved

To Society

The long term expectation is that our children will behave responsibly. That they will care for our planet now so that the world’s grandchildren can live comfortably in the future – a concept our children will be able to grasp, even at a junior level. Although it is too early to evaluate the long term impact of the resource, there is evidence that many of the children at ENPS now have an understanding of the concept of sustainability which is appropriate to their level of educational development.

To the business

Expectation: In their everyday working lives the business employees embrace sustainability, both consciously and unconsciously. Activities and deliverables associated with the initiative will provide opportunities for its employees and spread brand awareness of the business. Relationships with the wider community are a likely occurrence.

Outcome: Significant opportunities for professional development have occurred and continue to occur. The resource has excited the business employees and there are moves to replicate it outside New Zealand. In particular, Australia is planning to launch a National Curriculum in the near future. Sustainable living is a cross-curriculum perspective in the Australian Curriculum Design Document (ACARA, 2009). Discussions are underway to explore whether a similar resource would be useful in the Australian context.

To the School and its Teachers

Teachers are busy but committed people. Because schools don’t have unlimited funds, curriculum development must be undertaken in-house or schools must fund the release of their teachers to achieve this. Much of this work is usually done after the school day when teachers are tired from a full day of teaching. Assistance in curriculum and resource development with associated targeted activities related to sustainability will be valued. Teacher involvement in the initiative will provide them with an understanding of the concept of sustainability, a professional development opportunity and marketable experiences. Other anticipated benefits were expected to include:

Did this occur?

- An authentic learning experience for students ✓
- A professional development opportunity for teachers in working with a resource planning consultant ✓
- A positive contribution from the activities implemented ✓
- A resource developed for the school's use in a defined period at a low cost to the school ✓
- An opportunity for the school to professionally co-publish a resource to share with the wider community, and ✓
- An opportunity to raise the profile of the school in the eyes of the public. ✓

Discussion

The Perspective from the Hooked On Thinking viewpoint

Initially the educational consultant was concerned that their professional image might be compromised by its involvement in an initiative of this nature if it was improperly conceived, developed without authentic collaboration and approached from a top-down “here it is, isn't it great, please use (cameras flash, photo opportunity), goodbye”. After some initial discussions they accepted that there was positive intent on the part of the business sponsor and they then whole-heartedly supported the process.

The Business Viewpoint

The business recognised the opportunity to contribute positively to the development of its own employees and to society through its support of this initiative. It has presented an opportunity for the company to clarify its own understanding of sustainability.

The resource has been trialled for one year. Recently (mid-2010) a lessons learned review was carried out with ENPS and Hooked On Thinking and the resource has been updated to reflect these lessons. A formal launch is now being considered in order to bring it to the attention of a wider audience.

The initiative has been successful beyond the expectations of the business. The experience has resonated around the organisation with staff in several geographies around the globe interested in developing similar resources tailored to the educational needs of their respective countries. This includes the United Kingdom, Australia and South America. The hope of the business is that the resource will “go viral”.

Viewed through the lens of economic sustainability, this CSR funded initiative puts the name of the sponsor in places where it might not otherwise have been known, which may eventually lead to unforeseen business opportunities. Image and opportunity go hand in hand.

Conclusions

From its inception in early 2008, through its release as a draft in mid 2009 to the final version released in mid 2010, the initiative and its accompanying resource has been a truly collaborative effort between the educational community and the business community. It was hoped that it would be a solidly grounded resource that would help lay the foundations for a generation of learners who would “seize the opportunities offered by new knowledge and technologies to secure a sustainable social, cultural, economic, and environmental future for New Zealand” and for our world. The participants believe it remains faithful to that goal and they hope it will “go forth and multiply”.

Returning to the original research questions:

- 1) Can authentic collaboration between the education and business communities produce a deeper understanding of sustainability? First of all, was this collaboration authentic? In the opinion of the participants – this is a yes. Does it produce a deeper understanding of sustainability for many teachers? – another emphatic yes. A deeper understanding by comparison with what? – undoubtedly the current level of most educators.
- 2) Would a professionally sound teaching and learning resource on sustainability be valued by teachers? The feedback thus far would indicate yes.
- 3) Do many teachers not understand the holistic concept of sustainability? Without a doubt.
- 4) Would the approach taken to produce a professionally sound teaching and learning resource on sustainability provide authentic professional development opportunities for those involved in its production? Is the resource “a professionally sound teaching and learning resource” – the feedback thus far is an unsurprising yes, given the approach taken to design and implement the resource. Did “professional development opportunities occur” – yes and they continue to occur.

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