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Coordinator, IBSC Action Research Program

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Introduction

DI LAYCOCK
Coordinator, IBSC Action Research Program

The literature and research are overwhelming in their support of pedagogy that is student-centred and which fosters positive relationships between students and their teachers. Also compelling in the literature is the suggestion that the attitudes and actions of teachers are amongst the strongest influences on their peers’ decision to change their practice. It follows, therefore, that an initiative such as the 2011–2012 IBSC Action Research Project, where these two notions are combined, has the power to significantly influence learning and teaching in boys’ schools.

The eight action research reports presented here represent an extension of previous research undertaken on behalf of the IBSC by Michael Reichert and Richard Hawley. In their report to the IBSC, Teaching Boys: A Global Study of Effective Practices (2009), and subsequent publication, Reaching Boys, Teaching Boys: Strategies that Work – and Why (2010), Reichert and Hawley debunk the myth that boys are resistant to schooling. Their large-scale, worldwide study of boys and their teachers emphatically reveals that boys want to succeed at school, and that a significant part of leading them to such success is the forging of positive student-teacher relationships. To complement their findings, Reichert and Hawley provide teachers with a comprehensive toolkit of strategies that work effectively with boys. It is a selection of these strategies that the 2011–2012 IBSC action researchers investigated, implemented and evaluated within their own classrooms, under the research theme, Teaching boys at the coal face: Mining key pedagogical approaches.

The strategies implemented as “actions” by the IBSC’s action researchers included: embedding online gaming across disciplines to promote engagement, creativity and collaborative relationships; using characterisation techniques in Drama to enrich boys’ emotional growth; integrating a reflective component into collaborative learning in Science to increase understanding of self and others; incorporating the principles of restorative justice into student discipline procedures to foster boys’ ownership of behaviour; heightening boys’ emotional intelligence through a daily mindfulness program; introducing a flipped classroom approach to improve the student-teacher relationship; and developing a student-driven award system to enhance ownership of, and engagement in, character education.

The findings presented here by members of the IBSC’s 2011–2012 Action Research Team highlight the very positive benefits to be derived from listening to and respecting student voice. In empowering students to drive their own learning, whether in the academic or pastoral domain, the teacher-researchers generally observed the very positive impact of their pedagogical change on the boys’ desire to learn, and on the boys’ personal and scholarly development.
Further, the researchers recognised the profound personal value of using the formalised reflection of the action research process to transform their previously intuitive practice into practice that is informed and well-considered.

The research reports you are about to read are the fruits of the researchers’ 16-month research journey; a journey that began online in early 2011, and which took them to the IBSC annual conference in London for training, and finally to the presentation of their research findings at the 2012 IBSC annual conference in Melbourne. Along the way, members of the team experienced many of the same processes that their research actions required of the boys in their classrooms; they collaborated online, reflected on their learning, and engaged with ideas that facilitated problem-solving, decision-making and risk-taking. In doing so, they also experienced the same emotional roller-coaster ride that we ask our boys to take throughout their schooling; a ride characterised by the highs of success and at times the frustrations of failure.

The researcher’s reflections accompanying each report are testament to the profound and long-lasting personal and professional changes that can arise by turning one’s attention inwards through a process such as action research. They also highlight the substantive benefits for teachers of working together in a learning community populated by educators keen to connect and to share knowledge on teaching and learning in boys’ schools.

A learning community such as the 2011–2012 IBSC Action Research Team could not have been sustained without leadership, and heartfelt thanks go to the Team Advisor, Dr Linda Gibson-Langford of the King’s School in Sydney, Australia. Her mastery of action research and her inspiring, compassionate leadership made this journey exciting and rewarding for everyone. Specifically, her work in providing ongoing feedback and her comprehensive editing of the research project reports are duly acknowledged.

Thanks are also extended to the IBSC, and in particular, the Executive Director Mr Brad Adams, for providing the original vision for, and ongoing support of, the IBSC Action Research Program. Since its inception in 2005, the program has welcomed and nurtured more than 150 teacher-researchers from IBSC schools around the world.

Finally, and most importantly, the IBSC congratulates the members of the 2011–2012 IBSC Action Research Team for their dedication to task and readiness to share with us their research projects.

References
Inquiry Learning? Try a Game.

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Abstract

Game-based learning (GBL) has become a hot topic within education. In the 2011 Horizon Report (Johnson, Smith, Willis, Levine & Haywood 2011), games-based learning was considered one of the trends to watch in the next few years. As yet, however, there is little research on how it affects student performance and engagement, and, more specifically, boys’ engagement in acts of learning.

The researcher was interested in games-based learning and, more specifically, how games-based learning could engage boys as learners. Through action research he sought to answer the question: “What effect will game-based learning have on boys’ engagement and performance?” Eighty Grade 7 boys were involved in a digital summative task on Sustainability in which the computer game Minecraft became the platform of choice for most boys. The use of a game-based option allowed for a creative and open-ended environment. The task was a collaborative one in which each student was given a particular role—farmer, builder, miner. The boys could create a sustainable village and/or world, focused on resource use.

Findings indicated that the opportunity to learn through a creative and open process provided intrinsic motivation for the boys to create an elaborate and sustainable world. Their comments, captured throughout the research period, ranged from ideas connected to creativity, improved engagement, learning and fun, and extended to concerns centred on the distraction factor when learning online.
**Rationale**

A school for boys since 1913, Crescent School is located in Toronto, Ontario in Canada. It is committed to developing and implementing the most current research into how boys learn. Faculty members, rated by parents as Crescent’s greatest strength, consider teaching boys their vocation, and educating boys their responsibility. They combine a challenging academic program for day students in grades 3 to 12 with an array of co-curricular opportunities, allowing each boy to find and develop his unique abilities.

Within this environment, it was felt that by developing a games-based learning unit, a benchmark would be set for our teaching practice focused on our mandate to support inquiry-based learning. To this end, it was understood that “gaming” was becoming more prevalent and mainstream in today’s society, and that, although perceptions of stereotypical gamers abound, gaming is now used in both professional and skills training events (Clark & Ernst 2009). Thus, the idea of introducing GBL across Science and Geography for the boys in Year 7 was thought to be a worthwhile risk in support of our pedagogical challenge to engage and enrich boys’ learning opportunities. This led to the question: “What effect will game-based learning have on boys’ engagement and performance?”

**Literature Review**

Reichert and Hawley (2010) state that teachers need to be more responsive to their students’ reactions and feedback. Such reflection and engagement with students, focused on listening to student “voice,” can then inform practice and pedagogy. For example, the ideas of play, intrusive play and bodily-kinesthetics have been considered as three of the more important and instrumental factors for engaging boys in the learning process (Gurian & Stevens 2007). Gurian (2006) also notes that visual and/or graphical strategies are important in helping many boys to stay absorbed in tasks. Adding to this is Reichert and Hawley’s (2010) belief that motor activities involving games, role-play, competition and teamwork help to support a vibrant learning environment in which boys can thrive. It follows that any learning strategy offering a sense of active play and incorporating such factors as competition and social exchange, and which is visual, will engage boys in acts of learning. One such strategy that supports boys’ learning is based on games. GBL is the process of using games to teach content and critical thinking. It should not to be confused with “gamification,” which is the process of applying game design principles in another field or content area.

Willis (2011), a neurologist, assessed how learning that is challenging is similar to the way in which a gamer becomes engaged in a video game. He states:

> When learners have opportunities to participate in learning challenges at their individualized achievable challenge level, their brains invest more effort to the task and are more responsive to feedback. Students working toward clear, desirable goals within their range of perceived achievable challenge, reach levels of engagement much like the focus and perseverance we see when they play their video games.
Gee and Morgridge (n.d.) also note the potential of video games for learning:

The cutting edge of games and learning is not in video game technology—although great graphics are wonderful and technical improvements are important. The cutting edge is realizing the potential of games for learning by building good games into good learning systems in and out of classrooms and by building the good learning principles in good games into learning in and out of school whether or not a video game is present.

It is Clark and Ernst (2009), however, who specifically focus on gaming in the sphere of education. They note, “we see that gaming is a part of our students’ everyday lives, and it is left to educators to harness this new and emerging area as a way to reach out to our students” (p. 25).

Although GBL is somewhat contentious in education circles, gaming itself is an enormous industry. People under the age of 18 make up 94% of all computer gamers, and 60% of them are male (Clark & Ernst 2009). Research has also shown that gaming can motivate the player, which adds a layer of emotional content on top of instructional content (Berger & Muller 2009). When these data are added to the research base on gaming and learning, and considered in conjunction with other research that points to an increase in student achievement when using computer-assisted instruction (Vogel, Greenwood-Ericksen, Cannon-Bowers, & Bowers 2006), it seems reasonable to include gaming technologies into learning and teaching strategies in boys’ schools, especially where it concerns disengaged learners.

Whilst the literature suggests that the use of educational gaming has the ability to actively involve students in their learning, especially in boy-centric environments, Killi (2007) warns that there are very few research studies focused on the link between gaming and learning, especially from the perspective of boys. It is hoped that this action research project will help address that void.

**Methodology**

My research aim was to investigate whether games-based learning could improve my students’ engagement in learning about sustainability as part of the *Resources and Sustainability* curriculum, and in doing so, facilitate greater success for boys in their summative task. To achieve this aim, I chose action research as my methodology. The fact that action research allows practitioners to reflect on, and assess, something they are willing to try in their classroom, and convey the findings to all stakeholders—other teachers, administration, parents and students—was an important consideration in the selection of this methodology.

Part of the power of action research is that it is cyclical, and allows practitioners to pose a question, decide on an action, gather data, and reflect, before gathering more data and adjusting their strategy. My hope was that this small-scale research would be the first step in a decision-making process that would start to change the learning environment in some way (Ferrance, 2000), and that such practitioner research would become contagious and ubiquitous throughout our school’s teaching practice.

As mentioned previously, gaming has become a hot-button topic. The goal of looking at this intervention through action research was to provide a framework for an evidence-based approach to curriculum design, and to build greater confidence and knowledge of the “why” behind pedagogical approaches such as this (James & Deyner 2009). Action research, therefore, would
provide the bridge between research and practice, with the goal of enriching outcomes for our students (Rust 2009).

PARTICIPANTS
At the school’s Curriculum Evening in September, the research initiative was explained to parents. Each boy in the Year 7 Science and Geography classes, and his parents, were given a letter requesting permission to be involved in my research. Importantly, each boy had the option to not participate. It was made clear, however, that these boys would complete an alternative assessment task. The letter also outlined the research rationale and included the time frame for the boys’ involvement. Further, it made reference to the use of photography and video as data collection tools. Anonymity was assured for each participant in any dissemination of the research.

All 80 students in the four Year 7 Science and Geography classes, of which two were mine, participated in the research. These participants were 12–13 years old.

ACTION
I wanted the boys in my two classes to be involved in the process of creating the summative task; to create a real world challenge for the Year 7 boys to solve by incorporating many of the concepts learned throughout the unit. The task would need to be collaborative and harness the boys’ critical and creative thinking, with a specific focus on analytical skills. I chose game-based learning as my strategy.

During three one-hour classes, the participants in my two classes traded ideas back and forth. Within this time, four options were finalized, including the criteria and expectations for each of them (Appendix 1). Three of the four options included creating a digital model of a sustainable environment, and although most groups chose one of these options, there were some that chose option four—to make their model by hand.

For the digital options, the boys chose the games platform Minecraft, as most of the boys were familiar with it. I set up a classroom server to enable all groups within the cohort to collaborate with one another. To do so was low cost; an important factor when setting such a task for so many students.

DATA COLLECTION
Data collection included a combination of qualitative and quantitative techniques. I wanted to gather baseline data from the boys to establish their depth of involvement and interest in game-based learning. An initial questionnaire for the participants (n=54) was distributed through Google Forms. The questions focussed primarily on time spent gaming, views on gaming, gaming ability and initial learning levels on the topics of resources, resource use and pure substances and mixtures (Appendix 2).

During the first cycle of action research, the participants reflected on their experience by maintaining a personal blog. They could also comment on their peers’ reflections as part of this process. At the end of this initial cycle, two focus groups—selected randomly and comprising five boys each—were interviewed using semi-structured questions, and video and/or audio recorded.
This enabled me to get at the heart of what aspects of gaming did or did not help with the boys’ learning and engagement. All students completed a post-questionnaire, through Google Forms, to enable a comparative analysis.

DATA ANALYSIS

Thematic analysis of the data focused on categorizing and coding the qualitative data obtained through the pre- and post-questionnaires and interviews. The data were then consolidated, reduced and interpreted in order to make meaning out of the data set. The categories and codes were then linked to see what commonalities existed between them (Merriam 2009).

Quantitative data were consolidated and analysed using a combination of Google Spreadsheets and Microsoft Excel. Trends between pre- and post-questionnaire data were analysed and graphed in order to provide a backdrop and comparison to the qualitative data.

Key Findings and Discussion

PRE-INTERVENTION QUESTIONNAIRE

Fifty-four students responded to the pre-intervention questionnaire, affording me a baseline perception of their views on gaming, time spent on gaming, self-perceived ability and some initial learning levels.

The overwhelming majority of the participants “gamed” between 1 to 6 hours a week, while a smaller number gamed more than 6 hours per week. This was in contrast to a very small minority who did not game at all. It was my observation, however, that the time they actually spent gaming, whether it be on their mobile device, tablet or laptop, was higher than what the boys’ perceived. For example, since we implemented a Bring Your Own Device (BYOD) system in the school, I have seen a significant increase in gaming before school, during recess and after school. Most of the participants considered themselves as intermediate to advanced users, while about a fifth of the participants believed they were novice or beginners. This was important information that enabled me to ensure that the level of the intervention would match the boys’ level of expertise. Knowing that the greater majority had used Minecraft previously made it easier to integrate this platform into the initial design of the summative task. Interestingly, for those who had not gamed much or who had never played Minecraft, there was an even divide in their perceptions that the use of gaming would either help them learn more and keep them engaged, or distract them.

The greater majority of participants believed that using a GBL approach would bring positive results in the summative task. Sixteen of the boys believed that video games, as part of the classroom strategies for learning, would improve their performance, while fourteen agreed that this strategy would help them increase their knowledge in the area of sustainability. Interestingly, twenty respondents felt that video game learning would increase their effectiveness in class, while only eleven felt that the strategy would help them gain better grades.

Other participants noted that gaming would “improve my imagination and creativity,” and “be a better way of learning.” The comment, “make class fun and not as stressful,” was pertinent to how this young man perceived what elements make up a vibrant learning environment (Reichert & Hawley 2010). As mentioned, not all thought this would be a positive experience, with one participant offering, “[using gaming would] distract me.”
At Crescent, we focus all our tasks on getting the boys to explain their understanding at a deeper level, and to be able to make connections between each of the concepts being taught (Wiggins & McTighe 2005). Feedback from the participants, in general, echoed this philosophy in that a gaming platform might help them to create something that they could not otherwise explain or articulate in words. As illustrated in this response, many of the students believed that it would allow them to show the teacher what they really knew: “Minecraft helps [us] express [our] village.” Another participant revealed, “I enjoy playing Minecraft and in the past I have seen and thought up ways to make [a village] sustainable.” Other participants commented that, “I think Minecraft will help me understand the concepts better,” and, “I think it is better than a written report or a simple diagram because in Minecraft you are actually making the farm like an actual farm rather than drawing it on a piece of paper.” In their thoughtful responses on gaming in the classroom, many either believed that it would be useful and fun and that it would make learning more interesting, or that gaming was, perhaps, a distracter. Considering the number of students who enjoyed gaming and the high percentage of those who do game on their own time, this was an interesting paradox, and quite an insightful observation from young adolescent boys. In general, the boys felt they were afforded better opportunities to learn and demonstrate their knowledge in this area of the curriculum through involvement in GBL. They also felt that they could be more creative in their responses.

POST-INTERVENTION QUESTIONNAIRE

Thirty-five students responded to the final questionnaire, administered after they had reflected on each other’s work and had received their assessment rubrics back from the teacher. The goals of this questionnaire were to discover whether the students thought they did better on their summative task because of gaming, and whether they were more creative and more able to explain themselves in different ways. The questionnaire was also designed to gauge if the boys would want to learn through a gaming process again, if given the opportunity. The cohort held a very positive position across all goals.

Do you want to use gaming again for this subject or other subject?

Yes 86% (30)

No 14% (5)

The greater majority believed that the gaming intervention helped them to do better on the summative task. In comparing the Term 1 and Term 2 summative tasks, both of my classes’ grade point average had increased. Not all of the increase can be tied to the use of gaming, as the quality usually increases with their comfort level in class and their understanding the level of expectations, but gaming could not be ruled out as a contributing factor.
Do you think gaming has allowed you to be more creative and do things you couldn’t do before?

![Pie chart]

Yes 80% (28)  
No 20% (7)

The boys’ increased opportunity to express their creative skills was attributed to the use of gaming. The participants felt more confident to share their ideas as their competence grew. One participant reflected, “it allows students to express their creativity in games like Minecraft,” while another agreed that gaming was useful because it allowed them to create a model to explain complex ideas: “If you were to use a real physical model it would consume a lot of time which could be used for your write up.” Creativity, ease of use, open-ended scenarios and the fact that it was fun and engaging were re-occurring themes throughout the open-ended responses gathered through the questionnaire.

Digital modelling through game-based learning reflects other ways in which we ask the boys to present their knowledge. Every year they are asked to create models, maps, and board games using physical materials. Although this does allow them to be creative and active in their learning (Reichert & Hawley 2010), requiring boys to create time consuming and resource-rich products can be incompatible with the teaching and learning of concepts such as sustainability, stewardship and resource use. This issue was highlighted by one participant, who responded, “for Science, gaming is far more convenient and cheap. Why waste hundreds of dollars on supplies and another couple of hours on constructing the model when you can use your favourite game and make something in less time?”

FOCUS GROUP

The focus groups shared their thoughts on the summative task, the use of gaming and the notion of gaming within the school environment. In talking with the groups, similar themes arose to those that emerged from the questionnaire data. “Creativity,” “open-ended,” “engaging,” and “fun,” were recurring comments throughout the interviews. Becoming “distracted,” or “off-task,” were also concerns of the group.

When questioned why certain groups did not choose gaming as an option, most of the boys commented that if they played Minecraft outside of school, they were more inclined to do it inside school as well. The boys also preferred that a group member teach them Minecraft. One of their recommendations was for each group to have at least one person who knew the basics of the game so that there would be one expert amongst them. An area of concern for the boys was how they could better follow the “rules” that were outlined. I had enlisted a few expert users to manage the server and oversee the digital citizenship aspect of the world. It seemed to work well most of the time, but they did comment on certain plug-ins that could be used in order to assist in this.
The focus groups agreed that GBL did help with their performance. One of the participants acknowledged the excellent grade awarded to their group and put this down to being “focused” and “engaged” in the task. He observed:

Actually I think one of the best parts about Minecraft is, normally if we have a Science Geo GRASP Task and you know you had to do work at home because you were behind, it is such a drag. You don’t want to sit in your room and write up like a 1000 word essay but it’s like more fun to say you go home and just build something in Minecraft and show it that way.

The focus groups also considered that allowing the boys to use GBL as a learning platform should be considered a privilege rather than a right. Most of them agreed that the students who were off-task were generally off-task in other areas of the course, and that maybe it should be used for those who continually handed in work on time and put forth a strong effort throughout the year. The timing of the summative task was important to them as well. Most of them felt this would make a good introductory summative task that would engage them in the Science and Geography curriculum right at the start of the year.

Conclusion

The use of emerging technologies is beginning to have a considerable impact on teaching, learning and creative expression within education (Johnson et. al. 2011). It was encouraging to know that game-based learning had provided my students with an outlet for taking risks, exploring possibilities and working on a deep question to develop deep knowledge within a collaborative environment. Their engagement in the content was heightened, and it allowed them to create a world based on their own understanding of the big ideas.

Over time, boys will begin to see their digital and mobile devices as learning tools. In this first cycle of action research, it was encouraging to listen to the boys discuss and make comment upon the benefits of gaming in helping them to acquire and develop new knowledge.

As gaming and its impact on learning become better understood, I have no doubt that we will see more significant investments in large-scale educational games. Although educational gaming may be a few years away from being embraced as a mainstream tool, the results from this study show that it is something exciting to consider for use within the classroom. In the words of one participant, “it would be helpful for other subjects because we can create models or amazing stuff in gaming that adults don’t know about.”

IMPLICATIONS FOR FURTHER PRACTICE AND RESEARCH

Action research is a cyclical journey, and with the first iteration complete, I can already see the next steps. Next year, I will continue this summative task and keep assessing the same areas through action research. I will take on board some of the boys’ insightful ideas as to how to tighten the intervention and hopefully extend the summative task across a few more subjects. It will be interesting to see how this intervention is perceived within the school, and if the use of gaming progresses outside of this subject area. I will also continue monitoring gaming research literature in order to further verify these findings.
Reflection

Study without reflection is a waste of time; reflection without study is dangerous.

Confucius n.d.

Being afforded the chance to reflect on my own practice, and being supported and challenged by an international group of peers, is quite an experience. It is not one to be taken lightly. Technological advances will continue to change the way we think, act and teach. The tool cannot be the focus; the focus must be on informing your practice and being flexible and open enough to test it, share it and change it. The ultimate goal is that the change, regardless of how small, will have a profound impact on the student. That will be the true measure of accomplishment.

I believe the ultimate goal of teaching is to teach for life-long learning. What better way to encourage than to practice what you preach. I think the boys were truly excited about the opportunity to develop their own summative assessment task, and albeit tentatively take the chance at gaming in school. Many still comment on the fact that they were “allowed” to game for class. Giving them a voice can be a powerful tool and it is my hope that they can grasp on to this and continue to work on the best way to use their voice. If anything results from this action research project, my hope is that it is this: given the opportunity, boys can be creative geniuses and given the chance to do something open-ended and fun, boys can shine. As Vygotsky (1987) notes, “the teacher must orient his work not on yesterday's development in the child but on tomorrow’s” (p. 211).

Acknowledgements

I would like to thank my school for supporting me on this journey and Dr. Michael Leatch for all his advice and support during this research. I would also like to thank Sheryl Murray and Lisa Weldon for their encouragement and support with their classes. A special thanks goes to those boys who helped and guided me through this (especially Miles and Charles). Thanks to my IBSC Team as well for keeping the drive going, and to Linda and Di for their ongoing support, editing and guidance.

References


### Appendices

**Appendix 1 Options 1 and 2**

<table>
<thead>
<tr>
<th>Role 1</th>
<th>Farmer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plants crops and/or raises animals in most sustainable way possible</td>
<td></td>
</tr>
<tr>
<td>Creates a 1-page summary on what your role is and what is needed to be sustainable, what it means to be sustainable in your role</td>
<td></td>
</tr>
<tr>
<td>Creates a distribution map that shows where the food products are located (your village and/or Canada)</td>
<td></td>
</tr>
<tr>
<td>Researches 1 food product of your choice with an input/output chart of how the food gets from ground to table (Refs req’d)</td>
<td></td>
</tr>
<tr>
<td>Identify a contaminant present in some stage of the process of your building/village. Identify a Solution for the contamination problem. Use diagrams to assist in your explanation. HINT: Use your knowledge of the particle theory and separation of PSM to assist you</td>
<td></td>
</tr>
<tr>
<td>Daily Journal (using your blog) 1. daily accomplishments 2. list of things to complete next day 3. 2 things you would have done differently today</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Role 2</th>
<th>Miner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizes extraction and collection of resources required in most sustainable way possible</td>
<td></td>
</tr>
<tr>
<td>Creates a 1-page summary on what your role is and what is needed to be sustainable, what it means to be sustainable in your role</td>
<td></td>
</tr>
<tr>
<td>Researches 1 natural resource of your choice with an input/output chart of how the resource gets from the ground to market (Refs. req’d)</td>
<td></td>
</tr>
<tr>
<td>Creates a distribution map that shows where the natural resources are located (your village and/or Canada)</td>
<td></td>
</tr>
<tr>
<td>Identify a contaminant present in some stage of the process of your building/village. Identify a solution for the contamination problem. Use diagrams to assist in your explanation. HINT: Use your knowledge of the particle theory and separation of PSM to assist you</td>
<td></td>
</tr>
<tr>
<td>Daily Journal (using your blog) 1. daily accomplishments 2. list of things to complete next day 3. 2 things you would have done differently today</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Role 3</th>
<th>Builder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uses resources to build sustainable house/village</td>
<td></td>
</tr>
<tr>
<td>Creates a 1-page summary on what your role is and what is needed to be sustainable, what it means to be sustainable in your role</td>
<td></td>
</tr>
<tr>
<td>Researches 1 sustainable building product of your choice with an input/output chart of how the building product gets from the ground to the builder (Refs req’d)</td>
<td></td>
</tr>
<tr>
<td>Creates a thematic map that shows the economic importance of natural resources (your village and/or Canada)</td>
<td></td>
</tr>
<tr>
<td>Identify a contaminant present in some stage of the process of your building/village. Identify a Solution for the contamination problem. Use diagrams to assist in your explanation. HINT: Use your knowledge of the particle theory and separation of PSM to assist you</td>
<td></td>
</tr>
<tr>
<td>Daily Journal (using your blog) 1. daily accomplishments 2. list of things to complete next day 3. 2 things you would have done differently today</td>
<td></td>
</tr>
</tbody>
</table>
Final Product

Documentary/video of following points:
- how natural resources that are used have an **impact on the environment**
- **benefits** achieved by all roles working together as stewards (min 4 benefits w/ explanations)
- Using screenshots/screencaster, diagrams, audio to create a documentary/video using Prezi, iMovie, Moviemaker
- Map with legend showing main components of house/village & interactions between farming, extraction, building and environment
- Digital Model (Minecraft, Google SketchUp, other) of your building/village

Option 3 – Aliens & Humans

<table>
<thead>
<tr>
<th>Role 1</th>
<th>Farmer/Scientist</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develops a sustainable food source that will feed both alien &amp; human colony</td>
<td></td>
</tr>
<tr>
<td>Creates a 1-page summary on what your role is and what is needed to be sustainable, what it means to be sustainable in your role</td>
<td></td>
</tr>
<tr>
<td>Creates a distribution map that shows where the food products are located (your colony and/or Canada)</td>
<td></td>
</tr>
<tr>
<td>Researches 1 food product of your choice with an input/output chart of how the food gets from ground to table (References req’d)</td>
<td></td>
</tr>
<tr>
<td>Identify a contaminant present in some stage of the process of your building/village. Identify a solution for the contamination problem.</td>
<td></td>
</tr>
<tr>
<td>Use diagrams to assist in your explanation. HINT: Use your knowledge or the particle theory and separation of PSM to assist you</td>
<td></td>
</tr>
<tr>
<td>Daily Journal (using your blog) 1. daily accomplishments 2. list of things to complete next day 3. 2 things you would have done differently today</td>
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<table>
<thead>
<tr>
<th>Role 2</th>
<th>Human Leader</th>
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<tbody>
<tr>
<td>In charge of &amp; organizes extraction and collection of natural resources</td>
<td></td>
</tr>
<tr>
<td>Creates a 1-page summary on what your role is and what is needed to be sustainable, what it means to be sustainable in your role</td>
<td></td>
</tr>
<tr>
<td>Researches 1 natural resource of your choice with an input/output chart of how the resource gets from the ground to market (References req’d)</td>
<td></td>
</tr>
<tr>
<td>Creates a distribution map that shows where the natural resources are located (your colony and/or Canada)</td>
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</tr>
<tr>
<td>Identify a contaminant present in some stage of the process of your building/village. Identify a solution for the contamination problem.</td>
<td></td>
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<tr>
<td>Use diagrams to assist in your explanation. HINT: Use your knowledge or the particle theory and separation of PSM to assist you</td>
<td></td>
</tr>
<tr>
<td>Daily Journal (using your blog) 1. daily accomplishments 2. list of things to complete next day 3. 2 things you would have done differently today</td>
<td></td>
</tr>
</tbody>
</table>
| Role 3 | Uses resources to build sustainable house/village  
|        | Creates a 1-page summary on what your role is and what is needed to be sustainable, what it means to be sustainable in your role  
|        | Researches what trade can be improved between colonies with an input/output chart of how the products will get from one colony to another using a more sustainable method (References req’d)  
|        | Creates a thematic map that shows the economic importance of the natural resources (your colony and/or Canada)  
|        | Identify a contaminant present in some stage of the process of your building/village. Identify a solution for the contamination problem. Use diagrams to assist in your explanation. HINT: Use your knowledge or the particle theory and separation of PSM to assist you  
|        | Daily Journal (using your blog) 1. daily accomplishments 2. list of things to complete next day 3. 2 things you would have done differently today  

| Final Product | Documentary/video of following points:  
|               | • how natural resources that are used have an impact on the environment  
|               | • benefits achieved by all roles working together as stewards  
|               | (min 4 benefits w/ explanations)  
|               | • Using screenshots/screencaster, diagrams, audio to create a docu/video using Prezi, iMovie, Moviemaker  
|               | • Trading Post: What trades/exchanges are going on between the two colonies (Concept Map)  
|               | • Map with legend showing main components of the 2 colonies & interactions/trade between farming, extraction, building and environment  
|               | • Digital Model (Minecraft, Google SketchUp, other) of your building/village OR Written Speech outlining how colonies will work together for the future (2 pages MAX)  

| Role 1 | Researches 1 food product found in the local grocery store. How it is grown and who for (Refs req’d)  
|        | Researches 1 food product of your choice with an input/output chart of how the food gets from ground to table (Refs req’d)  
|        | Creates a 1-page summary on what your role is and what is needed to be sustainable, what it means to be sustainable in your role  
|        | Creates a distribution map that shows where the food products are grown (Canada)  
|        | Identify a contaminant present in some stage of the process of your building/village. Identify a solution for the contamination problem. Use diagrams to assist in your explanation. HINT: Use your knowledge of the particle theory and separation of PSM to assist you  
|        | Daily Journal (using your blog) 1. daily accomplishments 2. list of things to complete next day 3. 2 things you would have done differently today  

<table>
<thead>
<tr>
<th>Role 2</th>
<th></th>
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</thead>
</table>
| **Consumer/Customer** | Researches difference between regular, locally-grown and organic food  
(References req’d)  
Creates an input/output chart of your role within the food system  
Creates a 1-page summary on what your role is and what is needed to be sustainable, what it means to be sustainable in your role  
Creates a distribution map that shows where the food is primarily sold  
(Canada)  
Identify a contaminant present in some stage of the process of your building/village. Identify a solution for the contamination problem. Use diagrams to assist in your explanation. HINT: Use your knowledge of the particle theory and separation of PSM to assist you  
Daily Journal (using your blog) 1. daily accomplishments 2. list of things to complete next day 3. 2 things you would have done differently today |

<table>
<thead>
<tr>
<th>Role 3</th>
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</thead>
</table>
| **CEO of Food Co** | Researches ways in which food products are marketed and sold to the consumer—processing, packaging, transportation (Refs req’d)  
Creates a 1-page summary on what your role is and what is needed to be sustainable, what it means to be sustainable in your role  
Creates an input/output chart of your role within the food system  
Creates a thematic map that shows the economic importance of natural (your village and/or Canada)  
Identify a contaminant present in some stage of the process of your building/village. Identify a solution for the contamination problem. Use diagrams to assist in your explanation. HINT: Use your knowledge of the particle theory and separation of PSM to assist you  
Daily Journal (using your blog) 1. daily accomplishments 2. list of things to complete next day 3. 2 things you would have done differently today |

<table>
<thead>
<tr>
<th>Final Product</th>
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</table>
| **Final Product** | Report highlighting the following:  
• Life Cycle Analysis on chosen product—what does it take to get it from ground to the table  
• **Benefits** achieved by all roles working together as stewards  
(min 4 benefits w/ explanations)  
• Brochure—highlighting the benefits of farming, how farming has changes in Canada, natural resources that are required in order to get food product from the ground to the table |
<table>
<thead>
<tr>
<th>Level</th>
<th>1 page report</th>
<th>Contamination report</th>
<th>Input-output chart</th>
<th>Work cited</th>
<th>Docu/Brochure</th>
<th>Model</th>
</tr>
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<tbody>
<tr>
<td>5</td>
<td>Elevated: All words are spelled correctly, punctuation is exact, argument is enhanced by the quality of the vocabulary and sentence structure.</td>
<td>Elevated: All words are spelled correctly, punctuation is exact, and argument is enhanced by the quality of the vocabulary and sentence structure. A clear idea of what problem you were addressing and what solutions were available.</td>
<td>The use of symbols, colours and images communicated a clear idea of what inputs and outputs were necessary in the process assigned.</td>
<td>Work cited in the correct format. Properly edited with resources from a number of different sources.</td>
<td></td>
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</tr>
<tr>
<td>4</td>
<td>Very strong. Very few words are misspelled; punctuation is almost exact; argument is strongly supported by quality of the vocabulary and sentence structure.</td>
<td>Very strong. Very few words are misspelled; punctuation is almost exact; argument is strongly supported by quality of the vocabulary and sentence structure. A somewhat clear idea of what problem you were addressing and what solutions were available.</td>
<td>The use of symbols, colours and images communicated a somewhat clear idea of what inputs and outputs were necessary in the process assigned.</td>
<td>Work Cited in the correct format. Properly edited but very few sources used.</td>
<td>Group has clearly demonstrated how all the assigned roles can work together in a sustainable manner.</td>
<td>Group has clearly demonstrated how all the assigned roles can work together in a sustainable manner.</td>
</tr>
<tr>
<td>3</td>
<td>Even. Several words are misspelled, punctuation is lacking but evident, argument is weakened by difficult or incorrect use of vocabulary and unstructured sentences.</td>
<td>Even. Several words are misspelled, punctuation is lacking but evident, argument is weakened by difficult or incorrect use of vocabulary and unstructured sentences. An idea of what problem you were addressing and what solutions were available.</td>
<td>The use of symbols, colours and images communicated a somewhat clear idea of what inputs and outputs were necessary in the process assigned.</td>
<td>Work cited in the proper format. However few sources are used and it is not properly edited.</td>
<td>Product lacks many components and does not represent the benefits of working together or mentions sustainability.</td>
<td>Model lacks many components and does not represent the benefits of working together or mentions sustainability.</td>
</tr>
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</table>
### Option 4 – Food Processing Co. (continued)

<table>
<thead>
<tr>
<th>Level</th>
<th>1 page report</th>
<th>Contamination report</th>
<th>Input-output chart</th>
<th>Work cited</th>
<th>Docu/Brochure</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Emerging. Multiple words are misspelled; punctuation is lacking but evident; argument is weakened by difficult or incorrect use of vocabulary and unstructured sentences.</td>
<td>Emerging. Multiple words are misspelled; punctuation is lacking but evident; argument is weakened by difficult or incorrect use of vocabulary and unstructured sentences.</td>
<td>The use of symbols, colours and images communicated a vague idea of where the locations of regions and places are in the world.</td>
<td>Work cited not in the proper format and few sources used.</td>
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<tr>
<td>1</td>
<td>Developing. Almost all words are misspelled; use of punctuation is not evident; vocabulary is simple and limited.</td>
<td>Developing. Almost all words are misspelled; use of punctuation is not evident; vocabulary is simple and limited.</td>
<td>The use of symbols, colours and images communicated an unclear idea of what inputs and outputs were necessary in the process assigned.</td>
<td></td>
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<td>Only one source cited or no work cited present at all.</td>
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Appendix 2

PRE-QUESTIONNAIRE

Sci/Geo GRASP Task – Questionnaire #1

Please answer all of the questions below. If there is anything else you would like to add, feel free to let me know!

How many hours a week do you spend gaming?
- I don’t game at all
- 1–2 hours a week
- 2–4 hours a week
- 4–6 hours a week
- 5–8 hours a week
- 8 or more hours a week

What do you game on the most? (eg. laptop, phone, gaming console, etc.)

---

Do you enjoy gaming?
- I love it
- It’s okay, I play from time to time
- Don’t like it

How would you rate your gaming ability? (How good are you?)
- Expert
- Intermediate
- Novice
- Beginner

Have you played Minecraft before?
- Yes
- No

I thing using video games in the classroom would …
Check all that apply to you.
- Improve my performance
- Increase the amount that I learn
- Increase how effective I am in class
- Help me to achieve better grades
- Other: 

---
Do you think you will use *Minecraft* for this GRASP task? Why or why not?
Put “Yes” or “No” and a brief description of why you will use it or why you won’t.

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

If you chose not to use *Minecraft*, did you use another game?
Yes or No. If you put yes, please write down what game you used.

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

Please write down any thoughts you have on using games in the classroom (for any subject).
Do you think they are useful? Would you like to see them used more? Do you think they would be distracting?
Please be honest, your comments can be positive or negative.

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________
Appendix 3

FINAL QUESTIONNAIRE

Now that you have received your GRASP Tasks back—do you think gaming (using *Minecraft* or another game) helped you do better on this project?

- ☐ Yes
- ☐ No

After the Resources GRASP Task—have you used *Minecraft* (or another game) in any other subjects?

- ☐ Yes
- ☐ No

Do you think gaming has allowed you to be more creative and do things you couldn’t do before?

- ☐ Yes
- ☐ No

Do you want to use gaming again for this subject or other subject?

- ☐ Yes
- ☐ No

Please briefly explain why you think gaming was useful for this subject.

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

Please briefly explain what concerns or problems might occur from gaming.

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________
Abstract

Valued by schools all over the world, character education programmes have an ability to “improve student levels of respect and responsibility” (Duer, Parisi & Valentis 2002, p. 5). How do schools, however, make these programmes meaningful for their students? Do students see the character education programmes in their schools as valuable and relevant in their lives?

It was these questions that prompted an action research project focused on re-developing the character awards structure of Crescent’s Lower School’s Character Education Programme (CEP). The focus of the project, which was inspired by the work of researchers Reichert and Hawley (2010), and Cox (2012), was the inclusion and recognition of student voice in the re-fashioning of the CEP. Video recorded data were collected from teacher-led student focus group discussions over a period of four months.

Analysis of the data indicated that the students were positively and profoundly empowered by the responsibility and opportunity to lead in the revision of the awards structure in the CEP. The results are also significant because the students’ level of engagement, empowerment and reflection led to a successful overhaul of the existing programme; changes that have been celebrated and implemented fully by the school community.
Rationale

Founded in 1913, Crescent School is an independent school for approximately 700 boys from grades 3 through 12. Boys are afforded the opportunity to strive for excellence in every aspect of their lives and develop their talents in academics, the arts and athletics. Ultimately, the school’s objective is to foster the development of graduates who fulfill its mission statement—*men of character from boys of promise.* To this end, the school is committed to developing character education initiatives that support its mission.

Initially, the Lower School’s character education programme had two goals: one, to create a school community that shared the same language and understanding of basic values, and two, for both faculty and students to model the mantra: “How can I help?” To facilitate and model the kinds of behaviours that would emulate these aspirations, a character awards programme was created to run in tandem with this initiative. A tiered awards ranking of ribbons and pins of green, bronze, silver, gold and diamond was established (Appendix 1). Positive student behaviour was recognized by faculty members at weekly assemblies, along with a short story-telling synopsis of why the award was being given.

It had become clear to students, faculty and parents that the character education programme needed review. Changes in faculty and improved student behaviour in the school’s core values had resulted in an inconsistent understanding of what constituted award-worthy behaviour, and what was expected, positive student behaviour. In addition, there was dissatisfaction with the transparency of the process, including self-esteem issues with students who rarely received awards, yet whose behaviour was exemplary.

The motivation to research this topic came from the premise that, if a school’s character awards programme is being designed for the boys, it is logical that the boys’ voices, experiences and reflections be heard and used to create the CEP curriculum. For the first cycle of my action research project, therefore, the research question was: “How will student leadership, in the revision of the awards structure of the Character Education Programme, affect boys’ acceptance of, and engagement in, the programme?”

As the students most familiar with the current awards programme, the Grade 6 graduating class was invited to participate in this research project. Cox’s (2012) research findings that “boys sense the significance of work as adolescence approaches” (p. 1), added purpose to the research.

Literature Review

Despite the findings of researchers who advocate the value of character education programmes in schools, and a plethora of pre-packaged character education curricula and character recognition plans, it remains challenging for schools to assess the value of their own character education initiatives. Creating a school culture that believes in “the heart as well as the mind… where character and intelligence are equally valued and nourished,” is considered both a priority and a necessity (Gordon, Phillips & Carr 2005, p. 223). Given these challenges, how do we inspire boys to embrace and contribute to the learning of the life-skills that promote character development? To begin, it is necessary first to look at the research that frames our understanding of these paradigms. Since research has identified that supportive and celebratory school settings and positive role models and
teacher-student relationships increase the engagement of boys in their learning, it was important to investigate how these three strategies could inform the design of my action research project.

Lashlie (2005), along with Reichert and Hawley (2010), acknowledges that school setting and celebratory school culture contribute positively to boys’ learning. Lashlie’s work reveals the need for boys to celebrate excellence and have evidence of their school successes, or rites of passage, displayed around them via “plaques, photos and awards’ cabinets” (2005, p. 204). Crescent School’s resolve to maintain its awards structure using tangible positive character recognition incentives such as ribbons and lapel pins found support in Lashlie’s research.

Beyond the tangible, the atmosphere in the classroom also plays a role in learning. Reichert and Hawley (2010) discovered boys experience increased engagement within a competitive environment that also embraces teamwork. In addition, they found that boys have a “pronounced appreciation of opportunities to both compete and cooperate in a scholastic setting” (p. 131). These findings support the success of a competitive teamwork approach to character education programmes in boys’ schools, and promote ones that include celebrations of excellence through recognition.

The importance of both positive role models and teacher-student relationships are crucial to a school’s success. By extension, demonstrating and mentoring good character and moral intelligence is a more successful strategy than just talking about it (Borba 2002). Again, the work of Reichert and Hawley (2010) established the connection between a boy’s success in learning and his relationship with teachers. One of the three most significant findings in the Reichert and Hawley study (2010) was that boys respond positively to teachers who see them “as an individual” (p. xxiii). Since students, particularly boys, gain a sense of importance when they feel that their opinion matters, it was essential that the design of the focus group sessions reinforced team-building skills.

The most effective character education programmes are the ones that are “personalized to fit the needs and interests of a school” (De Roche & Williams 2001, p. xviii). Elder’s findings (2010) on children’s self-assessment of their work in elementary school found that “by helping students reflect on themselves and their accomplishments, teachers can help students invest effort, interpret their progress... and gain a sense of self-efficacy” (p. 3). Further support for the recognition of student voice is found in Cox’s (2012) research on boys, which reveals “work is a primary pathway to significance because it bestows a tangible sense of worth, service, and craft” (p. 1). Schools that use student input to create and customize their character education programme, therefore, are more likely to reap positive results.

**Methodology**

I needed to inspire and empower the students with both the responsibility and the authority to tackle the revision of the school’s existing awards structure. Ultimately, it was my hope that the results of this research project would confirm my belief that student involvement in the revision of the awards structure would increase the level of student engagement with the programme. Action research was employed as a methodology to allow me to examine and improve what I am doing for the mutual benefit of myself and my students (McNiff, Lomax & Whitehead 2003), and to “improve teaching, learning and life” (Phillips & Carr 2010, p. 45).
PARTICIPANTS

Based on the literature review, the design of this project was influenced by the work of several prominent researchers in the fields of character education, boys' education, student engagement and personal realization. Since the literature supports the belief that positive teacher-student relationships and student involvement improve student engagement and sense of worth, it was crucial to establish a positive and personal connection with the participants. All of the Grade 6 boys in the Lower School were invited to participate in a focus group. Of 44 boys, 12 volunteered to join the focus group. This volunteer group represented students who excel across arts, academics and athletics. The group was as varied in its range of participants as is possible in such a homogeneous setting. The students, between 11 and 12 years of age, had been together in the school for at least two years and knew each other well. Once the focus group was chosen, all appropriate letters of parental and student consent to participate were collected. As part of this consent, permission was given for photographs to be taken and video recordings made, and for these to be used in subsequent dissemination of the research. Each participant was given a code name to ensure anonymity, and informed of his right to remove himself from the investigation at anytime.

ACTION

As the intervention was about boys taking ownership of re-structuring the awards system, I wanted to start the research process with a collaborative energy. I called the participants to a planning meeting, where we decided on meeting times and a name for the group. We decided that Thursdays, during recess or lunch, would be set aside for our focus groups. After a short discussion, the boys proudly called themselves the Grade 6 Character Council. It was rewarding to see the boys so engaged in choosing a name; it was clear they were starting the re-structuring process by taking their roles on the committee seriously. Their commitment to the task continued throughout the research process. As evidence of this, the data collection was initially planned for four sessions, but due to the engagement of the boys and their level of commitment to the project, the number of sessions, at their request, expanded to eight. This included the two summative reflective sessions.

DATA COLLECTION

Initially, two data collection methods were planned for this study: video recordings, using a flip camera and tripod, of student focus groups, and student reflection journals. The data collection methods chosen were designed to capture the level of boys' engagement, their opinions, their reflection process and ultimately, the recommendations of the boys in the Grade 6 focus group as they reviewed and revised the existing awards structure of the CEP. Video recordings were the primary method of data collection for two reasons. First, it allowed me to concentrate on the boys' conversations during our meetings and to be in the moment for our sessions. Second, I was able to examine how the boys were engaged in the responsibility of building policy that affects character development. Student reflection journals were meant to capture additional student reflections, but early on in the process it became clear that the boys were not able to maintain the momentum to write in the journals during their own time. Since it was crucial that this experience remain positive and not punitive for the boys, I modified the original plan so that writing in the reflection journals became a voluntary activity.
As a result of the decision to make journal writing an option, I needed to find another way to capture and record the ideas and flavour of each meeting in a way that was both practical and transparent. I decided to dedicate a flip chart stand and paper to this project, and brought it out at each meeting. We started each meeting with a quick review of what had gone before, and then carried on from there. The chart paper notes (Appendix 2) created during each session became the summative data, or the written record, of the group’s ideas. As teacher-researcher, I acted as the recorder for the boys’ conversations on chart paper so they could focus on listening and sharing. All the big ideas, questions and issues raised by the boys were captured and organized on the chart paper, while the video camera captured the rest. The freedom to brainstorm was so popular, that rather than using the journal to write their summative thoughts about the experience, the boys asked to have another video-recorded meeting to capture their final thoughts and reflections. Of course, I agreed, thrilled that the boys wanted to take the extra time to record their reflections.

DATA ANALYSIS

On completion of the data collection, video recordings of eight 40-minute meetings and two cumulative reflection sessions, plus five sheets of chart paper notes, had been made. The recorded meetings were downloaded directly onto computer. I then watched the videos and noted down for each session, the boys’ key comments and revelations. These comments were subsequently compared to the group notes I’d made on the chart paper. Examination of the videos and chart paper notes revealed data that could be grouped into two stages: how the boys examined and defined the current reality of the existing programme, and how the boys planned and communicated the revised programme to the school community. I was surprised to discover that the notes from the chart paper so clearly identified the steps in the journey that the boys took in this project. The video footage showed how patient the boys were with each other as they waited for their turn to share their ideas, and how excited they became when what someone else said sparked an idea that they wanted to share. The key ideas from the video were recorded onto the chart paper both during the sessions and in their final reflection discussions.

Key Findings and Discussion

During the first meeting of the Character Council, I told the boys that in order to solve the problems of the existing character awards structure, they needed to do three things: identify the current reality of what was happening at the school, identify what aspects of the existing structure to keep, and generate new curriculum for their new ideas. After hours of intense discussions, the boys were able to organise their upcoming tasks into four key categories:

- Defining the current reality: What is working and what needs to be changed
- Revising the criteria: Identification of grade level themes
- Revising the standards: Changing the award levels
- Recognizing character: Communicating the new award level system
DEFINING THE CURRENT REALITY

The boys began by talking about what they liked and did not like about our current system. Doug started the discussion of the current reality of the awards programme by stating, “we treat all grades the same. We shouldn't. As the grades increase it should get more difficult.” From this opening comment, the following conversation ensued:

Josh: “Yah, in grade 3, I was excited, I wanted everything! Now, I don’t care so much about the ribbons.”

Oliver: “Like in Grade 6, Mr D and Mr E say, ‘You have to knock our socks off to get an award.’ It gets harder as you get older, and you need more ribbons to get anything.”

Paul: “How do you even get 24 character ribbons? Only two guys have!”

This led to a discussion on the role of the teachers in the award giving process. In particular, the boys wanted the awards to be for age-appropriate reasons. They also wanted their teachers to keep better track of the awards entered for each boy in the database. David’s response that, “Grade 3 teachers give the awards so easy, and for easy things, like holding doors open,” was followed by Larry who revealed, “most of us have been here since grade 3, so it needs to get harder and harder.” It was Paul, however, who summed up the essence of the issue, “most kids and teachers have no clue how many ribbons anyone has.”

The boys’ conversation went back and forth between the problems associated with having boys do “good” things to get awards, and the value of raising boys’ self-esteem by giving awards. Ari cautioned, “some kids are [only] just good around the teachers to get noticed.” Oliver added that, “it is fun to compete, and older kids should be the ones setting the examples,” and Josh agreed, “the little kids look up to us bigger kids. They like awards. We can be leaders.”

Another area of concern raised was whether or not awards should be given for doing well in sports or academics. Initially, the focus group felt that by including sports and academics, there would be a greater interest in the overall CEP. Then Paul stated, “you would be so embarrassed to get an award for grades … you could get asked in the hall, ‘What mark did you start out at?’ I am not for that.” After this statement, the boys established quickly that this was not a good idea. After more detailed discussions over the next few weeks, the boys agreed that the following six criteria should be the ethical foundation of the awards structure that the Character Council was about to re-create.

- We should keep an awards programme. We can learn from each other and it is fun to compete.
- Don’t give awards for sports or schoolwork.
- Boys like getting awards, like pins, especially in grades 3 and 4.
- Boys and teachers need to know how many awards boys have.
- Teachers need to be more consistent about recording boys’ awards in the database.
- Rewards need to be different at each grade level, and get more advanced with each grade.

Once the boys established these guiding principles, the next step was to determine how to incorporate these themes into practice.
REVISING THE CRITERIA: IDENTIFICATION OF GRADE LEVEL THEMES

The second common theme to emerge from our meetings was the need to match the developmental stage of the boys in each grade to the awards. The focus group boys were very clear in their commentary about this during the first meeting. As older boys, they stated that they were uncomfortable receiving awards if they felt they were “too easy,” or for “grade 3-ers.” The boys devised a creative solution to this problem: they decided to talk about their own experiences in each grade to see if they could find a common topic that could be used as a character awards theme for the teachers. In detail, they reviewed their own challenges and experiences, and discovered that they were able to identify a common learning curve, or developmental challenges in character, at each grade level.

At Grade 3, importance was placed on friendships and making friends. Said David, “in Grade 3, it is all about being new to the school and trying to make new friends. You want to belong.” Oliver added, “you [have a] need to burst out of your bubble of shyness of coming to a new school.”

Organisation of schoolwork was the priority challenge set for Grade 4. As Larry noted, “Grade 4 is like you have to solve your ‘friend’ problems on your own first. Now, it is making sure you know where your stuff is, and being responsible for your own homework.” Doug agreed and offered, “in Grade 4, you are starting to realize you need to rely on yourself. Your parents aren’t you.”

Interestingly, the Grade 5 priority moved from the organisational to the affective in that being in control of emotions became the focus. Oliver’s insightful comment that, “Grade 5 is about taking responsibility for everything that you do; it is not the teacher’s job to do it for you,” was supported by Jerry saying, “Grade 5 is like grade 3, but harder. If you get angry or upset with your friends, you are expected to be older and work it out yourself. Then, you can talk to the teachers for help.” As Doug summed up, “you have to think about what you say, you have to think about how it will come out.”

The focus group demonstrated their understanding of the areas that needed reinforcing as they became older. Their input was pertinent to the cognitive and affective domains of learning and culminated in the age appropriate priority of leadership for Grade 6. Larry asserted, “we are supposed to be leaders but we aren’t sure what they want us to do,” while Doug countered that “there should be leadership goals for Grade 6; we should set our own goals.” In response to something Oliver said, Doug replied, “your teachers are preparing you for your next step to Middle School.”

REVISING THE STANDARDS: CHANGING THE AWARD LEVELS

Once the boys decided what should be awarded in each grade, they realized that the current awards structure did not work as well as it should. The boys felt that there was a need for two levels of recognition to enable every boy to “pass” character for the year and still have an opportunity for the boys who go “above and beyond” to shine. A new award structure was created (Appendix 3). They decided to call these two levels “merit” and “prestige.” The merit level would be like an achievement certicate, inclusive for all boys in Grades 3–6. The prestige level required the addition of a new award, the Emerald Pin. A sense of equity was very important to the Character Council. It was only fair that every boy should feel connected to the programme, but “superstars” needed to have a way to shine. As David summarized, “teachers can’t feel what we feel at recess. They don’t get what happens to us all the time. Our way is easier for us kids to relate to.”
RECOGNIZING CHARACTER: COMMUNICATING THE NEW AWARD LEVEL SYSTEM

The next step in the re-structuring process was to determine how to communicate the new approach to the school community. The boys wanted to tell the Lower School teachers and students about it during a Lower School assembly. They decided to create a presentation using the digital tool Prezi, and to launch the new system at a full school assembly, with parents invited (Appendix 4). The boys did all of the work for the Prezi on their own time. They elected two students to present their views in the creation of the Prezi, and the rest of the focus group shared the task of speaking about different elements of the programme.

Having the Character Council boys present the programme to the rest of the Lower School at an assembly proved to be a powerful way of re-engaging the students in the character awards programme (Appendix 5). Boys, teachers and parents met the new programme with great enthusiasm. There was great excitement about the Emerald and Diamond Pin Awards! Immediately following the assembly, the majority of the Lower School boys went back to their forms and asked their teachers to check their number of awards. This prompted an immediate printing and updating of the class awards lists so the student could see how they could achieve the next level of awards. This was potent evidence that the boys were re-engaging with the student-generated restructure. In addition, the boys began wearing their Number One Dress (blazers) to school, so they could show off their pins on their lapels.

Conclusion

Throughout this experience I felt like more a part of the Crescent community and instead of hearing about all the amazing things Crescent does, I actually got to take part in an event (Paul).

I began this project with a problem to solve. Crescent’s Lower School Character Education Programme had lost its focus, and with it, the engagement of the boys. The programme guidelines were unclear to students, faculty and parents. Character education and Crescent School are synonymous, and it was of paramount importance to me that the existing programme be revised, and revised successfully. Any initiatives had to be planned with intention. From the literature, it was clear that involving students in their own learning and building positive relationships with them was the path to success. But would it work for me? Would student voice in the awards structure of the Character Education Programme re-engage the student body?

At the completion of the first cycle of my action research project, Ari helped answer my initial questions. Said Ari, “I think that the Character Council was great, the idea was great and we thought of creative things. I personally think it progressed well overall and the students tell me they like our system.” The research findings indicated clearly that there were several positive effects on students’ engagement in the Character Education Programme. It began with the excitement and pride that the Character Council felt through being charged with such an important task, and continued with the boys’ demonstrated dedication in re-creating a character awards structure that would benefit their peers. The process ended for the boys on the Character Council with the development of a close bond and a sense of being on a team, and with an exciting, relevant awards structure. David’s and Oliver’s experiences reflect the focus group’s feelings about the journey, with David saying, “being in [sic] the Character Council gave me a sense of community. It was nice to be part of a
The positive energy of the boys on the Council, and their collaborative approach to their work, ensured that the final results would resonate with the rest of the Lower School. It was very important to them that they identified the grade level themes accurately. The Lower School staff celebrated this boy-centric perspective. In fact, the faculty became excited about this and decided to adopt the Character Council themes for the Leadership, Outreach, and House Spirit Programmes. Neither anticipated by the boys, nor by me, was this exciting affirmation of the boys’ work. As Jeff summarized during his final reflection session:

An idea is like two rocks smashing together to make bigger sparks, which are our ideas too. I didn’t think it would get so big, that one idea would spark another idea, and then all the sparks came together into one big idea that worked, even for the teachers.

Students, faculty and parents are connecting once again with the Character Education Programme in the Lower School. The first cycle of this research project resulted in a positive outcome for the students, the staff and the Crescent School community. As Doug stated, “we made something that we can relate to.”

**IMPLICATIONS FOR FUTURE PRACTICE AND RESEARCH**

This research project confirmed for me the value of action research as professional development for all educators. Specifically, this study established that our students are our best resources. They are the experts of their own lives, and given the opportunity and a platform from which to be heard, they can help us be our best teaching selves. Not only do these kinds of teacher-student conversations reveal crucial information for curriculum planning, they also build trust and strengthen teacher-student relationships and enhance student engagement in their own learning.

The findings have several implications for educators. Student involvement in curriculum development and co-curricular programme design is a worthwhile consideration for those seeking to raise the level of student involvement and engagement in school. For teachers contemplating an action research experience, valuable data can be obtained from incorporating student participation in the process, and by examining the effectiveness of student-generated curricula, in any subject area. Any programme of this nature is organic and needs to be reviewed on a regular basis. The next stage of this endeavour will be to monitor the revised structure over the course of a full school year, and assess what is working as anticipated, and what improvements might be needed.
Reflection

“Only we live what we live” (Doug).

I did not expect to love working on this research project as much as I did. I cherished the chats with the boys and the opportunity to get to know them as young men. I looked forward to our meetings and the devotion with which the boys engaged in our discussions.

The level of expertise the boys had with the flip cameras, the Prezis and the editing of the final DVD surprised me. They were so eager to “own” every aspect of this process, that they organized all of these details for the group. I simply provided the opportunity and the tools, and they did the rest.

The result? Character awards for boys, designed and created by boys. Their voice, their hopes and their desires have infused every component of this initiative. I am proud of their hard work, for it will be an inspiration to all our Lower School students, this year and in the years to come. The boys rose to the challenge and re-created a student-generated awards structure that re-engaged its participants in the mission to graduate as “men of character from boys of promise.”

Educators are life-long learners. When we are open to new experiences, new opportunities and new research, we have the potential to inspire our students and ourselves. Action research presents teachers with such opportunities. Without ever leaving the classroom, we can transform our practice and share that knowledge with others. We can make a difference.

References


Appendix 1

CHARACTER PINS

Appendix 2

CHART PAPER DATA
Appendix 3

NEW AWARD SYSTEM AND LEVELS

In conjunction with Crescent’s Director of Character and Leadership, the school is now going to create and locate appropriate curricula to support the themes identified by this Grade 6 Character Council. The faculty renamed the boys’ themes to fit in with the overall vision of the school:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Theme</th>
<th>Merit Award Levels</th>
<th>Prestige Levels</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Authentic relationships:</td>
<td>3 Awards</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Being a friend</td>
<td>(Ribbon, Ribbon, Green Pin)</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Personal responsibility:</td>
<td>6 Awards</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Being independent</td>
<td>(Ribbon, Ribbon, Bronze Pin)</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Managing Relationships:</td>
<td>9 Awards</td>
<td>Emerald Pin (18 Awards)</td>
</tr>
<tr>
<td></td>
<td>Being Self-Reliant</td>
<td>(Ribbon, Ribbon, Silver Pin)</td>
<td>Diamond Pin (24 Awards)</td>
</tr>
<tr>
<td>6</td>
<td>Serving Others:</td>
<td>12 Awards</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Being a Leader through Service</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Ribbon, Ribbon, Gold Pin)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The shield pins were designated the Merit level awards. It is the expectation that each boy should receive the following level by the end of their year in each grade. In other words, this averages to one award per term. Boys can achieve any award level in any grade; this is to ensure that the each boy feels valued and a part of this programme. Now, there are two award levels after the Merit level of awards, for those boys who go above and beyond the school’s expectations. The boys created a new level at 18 awards, called the “Emerald Level” and the top “Diamond” award remains the same. These awards are round pins with an embossed Crescent crest and a crystal stone.

Appendix 4

Student-Generated Character Council Assembly Prezi Presentation:
http://prezi.com/pzz4hy0womtj/character-council/

Appendix 5

The movie of the LS assembly, available upon request.
Through the *Looking Glass*: Adding a Reflective Component to a Collaborative Project

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Abstract

While Dewey (1933), happily standing on the shoulders of great teachers such as Aristotle, Plato and Confucius, considered reflection as an essential step in developing higher order thinking skills, it is the work of Bandura (1977) that influenced this action research study into how boys learn from each other. Bandura believes that interpersonal interaction can bring about greater reflection, which in turn develops a climate of sharing and leads to deeper thinking on a subject. Reflection is an important part of any feedback system, and this is nowhere more true than in a learning environment.

The author’s reflection on her practice led her to ask: “Could integrating reflective practice into coursework help boys appreciate learning from each other, as well as helping to understand themselves as learners?” She decided to add a reflective aspect to her Year 4 Science lessons to determine if her nine and ten-year-old boys could gain an appreciation of themselves and others as learners, by collaborating on a Science project.
The boys were assigned a partner for their project, and through four reflective experiences data were gathered and analysed to create a picture of how the boys interacted as they worked together on various stages of their research project.

Analysis of the data indicated that integrating reflective experiences into course work did indeed raise the boys' awareness of the benefits of being positive learning partners.

Rationale

At St. Mark's School of Texas, a selective college preparatory school for boys from Grades 1-12, we have clear mission statements for the whole school, as well as for each division of the school. In addition to these statements of purpose, each teacher has developed a mission statement for each course they teach. The purpose of this individualized statement is to help us to focus on precisely how we include the building of community and leadership skills within our classroom. The mission statement for my Science Course is as follows:

Each student in fourth-grade science will learn to become a better boy by becoming a better scientist. To this end, each boy will develop skills in reading, note-taking, studying, organization, vocabulary, research, presentation, and laboratory experimentation. Learning how much he relies upon the health of the natural world for his own health, he will learn that a strong understanding of science is necessary to be a responsible leader in the world. Learning how much he relies on the health and well being of his classmates and teachers for his own success, he will learn to lead by taking responsibility for the success of the whole class.

Guided by this mission statement, I wanted the boys to fully appreciate the role they play in our classroom community, especially in regard to their support for one another. At the outset of this initial cycle of the research, I believed that the young boys I taught were not fully aware of the significant social skills they could develop when they work together. The integration of reflective questionnaires, interviews, and discussions into a three-week collaborative Science project would hopefully prove a strategy that would raise the boys' awareness and appreciation of positive social skills, and possibly develop deeper critical questioning skills. Hence, the action research question became: “How are young boys' social skills enhanced when reflective responses are added to collaborative science projects?”

Literature Review

Teachers know that boys like to work together. Reichert and Hawley (2010), in their global research study on how boys learn best, support this idea whole-heartedly, citing many teachers whose “best lessons” were based on “collaboration that seemed to drive the intended learning outcomes forward, sometimes producing unexpected and welcome benefits” (pp. 122–123).

While boys do indeed enjoy working with their friends, teachers have the responsibility to monitor the partnerships within their classroom. Less socially developed students, and students new to a class, should be especially safeguarded. Thompson and Grace (2001) state, “a teacher needs to be in charge of the social groupings in her classroom; it cuts down on the social anxiety of the children” (p. 229).
Working in a collaborative setting requires students to have a certain social skill set that reflects the development of what Thompson and Grace (2001) describe as good citizen skills: empathy, responsibility, sharing, self-sacrifice, self-disclosure, and faithfulness. For nine and ten year old boys, these social skills can be challenging, with some boys able to think abstractly, while others are still at a more concrete stage of cognitive development. Learning to work with others, however, is a life skill that children must acquire. They must begin to develop an empathetic understanding of working together and to understand the difference between cooperation and collaboration; that collaboration is much more than just working side by side, and it is more than conversing and coming to mutual conclusions. Students must learn to be respectful of one another’s ideas and opinions. According to Gibson-Langford (2009), for collaboration to be all it can be, structures and processes that place emphasis on building relationships, in the first instance, are essential.

Collaboration is easier for some children than for others. Levine (2002) states:

Some children have trouble assuming a collaborative role. They seek too much control or they fail to do their share and thereby alienate others. They lack the sensors needed to make the determination of how assertive and how helpful to be in a coordinated collaborative activity (p. 235).

Further, says Levine, “kids need to know themselves, and they need to know what to work on to help themselves (p.278).”

As the literature indicates, teaching children how to reflect on their learning experiences is an important skill. Journaling and reflective responses are two methods that will help develop these skills, suggests Gurian (1997), who states, “boys can record their life experiences in journals. The more boys make out of their lives, the more they learn from life” (p. 217). Tomlinson and McTighe (2006) support this concept of mindfulness, and observe:

The most effective learners are metacognitive; that is, they are mindful of how they learn, set personal learning goals, regularly assess and adjust their performance, and use productive strategies to assist their learning (p. 79).

They go on to state, “one straightforward approach to cultivating metacognition involves having learners regularly respond to reflective questions” (p. 79). It seems probable, therefore, that through a metacognitive activity such as reflective journaling, young boys will become more aware and appreciative of the social skills they acquire as they navigate the environment of collaborative learning.

**Methodology**

An action research approach was chosen to determine if, through guided reflection, my students would develop positive relationships through collaborative experiences. Action research provides teachers with the opportunity to generate an inquiry within their own particular interest, and to discover implications for change or development related to their teaching environment (Schnorr & Painter, 1999). This pedagogical approach is inherent in my work as a reflective teacher. After reading in the area of action research, I realized that I had actually been, without knowing the label, an action researcher for nearly thirty-one years. At the end of every lesson, unit, or project, I would...
sit and think about what worked well and what needed tweaking and improving. Employing an action research methodology, whereby this reflective approach is formalised, was a natural extension of my teaching practice.

**ACTION**

My mission statement for my Science class prompted me to reflect on just how I thought my boys truly understood the concepts of community and leadership, and how they could build leadership skills through working with their classmates and teachers. I felt quite certain that they were aware of how and what they were learning, but what did they really understand about what they were gaining from collaborative learning experiences?

I decided that the best way for them to raise their awareness about the power of collaborative work was to have them do exactly what I had done—reflect. Only by pausing to reflect on our work can we truly see what we have gained and where we are heading. This led me to evaluate my Science curriculum to determine the best place to add this element of reflection. While the young boys in my Science classes had limited or no experience with this kind of reflection, it was my hope that they would, as collaborative learners, gain insight via focused and reflective processes.

**PARTICIPANTS**

After my school executive approved my research proposal, the boys and their parents or carers received a permission letter outlining the rationale, process, and expectations of the project. It also conveyed that participation was voluntary and that any of the boys could opt out of the project at any time. Permission was also requested to video-record, photograph and audio-record the boys throughout the project. Safeguarding the boys’ identity would be paramount in any dissemination of the project, and so boys’ names would be coded to ensure anonymity.

Thirty-two fourth-grade boys from my two Science classes volunteered to participate in the project. Nine of these boys were new to St. Mark’s this year, and were still trying to find their position socially within the groups. Most boys had worked together on projects in previous school years, but many of these past projects involved parental input. This would be their first science project completed entirely at school with only the help of an assigned peer partner. As well, while the boys had mixed abilities, they were quite limited in their experience with any kind of reflective response writing.

**DATA COLLECTION**

Action research is emancipatory (McNiff 2010); it gives voice to the feelings and reflections you have as a teacher. It allows the teacher-researcher to interpret the data collected through a variety of qualitative techniques (Mills 2003). To establish rigor and validity, data were collected over the period of the research using a variety of techniques: questionnaires, observation and field notes, video recording, still photography, and interviews.
The majority of data were collected from open-ended questionnaires. This method served my purposes well as we have a policy of no letter grades or percentage scores until the seventh grade; we rely solely on qualitative data. I was comfortable, therefore, using and analyzing qualitative data as a general assessment tool. I wanted to gather the boys’ responses to the various stages of this project, and these open-ended questionnaires were definitely an age-appropriate way for me to compile this information.

At the start of the boys’ Science project, an initial questionnaire (Appendix 1) was administered to determine if my assumption about their lack of understanding regarding their personal and collaborative learning skills was indeed correct and on track. I wanted to find out how the students felt about working with a partner on a project, what their past experiences had been, and what they felt were the pros and cons of collaborative projects. Once partners were assigned and work was well underway, the boys completed a second questionnaire (Appendix 2) to see how they were progressing with their partner—what they were pleased with, and what their frustrations were at this halfway point. Finally, when the project was finished, a third questionnaire (Appendix 3) was completed to reflect on what they had learned about themselves and their partner.

Other techniques

Video recordings and still-photography assisted with my observations of the boys’ collaborative experience. I was able to compare the notes I had made of my impressions of the boys’ teamwork experience with the comments they made in the video recording. I could also review and comment on their body language. The still-photos became a rich resource for reflecting on the boys’ moods, level of cooperation, and engagement. As well, a small focus group of seven boys was selected on the basis of their thought-provoking written responses to the open-ended questions. This focus group completed another questionnaire (Appendix 4) before we discussed their responses to further clarify their perceptions on the reflection process.

DATA ANALYSIS

The qualitative data collected helped me assess my students’ attitudes toward their partners and their perceptions of collaboration as a learning strategy. It also helped me see exactly what each boy’s opinion of his growth was, and what each thought he gained as both learner and a partner-in-learning. To accomplish this, I took each set of questionnaires and I read through each response, one question at a time. For example, in the first question of the initial questionnaire, I read through each of the 32 responses and noted similarities and differences, using stars or triangles or other shapes to denote commonalities and variances. In some instances, this required two or three
readings of the responses. I then categorized the responses according to particular themes arising from the data, e.g. Theme 1: Characteristics of teamwork. Since there were four questionnaires with four to five questions each, this process took a considerable amount of time. I do believe, however, that it was well worth it.

KEY FINDINGS AND DISCUSSION

Teamwork is often defined as the combined action of a group of people toward a common goal. A simple and clear definition, I wondered how nine and ten-year-old boys perceived teamwork. Responses from the first questionnaire gave me a clear snapshot of their thoughts, what qualities they believed made a good partner, and the pros and cons of teamwork from their vantage points.

I did indeed find that all of the boys had a good grasp of the meaning of teamwork—they generally understood that teamwork meant working together toward a common goal. Some boys expressed, however, both positive and negative opinions of teamwork. Positive comments focused on sharing tasks, a chance to see ideas from a different perspective, and the recognition that getting along with many different kinds of people is a lifelong task. The boys also reflected that new friendships could be formed as a result of a great teamwork experience. On the negative side, the participants generally agreed that it is often difficult to come to an agreement between partners or members of a group when there are differing opinions. Sadly, one boy felt that the worst part of teamwork was when you and your partner could never agree about anything. As well, one out of six boys felt that when a disagreement ensued, friendships were damaged, sometimes irreparably. Common responses to what qualities they thought a good partner should have were summed up by Participant A who noted, “a good partner lets you decide sometimes, talks in a calm voice, doesn’t laugh at your ideas, has patience when you are talking, isn’t lazy when he works, and shows up when it’s time to do any research.” Participant B added to this comment by observing, “good partners have a lot of life skills. They care about others, they work very, very hard, they act like a family member, and they never give up.”

Partners and topics were then assigned, based on my knowledge of the boys’ abilities, and on my observations of their behavior thus far in the school year. I wanted to be certain that new boys in the classes were not partnered with another new boy, but rather with someone who had experience with the school’s resources and culture, as well as someone who would hopefully make this first Science research project of the year a positive experience.
As I watched the boys’ initial responses to collaborative learning, I noticed that groups approached the project differently. Some boys chose to work on each stage of their research together, while others decided to split up the research into equal portions. The first two days of their research went smoothly. As day three and four approached, there was more tension between some group members. Participant A felt that his partner wasn’t sharing the computer and was getting to do all the typing. He noted, “my partner likes to always do things his way! It’s frustrating to try to do the things that I want!” In contrast, Participant D, a somewhat more timid member of the group, appeared to simply sit back and watch as his partner actively involved himself in the task at hand. Other groups had such a strong sense of fairness and equality that they would switch their use of the computer after each section of the research and take turns deciding what assigned website they would go to next. When a decision needed to be made between partners, one group used a ruler to call heads or tails. The favorite decision-making system in the class, however, was the “rock, paper, scissor” approach. This worked well for these young boys, and everyone appeared pleased. As Participant C put it, “whenever we could have gotten into an argument about something, we would just settle it with ‘rock, paper, scissors!’ Then we were both always happy.”

As the boys’ research progressed, the second questionnaire gauged their progress in terms of how they felt they were getting along as partners. Their natural competitiveness really came out at this stage. Many felt that they were progressing well if they had completed their research and had started their poster. Others who had not reached this stage in the project were frustrated with one another, as they felt it was their partner’s fault if they weren’t where they wanted or needed to be based on the given timeline. As Participant D noted, “we are behind schedule. My partner and I get into arguments a lot about which pictures to use and who is going to do the typing. I’ve learned that we work well together when we are both in good moods.”

How to compromise and negotiate were certainly life skills that several boys had to learn. For little things like their poster board layout to the wording of the captions under chosen photographs, there was tension in eleven out of the sixteen groups. Bossiness and control were evident as suppressed character traits started to rise to the surface. One particularly frustrated student shared, “my partner is always nagging me, and he always hates all my ideas. He is so annoying. Whenever we disagree on something, he gets angry and then just does things his way. I wish he was nicer and less demanding!” New boys, who had sat back and observed for the first few class periods, were now venting their frustrations. While most liked their partners, they did feel that their partner didn’t appear to trust their abilities enough to give them ample opportunities to do the “important work in the project.”

There were some contradictions in the responses from this second questionnaire. When asked how they were getting along with their partner, Participants E, F, and G responded that there were no problems and all was great. Two questions later, when asked what they wished their partner would do differently, their reasons varied from, “I wish he would share more. He’s hogging the computer all the time!” to, “I wish he would listen to me and my ideas!” and, “he gets off track and starts talking to other groups instead of helping me! It’s driving me crazy!” Participant H, a student with a strong work ethic, confided his innermost feelings and frustrations at the lack of respect his partner was showing him, “I really don’t like my partner. He keeps nagging me about our work. He hates all my ideas, and he can be annoying! I hope that I NEVER have to work with him again!”
As the research project was nearing completion, poster presentations were given in front of the group (see Figure 3).

![Figure 3. Finished posters and presentation time!]

Directly after this, the boys responded to the final questionnaire, focusing on their overall experience with their research partners. One positive outcome was that this collaborative project gave the boys a chance to practice the art of compromise. Nine boys felt strongly that they had learned to compromise, while others felt that, for the most part, they had enjoyed the experience of teamwork. Participant I noted, “I learned to compromise and be patient with other people. When you work with somebody else beside you, you can get a lot more done if you agree and don’t fight. I loved having a partner for this project!”

Other skills that the boys felt they had learned from working together were patience, dedication, loyalty, cooperation, and perseverance. Participant J noted, “I have learned that partners are not always perfect or not always patient,” while Participant K said, “I haven’t always liked working with partners, but now I have learned to share and give each partner equal amounts of work. My skills of teamwork and cooperation have greatly increased in this project!”

In general, the boys were open and honest in their appraisal of themselves as partners. This is evident in Participant H’s insightful comment, “my partner’s bossiness made me really angry. I had to control myself. I just cooled my temper. I am most proud of how we cooperated after we had some quarrels. I learned to be a better friend to others, even if you don’t like them too much.” This was a refreshing aspect of this first cycle of the action research, with boys accepting social weaknesses in themselves, but also suggesting how they could resolve these issues. Many of the boys demonstrated astuteness in understanding themselves through statements such as, “I have learned to listen to others and to be a better follower sometimes,” and, “I have learned to trust my partner and to agree more.”

From the reflective questionnaire, it was evident that these boys had gained awareness of, and experience in, important social skills. Would they have been aware of their growth in such skills if they hadn’t been required to reflect on their experiences along the way? The greater majority of the boys felt that they would not have learned these things about themselves without the reflection. While they were all engaged in the learning task, they also liked the idea of reflection, and they appreciated this important component of the project.

The focus group of seven participants shared their thoughts and feelings of their experience. They were articulate and not timid about sharing their opinions with me. I appreciated their candidness as they discussed the reflective aspect of this project. Participant L commented, “it is often hard to
look back on what we did in the past. I prefer to look to the future, but we should probably take time to look back and see what we could have done better because that is how we learn.”

In regard to the value of reflection, participants M and N respectively noted, “I liked the idea of reflection. I think that without it, I wouldn’t have learned all these things about myself,” and, “without reflection, you don’t ever really ask yourself these types of questions!” Participant B revealed, “I really don’t pay attention to these kinds of things, and I think that looking back over things is a good way to improve yourself with the things you weren’t so good at and feel good about the things you did well.” Judging by the boys’ reaction to reflection as part of the learning process, it would seem that some form of reflection, either formally as in this action research project, or informally, is of value. Participant G enjoyed the idea of “looking internally,” while Participant O agreed that, “reflection made me take time to really slow down and think. I had to try to think deeply. If I didn’t think deeply, I probably wouldn’t have learned about these things.” It was Participant H’s words, however, that really resonated with me, “I don’t think I could learn what I’ve learned without the reflection. Reflections let yourself be purified on paper by pen. I don’t think I could be the true me without reflecting.”

**Conclusion**

The three questionnaires were paced well to assess the development of social skills and knowledge transformations in the boys. To some extent they were able to define their social growth through their reflective thinking; adjusting feelings and actions as they progressed though the questionnaires. It was apparent that their level of awareness of themselves as collaborative partners was heightened through the project, and that many were even somewhat awestruck with what was revealed.

Action research should enrich not only the students’ experience, but should aid the researcher’s journey as a teacher. The focus group knew that I was still learning as an adult, and their thoughtful reflections included their empathetic understanding of my role as learner. As we casually discussed questions previously answered by them, I realized how meaningful this step in the journey was because the boys were alive with excitement and enthusiasm.

Another positive aspect of this project came from the experience of the new boys in the fourth grade. They had learned so much about their partners and peers through this collaborative process. None of the thirty-two boys had ever experienced a reflection activity in which they really stopped to appreciate what they were learning. They see themselves as fine learners, but reflection most certainly helped them to become sensitive to specific character traits about themselves as collaborative partners. Recognizing those traits in which they would need to develop to be good team members would help them grow to be successful learners and young men.

**IMPLICATIONS OF THE STUDY**

Reflective activities of this nature will be integrated into my classroom learning strategies; not only in Science, but also on every activity or project in which I believe my students can gain knowledge about how they learn.

Perhaps at the fourth-grade level, I expected too much of the boys when it came to answering the questionnaires. Answering questions centered on what they were feeling and experiencing in relation to their partner’s work ethic was difficult for some. Many boys wanted to tell me their actual frustrations with locating information about their research topic. While I did need to know
this, I had to keep explaining my questions and my objectives for them throughout the completion of these questionnaires (especially the second and third). Due to the fact that so much oral explanation was needed regarding the questions on these surveys, the class time necessary to complete them was more than I anticipated. I will therefore need to adjust my future expectations and timelines accordingly. As well, I also plan to have more questions in the form of a scale of one to five rather than a full written response, although space will be provided for those boys who want to provide a more detailed explanation. I believe this may help these young boys assess themselves more accurately, and in a more timely fashion. Finally, I think I will also have more whole group oral discussions rather than with just one focus group.

IMPLICATIONS FOR FURTHER RESEARCH

I appreciate the importance of reflection in the learning process, as well as the importance of setting new goals based on the results of the reflection; something I do each and every time I reflect on my own work. Would my students be able to set new goals for their future projects as well? Perhaps I will consider adding this aspect to my boys’ reflections in the future.

Reflection

This action research project was one of the most challenging undertakings of my career as a teacher. I have found that, like all arduous tasks, that is when I learn the most and feel the most fulfilled as a person. Teaching my students to recognize the benefits of deep reflection was an awesome experience for me as a teacher. Reflection gave my students the opportunity to learn more about themselves in a way that truly empowered some of them. Since I did the action research early in the school year, I was able to draw from the boys’ experience on this project as we tackled subsequent projects and tasks together. Other colleagues have also added reflective components to their work as well. Action research projects and strategies continue to spiral through our school community.

References

Appendix 1
1. What does teamwork mean to you?
2. How do you feel about working with a partner?
3. What are the best parts about teamwork? What are the worst parts about teamwork?
4. What qualities does a good team partner have?
5. Other comments:

Appendix 2
1. How is your project progressing? Are things going well?
2. What are your frustrations at this point?
3. What are you most pleased with?
4. How are you and your partner getting along?
5. What have you learned about one another so far?
6. What do you wish your partner did differently?
7. Other comments:

Appendix 3
1. What worked well for you and your partner?
2. What challenges did the two of you face?
3. How did you overcome these challenges?
4. What are most proud of about this project?
5. What would you do differently if you could do this project again?
6. What skills do you think you have learned because of this project?
7. Other comments:

Appendix 4

FINAL FOCUS GROUP
1. What do you think you have discovered about yourself as a learner and a team member?
2. What social skills were enhanced or established in your self as a result of this project?
3. How did you like the idea of reflection? Was it hard to think of yourself as a learner?
4. Do you think you could have learned these things about yourself without the reflection?
5. What else would you like to say about collaborative learning?
From Naughty to Good: Owning My Behaviour

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Abstract

Giving sanctions, such as detentions or withholding privileges, is a standard approach to managing poor behaviour in schools, but is it effective? Do the same boys continue to “feature” on detention lists? How effective are school discipline policies in changing behaviour? Could the concept of restorative justice, coupled with strategies that involve boys in empathy-building activities, be a worthwhile approach in helping boys to own their behaviour?

The author was concerned about the apparent ineffectiveness of school sanctions to change unacceptable behaviour in her boys. She embarked, therefore, on an action research study that focused on the use of restorative justice as a means by which boys could examine and understand the effect their behaviour had on those around them. From the insight gained, she hoped to help boys overcome poor behaviour. The author included role-play as part of the strategy and combined restorative practice conversations, both one-on-one and in a small group, within the structure of the existing discipline policy of Scotch College. Although the research was focused on one student who had been receiving detentions, this first cycle of action research began a process by which the author could better understand how best to help young boys own their behaviour.
Rationale

Scotch College in Melbourne is a non-selective boys’ school for students from Preparatory to Year 12. It aims to encourage a high standard of personal achievement, the full development of personality, and a sense of responsibility to others. The list of rights and responsibilities for all members of our community includes the right to be treated with respect and fairness, the right to open and honest communication with others in the school community, and the right to expect all members to behave in a way that upholds the school’s good name.

Within the expectations and procedures of the various school policies there exists a list of graded sanctions that may be imposed as a logical consequence of unsatisfactory behaviour or performance. These sanctions, depending on the nature of the behaviour or performance deemed inappropriate, include personal or community detentions and demerits. During the detention period, students are required to reflect on the reason for their detention by answering a series of questions loosely based on a restorative justice model. No follow up or feedback, however, is provided on these reflections. Hence, it seemed timely to discover what the boys understood about the school’s policy, and to gauge their assessment of the personal detention process for students. Through action research, I developed what I thought would be a more active process during the sanction time (i.e. the detention) with a focus on role-play. This was followed by a restorative approach, using conversations with those involved, which enabled the student to consider the relationships that potentially could have been damaged by his behaviour.

The research question became: “What happens when I incorporate role-play and restorative practices conversation to the existing detention process?”

Literature Review

Improvement outcomes for boys, both academically and personally, may be better realised by examining boys’ relationships to those in their school communities who are responsible for them, that is, their teachers. The House of Representatives Standing Committee on Education and Training (2002) [HRSCET] endorse this stance and note, “boys respond better to teachers who are attuned to boys’ sense of justice and fairness” (p. 78). Anyone who has spent time teaching boys appreciates their strong sense of justice—their desire for things to be “fair.” The HRSCET (2002) states, “all students, boys in particular, require clear rules and stated expectations about appropriate behaviour” (p. 82), and suggest a series of actions whereby there is a “focus on both what the student must do and what the teacher can do to support the student” (p. 148). HRSCET also notes, “a clear, consistent and caring approach to student discipline and welfare is a necessary part of maintaining a positive school environment and positive relationships” (p. 146).

Over and over again in the literature regarding boys’ needs and boys’ education there is an emphasis on the importance of relationship building with boys, as well as the development of their inter- and intrapersonal skills (Biddulph, 1997, 2000, 2010; Cleveland, 2011; Cox, 2006; Hawkes, 2001; Lashlie, 2005; Martino & Pallotta-Chiarolli, 2003; Pollack, 1998; Thompson, 2000). In schools, getting that relationship right is paramount. As Martin (2002) points out, “developing a good relationship with the student was cited by teachers and executives as the main reason they had experienced previous success with boys” (p. 137). As well, HRSCET (2002) states, “positive teacher/student relationships are essential to good teaching and learning, especially for boys” (p. 21).
What do “good” relationships look like? For some boys, “good relationships were characterised by the teacher taking time to get to know them, listening to them, respecting their views, and not treating them as children” (DEST, 2006, p. 115). However, relationships require two-way communication in that it is not just the teacher who must be actively involved in the development of the relationship. Noting concerns raised in the literature, it would seem that boys require assistance in developing their emotional intelligence or emotional literacy, essential skills required for the development of positive relationships:

Some boys may require assistance from their teachers and other role models to develop effective interaction strategies. They may need guidance on how to initiate and sustain relationships with their peers, how to interact cooperatively and how to function as part of a group (DEST, 2006, p. 24).

Demonstrating the benefits of building positive relationships requires input from teachers through explicit directions and role modelling. In taking a “relational perspective on learning” (Raider-Roth, Albert, Bircann-Barkey, Gidseg, & Murray 2008, p. 449), a teacher of boys is required to explore a range of strategies for initiating, developing and maintaining relationships as an important element of supporting our boys.

The literature considers the restorative practices approach as one strategy that focuses on re-building broken relationships (Wachtel & McCold, 2004). A restorative practice approach is underpinned by the fact that inappropriate behaviour is viewed as a violation of people and relationships; that these violations create obligations and liabilities; and that problem-solving focuses on healing and making things right (Hopkins, 2004; Blood & Thorsborne, 2005). It involves the use of conversation where the questions are framed in such a way as to: achieve the objectives of a raised awareness of the impact of the offender’s actions, an improved understanding of the reasons behind their actions, and a suitable response towards making amends. Questions are framed to elicit from the harmed person or persons their response to the actions of the offender, providing them opportunity to articulate and communicate their feelings and to make a contribution towards the shape of restorative actions (Armstrong & Thorsborne, 2006). Moving away from blame and shame, and focussing on actions and reasoning, is a more pro-active way in which to help boys save face and focus on thinking about the consequences of their actions. Thorsborne and Vinegard (2004), in their exploration of a more conciliatory and pastoral care approach to the development of discipline through restorative practice, note:

More punitive discipline practices often do not deliver the kinds of outcomes we are seeking: more young people doing the right thing most of the time; young people who are thoughtful about the impact of their own behaviour on others; young people who take responsibility for their actions; the development of a sense of community and connectedness (p. 9).

There is extensive literature championing strategies such as restorative practice to improve relationships, and so the question left to answer might be, “How can schools deliver a proactive and preventative, rather than reactive and interventionist, programme for the development of self-disciplined and self-aware boys?” Given Martin’s (2002) report examining how to improve the educational outcomes of boys to include practical hands-on and activity-based learning, reward and positive feedback, and being given the opportunity and responsibility for making choices (p. 14), it would seem that restorative practice as a means to assist boys to re-rhink their behaviour answers all of Martin’s requisites.
Being more responsible for the choices a boy makes, through proactive and preventative activity-based learning, is supported by O’Neill and Lambert’s (1982) work entitled *Drama structures*. Based on the power of social learning, it encompasses:

Increased social competence and confidence, the ability to work purposefully with others, willingness to accept and respect the ideas of others and to build on them, willingness to accept responsibility and the opportunity to escape from an existing self-image or ‘role’ in the group—clown, trouble-maker, outsider (p. 14).

To be able to design a programme, therefore, that embodies the philosophy of restorative practice and takes into account Martin’s (2002) understandings of boys’ emotional learning, I considered role-playing, with its focus on thinking outside your self, as a way to reach boys, to help establish a positive relationship between teachers and boys, and to heighten awareness of empathy and fairness.

**Methodology**

Action research was deemed an appropriate methodology for considering role-play and restorative conversations in helping boys’ own their behaviour, especially since any future iterations of such an intervention would be the consequence of a reflection-planning-action cycle—the signature of action research (Burns, 1995). Sagor (2000) states that those who use action research, “inevitably find it to be an empowering experience” (p. 3), while Chng and Coombs (2004) recognise that:

Given the intensity of change, and how our teachers rarely ever have the time to evaluate their own teaching, action research as reflective practice is a practical approach for the management of change and new information (p. 371).

They also comment that action research “can become a natural extension of the professional duties of an educator” (p. 377).

As both a teacher and Middle School Curriculum Co-ordinator with responsibility for pastoral care, I became concerned that an important step was missing between the discipline policy and the enactment of the discipline process towards improving boys’ behaviour. Using both my work with restorative practice and my experience as a Drama teacher, I wanted to see what I could do to develop activities that melded both theory and practice into a holistic practice. Did my students really understand why they were placed on detention for inappropriate behaviour? Did the detention process aid students in changing behaviour? Could my understanding of the power of drama as a transformative experience be useful in this situation?

**PARTICIPANTS**

Action research “does not know what questions to ask until it has interpreted the present” (Burns 1995, p. 303). At the outset, therefore, it was important to understand whether there was a gap between my perceptions of the students’ understanding of the discipline policy and the reality. I decided to survey the Year 7 and 8 cohorts. With approval from both the Principal and Head of Middle School, information letters about the research were distributed to the students and their parents, and a permission form included for both parents and students to sign. The letter clearly stated that student participation in the project was voluntary; that no student would be
disadvantaged through non-participation, and that participants could withdraw from the study at any time. Parents and students were assured that all information collected in my research would be treated confidentially, and that no participants would be identified by name in future dissemination of the research.

**ACTION**

Reichert and Hawley's (2009) research into effective lessons for boys resonated with my understanding of effective teaching, especially in my role as a Drama teacher. Taking some of the elements of effective lessons, such as role-play and performance, personal realisation and novelty, and drama and surprise, I applied this knowledge to devise a restorative practice intervention. A survey was developed to tease out what the boys understood about the Scotch College Discipline Policy. Once this was completed, I analysed the detention lists and found one boy who was a *repeat offender*. The next step was to work individually with the student to explore, within a detention setting, how restorative conversations and role-play could enhance his personal realisation about his behaviour and its effect on others. Agreement to participate in this next step was sought and given by both participant (code name James) and the teacher who gave the sanction. Role-play was followed by a series of restorative conversations between James and his teacher, and James and myself.

**DATA COLLECTION**

Data collection incorporated both quantitative and qualitative techniques: survey, observation and field notes, video recordings and interviews.

To gather background data to determine if the boys were familiar with, and understood, the repercussions of the College's Discipline Policy, an online survey was given to fifty-seven Year 7 and 8 participants. They were also asked to comment if the policy and its processes made any difference in helping them to think about their behaviour. Other questions focused on the use of sanctions that could be imposed as a logical consequence of unsatisfactory behaviour or performance (Appendix A).

The question structure required a range of responses; from a simple yes/no to the question, “Have you been through a restorative justice conversation this year?” to a response, on a scale of 1–5, to the individual's level of comfort or understanding of specific elements, such as the nature of the school's discipline policy. The survey ended with an open response for students who wished to make any other comments about the discipline policy, demerit or detention process.

The next phase of the research project was an interview with a student on detention. Notes were made post interview. The student went through a series of role-plays followed by his first restorative conversation, which was video-recorded. A second restorative conversation was held and included the teacher involved in giving the detention; again video-recorded. Soon after the intervention, the student and I engaged in a casual conversation about his experience. Field notes were taken. After a length of time, a more formal interview ensued and this second interview was video-recorded.
DATA ANALYSIS
Quia, an online survey tool, provided an analysis of the survey data which graphed responses and identified an average rating for each question. This allowed me to note whether my expectations regarding students’ understanding of the discipline policy, demerits and detentions matched my assumption that the boys understood the policy and were cognisant of the ramifications if they continued displaying inappropriate behaviour.

The videos of the role-plays were analysed several times, with close attention paid to any of James’ comments that might suggest change in his understanding of the consequence of his behaviour. Along with the field notes from the restorative conversations, cross-checking comments helped to identify if James was aware of the impact that his behaviour had on others, and whether he felt that the process of intervention (role play and restorative conversations) had made any impact on his future behaviour. I used a manual method of coding the data—copying and pasting James’ comments into categories that would help me assess if he, in fact, did learn from being a part of a role-play followed by restorative conversation.

Key Findings and Discussion
RECONNAISSANCE – BASELINE SURVEY
The majority of respondents believed they had a satisfactory understanding of the Scotch College discipline procedures, and that, pleasingly, a very low number had obtained a demerit or detention. It became obvious, however, that their general understanding of the reasons for, and implications of, receiving sanctions to steer them toward positive change in behaviour needed addressing. Participant B noted, “demerits don’t change a person. Only a detention fixes people because you’re actually keeping them from fun and other things”. Many comments focused on a lack of understanding of the different types of detentions: Participant C asked, “What are all these dets? I have never heard of any?” whilst Participant D commented, “What is the difference between a personal and community detention?” For one student, his understanding was simple, and illustrated the confusion inherent in the policy. He noted, “I don’t understand what the difference [is] between a community and a personal. I think teachers only give the one type [after school]”.

When asked about restorative practices, 29 out of 57 respondents rated their understanding as low. A further clarification of the boys’ experience of restorative conversations found that 50 respondents had not held a restorative conversation, and in fact had very little, if any, experience with such a practice. These findings confirmed the need for my planned intervention.

ROLE-PLAY AND RESTORATIVE CONVERSATION
James is a bright and happy student who had received a number of detentions for being distracted in class and not submitting class/homework. During the discussion, he could be articulate at times about his own behaviour and the reasons for gaining a detention, but did not have the vocabulary to explore in detail how he might be able to change his behaviour.

I explained to James that I was “looking at how I can help you to make better choices so that you don’t end up in detention again,” with James’ responding, “because I’ve had so many?” He knew the reason for his detentions such as, “being stupid in class,” and “mucking around.” He admitted to being
distracted in class and distracting others, and that he had received a number of detentions both last year and this year for similar behaviour. When asked if receiving detentions was helping him change his behaviour, he replied, “no.”

During our discussion, I focused on a key insight from Reichert & Hawley (2010) that boys are relational learners. This insight incorporated the restoration of relationships and the exploration of personal realizations using role-play. For James, Ms M “is a good teacher” and he “gets on well with her most of the time.” In the first role-play, I was Ms M and James played himself, sitting on his seat and talking to the boys behind him. After the role-play, we discussed what happened and why. He noted that he thought that he generally knew the information and was bored.

In the second role-play, James was the teacher and I, the disruptive student. I wanted him to experience trying to convey information, but being blocked by disruptive behaviour. I discovered that he knew soccer really well so I asked him to explain the offside rule; that it was really important that I understood it because we were about to go into a game. At this stage, I became James and mirrored what he described he was doing during class, albeit in an exaggerated manner. After the role-play, I asked James how he was feeling when I was being distracted and wasn’t listening to him, and we agreed that this was a little bit frustrating for him. I asked him to remember how he felt when I was not listening to what he was saying, and to remember how his behaviour would make Ms M feel.

We then returned to his original reason for being distracted; that he felt he “knew the material.” I asked him to imagine what would happen and how would he feel if, when taking a test, he came upon a section that he knew Ms M had gone through in class but he had been distracted during this part of the course. He agreed that this would make him feel “angry” and “angry at himself” because he wasn’t listening. I suggested that this might be a reason for focusing more clearly in class.

The focus for the session centred on his lack of ability to concentrate in class, so we spent some time discussing how he could avoid being distracted, because as James explained, he “really can’t sit still.” We trialled a few strategies to help him remain focused such as jiggling his legs, or playing with his hands. We explored the possibility of using a stress ball.

Our third role-play dealt with the wider implications of his behaviour—how does his behaviour affect his relationships with his parents? In this role-play, James was Ms M calling home to talk to his mother (me) about his behaviour. He was able to clearly identify what Ms M might say to her. Playing his mother, I asked what I could do to help my son. In the role of teacher, James admitted he was unsure.

We then returned to the relationship between Ms M and James. How does he feel about Ms M? “The same,” he replied. He believed it was fair that he got the detention, but as he had been in detentions before, he agreed that the detentions did not help him develop the skills to stay on task. During this section of the interview, he was fairly monosyllabic and I needed to coax responses from him. When asked, “Is there something else that you could do instead of a detention that you think would help you?” he responded, “not really.” When asked, “If you got a detention every week… would that stop you?” he replied, “a little bit”. James reiterated that he “didn’t feel that his relationship with Ms M had been damaged because he was given the detention.”
When asked whether he thought that his behaviour might have hurt Ms M’s feelings, James commented, “a little bit.” When I asked why it would have done that, he responded, “’cause maybe she thought I couldn’t trust her or something and she trusted me and I just wiped it away.” I thought that this was a most interesting point—the element of trust, and broken relationships—an important aspect of the restorative practice conversation. I asked him to focus on this thought when he was in class, to avoid being distracted, and to consider Ms M’s position. When asked about the people he was distracting and the effect it might have on their learning, he agreed that he was distracting them, but made note that he wasn’t the only one distracting others.

We finished up the session with a review of our discussion and ideas about what else could he, Ms M, or I do to help him focus in class, remain on task and complete work assigned. He did not feel as if there was anything else he needed in terms of support, except simply to “not be distracted.” I also went through the next step in the process—our restorative conversation with Ms M.

During the week following the discussion, Ms M, James and myself had a restorative conversation. The session proceeded using a restorative conversation process (Appendix B). I felt that this was a positive experience for both Ms M and James in terms of repairing their relationship. A few weeks after the intervention, I happened upon James in another detention. I asked to speak to him outside and questioned why he was in detention. He said, “don’t worry Miss. I got this detention before we met.” I was pleased that he was able to recognize that he had remembered the work we had completed a few weeks before and that, hopefully, he felt that the experience could make a difference to his behaviour. Although this is a comforting thought, it will be interesting to see if the intervention works for James in the long term.

The intervention occurred towards the end of the 2011 academic year, so it was in the new academic year that I caught up with James for a further reflection on the process. Whilst he was able to articulate the reasons for receiving his detention and make some comment about the process we went through, he remained fairly monosyllabic about other areas. Asking him what he remembered from the session, James responded that “we talked about how to stay concentrated, I guess.” The major thing that James remembered about the session was my suggestion to get a stress ball to avoid being distracted, and he volunteered, “I have one in my pencil case.” I was pleased to hear that he had taken up one of the main points of our session together; that he had voluntarily got a stress ball in order to not distract himself or others from work. This is positive evidence of his developing self-discipline, instead of waiting for external consequences!

When asked about the role-play, he remembered that “I was trying to teach you something and you were being the student and you were being distracted,” and that it made him feel “a bit annoyed.” I was pleased that James understood that the use of role-play allowed him to develop empathy for the other person. He quipped, “you get a little bit more of the teacher’s perspective.” Whilst for James he felt that the relationship between himself and Ms M “would have been okay anyway,” his burgeoning personal realization of the effect of his behaviour on others was a most positive outcome.
Conclusion

This first cycle of my action research to develop a more active participant process to help students develop positive behaviour skills, was most illuminating. It gave me insight into the restorative justice paradigm and the impetus to continue to develop a programme to help our students grow into confident men who take responsibility for their own choices, maintain positive relationships with others, and have the ability to repair relationships when others are hurt by their inappropriate behaviour.

The initial reconnaissance provided me with adequate insight into how our students perceive our school’s discipline policy and behaviour management processes. This will lead me toward further action research cycles focussed on clarifying the processes for our Year 7 and 8 cohorts.

In terms of restorative practice, it is a complex undertaking and this initial step, the intervention with James that used both role-play and restorative conversation, assisted me in my reflection on how best to assist the boys in identifying inappropriate social behaviour and in helping them to develop empathy.

IMPLICATIONS OF THE STUDY ON PRACTICE

Future iterations of the process would include detailed role-play scenarios, which may allow for more lengthy investigation into relationships and consequences of student behaviour. Certainly, being able to work with more than one student in each session would allow for greater discussion and flexibility of role-play. I would also like to investigate the use of this process where there has been a significant emotional impact from the detention-sanction-event, incorporating the teacher involved with the detention or sanction.

As for my own practice, as Middle School Curriculum Co-ordinator, I have begun working on incorporating the use of restorative conversations more closely within the pastoral care programme for Year 7 and 8 students. I have also incorporated it into the Peer Support Programme in which Year 11 students mentor the students in Year 7, as a means for exploring restorative conversations through the use of role play. As a teacher, I continue to challenge myself in the development of positive relationships with my students, using the processes and concepts of restorative practice as a basis for ensuring a fair and just classroom environment.
Reflection

When I arrived in London for the 2011 IBSC Conference, my aim was to use the ideas from Reichert and Hawley (2009) for a project within my Year 7 Drama classes—it seemed that almost all of the elements of effective lessons could be explored within such a context. As we sat waiting for the start of one of the sessions, Linda arrived and shared a detention story about one of her students who had made a humorous quip about his situation and there was much laughter in the group. The discussion sparked something in my mind—I had been chatting with a colleague before I left Melbourne about the ways the process of detentions could be improved incorporating the use of restorative practices. It seemed as if a Eureka moment had occurred! This project was born out of such a moment, which sometimes brings the most interesting of research projects. Don't underestimate synchronicity!

It probably would have been an easier road for this research if I had explored an aspect of learning in a particular classroom—a captive audience as it were. Whilst it was most pleasing to discover that few of our boys in Years 7 and 8 were on detention, the fact that there were few possible candidates for this project made the process of exploring restorative practices within such a setting quite difficult.

Being an action researcher has allowed me to incorporate others' research and findings into my own practice. Recognising that it is okay for research to be “messy” (Cook, 1998) is important and I have come to agree with Baird and Northfield (1992) in that action research “confronts and challenges closely-held attitudes, perceptions, conceptions and abilities relating to the nature of learning, the process of teacher, one’s own work and success, and personal satisfaction and fulfilment” (p. ii). Teaching is a busy life but having this research project as a reason to slow down and reflect not only on my practice, but on the theories and philosophies behind what I do and the specific focus on boys’ needs, has been incredibly challenging but also rewarding.

ACKNOWLEDGEMENTS

Firstly, thank you to James for agreeing to be part of this research. Thank you to Linda and Di for all their support of the research team, particularly Linda who read and re-read this report with much patience and enthusiasm. It is also important not to underestimate the collegiality of this team, both in our initial face-to-face meetings, but also in our electronic communication throughout the year. Thank you to my team at work—John my colleague with whom I had the initial discussion about the use of sanctions, but also Pino, Syd and Rob—my “bosses” at Scotch—and Tom Batty, our Principal, for giving me the chance to challenge myself through this project.
References


Appendix A

SURVEY BEHAVIOUR MANAGEMENT AT SCOTCH COLLEGE

Question 1 (Rating scale) 56 of 57 respondents answered this question.
Rate your level of understanding of the Scotch discipline procedures. low (1)–high (6)
Average rating: 5.25

Question 2 (Rating scale) 56 of 57 respondents answered this question.
Rate your level of understanding of the process for awarding a ‘merit’. low (1)–high (6)
Average rating: 3.62

Question 3 (Multiple select) 57 of 57 respondents answered this question.
How many merits have you received this year?

Question 4 (Rating scale) 56 of 57 respondents answered this question.
Rate your level of understanding of the process for awarding a ‘demerit’. low (1)–high (6)
Average rating: 4.79

Question 5 (Multiple select) 23 of 57 respondents answered this question.
If you received a demerit this year, select the type(s) you received.

Question 6 (Yes-no) 44 of 57 respondents answered this question.
Have you received a second demerit for the same offence?
Yes: 11 (25.00%) No: 33 (75.00%)

Question 7 (Rating scale) 56 of 57 respondents answered this question.
Rate your understanding of the difference between a personal and a community detention. low (1)–high (6)
Average rating: 3.73

Question 8 (Multiple select) 57 of 57 respondents answered this question.
How many detentions have you received this year?

Question 9 (Multiple select) 6 of 57 respondents answered this question.
If you have been given a community detention, select the type(s) you received.

Question 10 (Multiple select) 7 of 57 respondents answered this question.
If you have been given a personal detention, select the type(s) you received.
**Question 11** (Yes-no) 40 of 57 respondents answered this question.
Have you received a second detention for the same offence?
Yes: 3 (7.50%) No: 37 (92.50%)

**Question 12** (Rating scale) 57 of 57 respondents answered this question.
Rate your knowledge of Restorative Justice or Restorative Practices. low (1)–high (6)
Average rating: 2.18

**Question 13** (Yes-no) 53 of 57 respondents answered this question.
Have you experienced a Restorative Justice conversation this year?
Yes: 3 (5.66%) No: 50

**Question 14** (Open response) 14 of 57 respondents answered this question.

**Appendix B**

RESTORATIVE PRACTICE CONVERSATION
The following questions are asked of those who have caused harm:
- What happened?
- What were you thinking about at the time?
- What have you thought about since?
- Who has been affected by what you did?
- In what way?
- What do you think you need to do to make things right?

The second set of questions is asked of those who have suffered harm:
- What did you think when you realized what had happened?
- What impact has this incident had on you and others?
- What has been the hardest thing for you?
- What do you think needs to happen to make things right?
Let’s Chill!
The Effect of Daily Mindfulness Practice on the Growth of Boys’ Emotional Intelligence

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Abstract
Mindfulness is a critical skill that can help young people to develop greater self-acceptance, counter stress, and build resilience. Contemporary definitions of mindfulness consider it a quality of human consciousness, which, when developed through training, can raise our awareness of our thoughts and feelings (Black, 2011).

The author was interested in developing a daily mindfulness programme for her Year 6 boys at St John’s College Preparatory School in Johannesburg, South Africa. Her goal was to help them manage relationships better and gain greater social and self-awareness. She wondered if, on a daily basis, her boys would accept “being still”—to chill. Could a mindfulness strategy be effective in developing the boys’ emotional intelligence? Would young energetic boys embrace a strategy that asked of them to close their eyes and focus on their breathing?
Through an action research approach, qualitative data were collected from video-recorded class discussions and the boys' insights and reflections recorded in their journals. Photographs taken of the boys “chilling” provided further data, as did their comments during and after each mindfulness session.

The project findings indicated a definite growth in all four of the constructs of emotional intelligence: self-awareness, self-management, social awareness and relationship management.

Rationale

St. John's College, founded in 1898, is an independent Anglican school located in Johannesburg, South Africa. It caters for boys from Grade 0 to Grade 12. The College is divided into three separate schools: Pre-Preparatory (Grade 0 to 2), Preparatory (Grade 3 to 7) and College (Grade 8 to 12).

The school has a rigorous academic programme, a full and varied sporting programme, and a strong cultural programme with emphasis on the arts. Participation in extracurricular activities is compulsory. These programmes mitigate against a boy's time to be still and “with himself.” As a staff, we have noticed that our boys find it increasingly difficult to sit quietly, and as a school community, we have felt the need to find time in our busy schedule for both boys and teachers to slow down and be reflective.

We believe it essential that our boys receive a holistic approach to education. Our perception is that they lack a strong sense of self-awareness and struggle to articulate or have a clear picture of themselves holistically in terms of their strengths, weaknesses, thoughts, beliefs, motivation, and emotions. Our priest has recently introduced a time of religious reflection and Examen in an effort to have “time-out,” both spiritually and emotionally.

Having been personally introduced to secular mindfulness practice by a psychologist friend and enjoying many of its benefits, I became interested in what the implications of following mindfulness practice would be for children. Reading around the concept, I became convinced that implementing a mindfulness programme at school that included meditation skills would assist young boys to develop both their self-awareness and emotional intelligence. As Willard (2010, Chapter 1, Section 5, para. 1) notes:

Because meditation is an activity that children can improvise and do for themselves, it is fundamentally empowering. Children learn powerful techniques they can use to soothe themselves when upset, focus when they need to, and just be comfortable and awake in the world.

Based on my experience and the literature, my research question became: “What effect will implementing a daily mindfulness programme have on the growth of boys' emotional intelligence?”

Glossary

There are terms regularly used in this report, which require explication in order to investigate my research question.
Mindfulness

Author of the seminal work, *Full catastrophe living*, Kabat-Zinn (1990), defines mindfulness as:

> Moment-to-moment awareness. It is cultivated by purposefully paying attention to things we ordinarily never give a moment’s thought to. It is a systematic approach to developing new kinds of control and wisdom in our lives, based upon our inner capacities for relaxation, paying attention, awareness, and insight [meditation] (p. 2).

It is important to realise that meditation is not passive. It requires “a good deal of energy and effort to regulate your attention and to remain genuinely calm and non-reactive” (Kabat-Zinn, 2005, p. 22–23).

Sometimes the terms mindfulness and meditation are used interchangeably. Kabat-Zinn (2005) states:

> When we speak of meditation, it is important for you to know that this is not some weird cryptic activity, as our popular culture might have it. It does not involve becoming some kind of zombie, vegetable, self-absorbed narcissist, navel gazer, ‘space cadet’, cultist, devotee, mystic or Eastern philosopher (p. xv-xvi).

In light of the negative connotations regarding meditation, I chose instead to use the terms “mindfulness” and “reflection” when addressing parents and boys. I believe these terms helped to allay popular misconceptions surrounding meditation.

Emotional Intelligence

Daniel Goleman (1996) suggests that there are four basic constructs to emotional intelligence:

- **Self-awareness**: the ability to read your emotions and to recognise their impact, using gut feelings to guide decisions.
- **Self-management**: controlling your emotions and impulses and adapting to changing circumstances.
- **Social awareness**: the ability to sense, understand and react to others’ emotions while comprehending social networks.
- **Relationship management**: the ability to inspire or influence others while managing conflict.

Breathing Mindfulness

This is the most common technique used in mindfulness practice. It consists of being in a relaxed and respectful posture, and focusing attention on your awareness of your breath. Rather than controlling your breathing, you just let it happen, being aware of what occurs physically and how it feels.

Body Scan

This is a powerful, yet simple, mindfulness exercise used to re-establish contact with the body. It is an effective technique for simultaneously developing concentration and flexibility of attention. It involves lying on your back and moving your mind through the different regions of your body as guided by the facilitator. It places thorough and minute focus on the body (Kabat-Zinn, 2005, pp. 76–77).
Intervention

This refers to the mindfulness programme in which the boys participated.

Literature Review

Jennings, Senior Director of the Garrison Institute’s Initiative on Contemplation and Education (2012) strongly contends that, “for those of us who teach mindfulness in educational settings, building an evidence base for our work is critical” (para. 1), especially as mindfulness sessions become more popular in educational settings. The activities and exercises that are key to mindfulness development are suitable to use with primary school children, particularly those from Grade 5 onwards, and so it would seem that childhood is a perfect time to build these skills.

Goleman (1996) declares that childhood is “a crucial window of opportunity for shaping lifelong emotional propensities; habits acquired in childhood become set in the basic synaptic wiring of neural architecture, and are harder to change later” (Chapter 14, Section 6, para. 1). Further, Susan Kaiser Greenland (2010) affirms, “the traditional ABCs of reading, writing and arithmetic that served us well for generations don’t serve us well anymore” (Introduction, Section 5, para. 1). While building strong academic skills is essential, it is just one of the elements which make up a well-rounded education. One of the aims of mindfulness in educational settings is to help children and teenagers to “learn academic, social, and emotional skills in a balanced way” (Greenland, 2010, Introduction, Section 5 para. 1).

Classical mindfulness focuses on cultivating wisdom, values and attention. These foci have been modified and adapted to create what Greenland (2010, Introduction, Section 5, para. 1) refers to as “the new ABCs of learning: attention, balance and compassion.” When settling in to mindfulness and meditation practice, she emphasises the importance of creating attentive awareness that is usually focused on attention to breathing (Kabat-Zinn, 1990; Nairn, 2010). The states of mind created during mindfulness sessions should be “enjoyable natural states of the mind which foster self-awareness and enhance self-esteem” (Wardle, 2007, p. 9).

Various authors claim that regular mindfulness practice can: improve concentration, creative thinking and memory; aid physical relaxation; increase tranquillity; aid in pain relief; and enhance spiritual development (Kabat-Zinn, 1990; Greenland, 2010; Nairn, 2010; Schoeberlein, 2009). Furthermore, these mindfulness exercises help to activate those “areas of the brain associated with healthy regulation of emotions, happiness and a positive outlook, as well as physical and mental resiliency” (Willard, 2010, Chapter 1, Section 4, para. 2). Thus, by equipping yourself with the tools to help you calm down and reappraise a situation in your own space, you will enhance psychological well-being and promote a healthy lifestyle.

If practising mindfulness can trigger positive outcomes, then perhaps there is a place for such practice in the learning and teaching of boys. For example, it is widely recognised that males have different types and amounts of neurotransmitters and hormones to girls, which “affect how boys and girls learn and interact” (Gurian, n.d., pp. 6–7). According to Gurian, boys’ attention span is shorter than girls, and in general, they are kinaesthetic learners. Further, Gurian and Stevens (2004) affirm, “more boys than girls tend to get in trouble for impulsiveness, shows of boredom, and fidgeting as well as for their more generalised inability to listen, fulfil assignments, and learn in the verbal-emotive world of the contemporary classroom” (p. 24). Couple this with the widely
recognised fact that boys have less serotonin than girls, rendering them less calm and more prone to escalate volatile situations, and that they have a greater tendency towards physical spontaneity and are less able to neurally combat their natural impulsivity, sit still and chat empathically to friends (Gurian & Stevens 2004), it would seem that the practice of mindfulness would have certain benefits for boys in the classroom situation. As Willard (2010) suggests, “a few moments of mindfulness each day can be a powerful reminder to children to refocus, prepare for transitions, and calm the body and mind” (Chapter 5, Section 5, para. 4). It is a further benefit that most pupils really enjoy the activities and will continually ask for them to be repeated (Schoeberlein, 2009; Wardle, 2007; Willard, 2010). In addition, regular mindfulness sessions encourage a longer attention span and better concentration skills (Wardle, 2007).

Completing a journalling activity

Journalling can be an enhancement to any mindfulness exercise. Schoeberlein (2009) notes that journalling activities “share a common focus on attending to and communicating about first-hand experience” (Chapter 8, Section 2, para. 8). She further notes that:

With mindfulness, journalling is about the experience of writing and awareness of recollection rather than narrative or analysis…. You are part of the action in mindful journalling, whereas you write about the action in a conventional diary (2009, paras. 1-2).

Wardle (2007) supports the addition of journalling as a mindfulness exercise and asserts, “in short these exercises are a proactive way of helping all young people to enhance their mental and physical health.” Thus, mindfulness enhances effective management of emotion and helps to promote better social and emotional skills. Schoeberlein (2009) says, “balanced emotions, a calm mind, and greater skill at paying attention all contribute to deeper and more finely tuned awareness” (Chapter 9, Section 8, para.6).

When one considers the available literature on both boys and learning, and on mindfulness and meditation, it seems most likely that the introduction of a mindfulness program will have a positive effect on boys’ emotional intelligence, and in particular, self-awareness.

**Methodology**

The methodology chosen for this project was action research as it gave me the opportunity to explore my own practice within the classroom through a simple cyclical approach referred to as *Look, Think and Act* (Stringer, Christensen & Baldwin, 2010, Preface). Through this process, information is gathered and analysed, and the outcomes of the analysis used to take some action. As action research is a self-reflective practice, it allowed me to look at the implementation of a mindfulness program, and to “check that it [was] as [I] would like it to be” (McNiff, 2002, p. 6).
PARTICIPANTS
My Grade 6 class of twenty-six boys, aged 11–12, were chosen as participants in this study. The boys represented the full spectrum of academic ability and had varied and diverse extra-curricular programmes. Prior to embarking on the research, I sought, in the first instance, consent from the Headmaster of the Preparatory School. Subsequent to this, the boys and their parents were emailed letters in which I requested permission for the boys to participate in the study, to be interviewed, and to appear in photographs and videos. Anonymity in data collection and in future dissemination of the research was assured. Pupils and parents were also assured that the boys would not be placed in a vulnerable position or be deprived of a learning experience by taking part, or not taking part, in this study. All boys agreed to participate.

ACTION

The class participated in mindfulness sessions on most school days for approximately six weeks. The mindfulness techniques I used included breathing and sound mindfulness (Greenland, 2010; Kabat-Zinn, 1990; Nairn, 2010); body scans (Kabat-Zinn, 1990); and noticing feelings (Schoeberlein, 2009). These sessions were relatively short at approximately 3 to 6 minutes in duration. The more involved body scan activities usually lasted for 10 to 12 minutes. Most, but not all of the mindfulness sessions, were followed up with an activity for boys to complete in their reflection journals. I collected most of my data from these activities.

DATA COLLECTION
My data collection was quasi-qualitative in its scope. Prior to implementing the mindfulness intervention, I began my study with a pre-intervention survey to establish the level of boys’ self-awareness; the first construct of mindfulness—emotional intelligence. In the form of a checklist of attitudes on a rating scale, the survey was designed to establish a baseline understanding of the boys’ state of self-awareness. It was repeated at the end of the project in order to ascertain any changes (Appendix A).

Approximately 20 sessions of mindfulness practice were undertaken. In order to ensure that the study was both reliable and valid, I constantly observed the boys, and collected data using still-photography and video footage, as well as audio recordings. I recorded teacher-pupil discussions, and took field notes on interactions within the class. In addition, I conducted a focus group composed of boys from the participant group who volunteered.
In their reflection journals, the boys wrote scaffolded responses by completing open-ended sentences and responding to specific statements such as, “today my mind wandered towards…” or, “today I found myself thinking a lot about….” They also wrote reflections based on their feelings and sensations before, during, and after sessions.

As the participant observer, I kept a journal of my feelings and observations, and added field notes during the course of the project. I also made note of some incidental responses from other teachers about my class, as well as events in my class pertinent to our project.

As a final task, prior to the post-survey, boys completed a “Who am I?” worksheet (Appendix B). The responses to these statements were used to create Wordles; another source of data (Appendix C).

DATA ANALYSIS

Transcript analysis, using the verbatim principle (Stringer, 2008), was used to write down boys’ responses, word for word. Subsequent analysis was based on creation of a thematic structure using the techniques of categorising and coding, and looking for trends which might suggest that the boys had indeed gained greater self-awareness by participating in the program. Using formative analysis, I recognised and responded to the boys’ reactions to the activities—how they appeared more relaxed and how their postures changed during various activities. Summative analysis, using both checklists and narratives, was used to determine whether the action had affected the boys’ development of emotional intelligence.

When analysing the empirical data in the surveys, I transcribed each boy’s response onto blank copies of the survey, separating the pre- and post-survey responses. Using different colours for pre- and post-survey, I next combined these coloured-coded responses onto one sheet. Certain sections of the survey were then taken and represented graphically for visual impact. The results were then analysed further, looking for differences and analysing what these could mean.

I used the video footage and still-photography to observe the boys’ engagement and willingness to participate in mindfulness sessions. Looking for visual clues to support any changes, I took particular notice of their posture and demeanour, as well as their development from session to session.

The Wordles were used to examine the boys’ description of their feelings and emotions. I compared these to the earlier work completed in their reflection journals to determine if there had been any development in this area. The boys’ reflection journals were important in triangulating responses from the surveys, their Wordles and my observations. My field notes served to aid my overall impression of how the boys were responding to the sessions.
Key Findings and Discussion

The pre-intervention and post-intervention surveys illustrated clear change in the boys’ overall feelings about themselves.

Although the pre- and post-surveys indicated that the intervention was clearly having an impact on the boys’ overall well-being, the more insightful findings came from studying what the boys said and wrote. When asked to write in their reflection journals about how they felt before, during and after a particular mindfulness session, Participant C wrote, “before I started, I was stressed about studying. When we were reflecting, I felt like I was sleeping. After I reflected, I felt relaxed and chilled. Now I feel like I’ve just woken up.” Participant K recorded, “I felt very relaxed like I was swimming. Before I felt like I was a hyper bunny,” whilst Participant Y effortlessly summed things up with his comment, “neutral—relaxed—rejuvenated.”

The boys became conscious of heightened sensory awareness while meditating. Participant D noted that “the small sounds were louder. It was nice and warm,” while Participant K mentioned that he “saw green and purple and all sorts of colours.” Participant J expressed, “throughout, I saw shapes and colours.”

Lack of space in the classroom meant that we sometimes took our cushions, yoga mats and air mattresses to meditate out on the cricket field. Participant H noted, “outside was so much better because the air was better and the wind was cool and I liked the sound of helicopters.” St John’s is particularly close to the Johannesburg Hospital and, before this session, boys had never noticed that we were on the direct path of the emergency helicopter flights, nor had they any idea of just how many emergencies there were.
The boys were asked to perform a body scan whilst meditating on the cricket field. They were becoming more self-aware as noted in Participant J1’s comment, “my eyes, as we got to them, the sun came out and I got the weirdest sensation.” Participant J2 also noticed that “I felt all tingly when I thought of my feet ….”

Meditation is not about “zoning out,” and the boys found that time and again their minds wandered from their breathing focus and on to other more pressing tasks or feelings. Boys were asked to comment on “where their minds wandered.” After South Africa exited the 2011 Rugby World Cup, Participant L noted during meditation that his “mind went to the Boks losing to Australia…. I can’t believe we’re out,” he stated, pouring all his emotion into the statement.

A common statement was echoed by Participant A when he declared that his “thoughts went and focussed on the week. I’ve got a lot to do like assessment, geometry test and science project.” Boys seemed more aware of their “busyness” now that they were regularly having short times in which to reflect. I sensed that comments such as, “Ma’am please can we do another reflection?” were no longer just merely ploys of work avoidance, but reflected genuine needs to slow down and “chill.”

Following mindfulness sessions, there appeared to be less anti-social and socially disordered behaviour in some of the boys. I was overjoyed to read in Participant S’s reflection journal that, at the end of a particular session, he “felt relaxed and lay back, ready to start a new day.” He then wrote, “I don’t want to argue or fight or do anything naughty. I just want to chill.”

The boys were beginning to develop their social cognitive skills, as well as their conflict-resolution skills. Participants J3 and S often found themselves in a situation where there was conflict. During the intervention period, an occasion arose when they were involved in an altercation with subsequent name-calling, anger and aggression. Having found myself at the end of my tether with yet another conflict involving the two boys, I ordered a “time-out,” encouraging them to reflect on each other’s feelings. Upon returning to class, there was a great deal of hand shaking and back patting; the crisis had been averted before it became physical. The two boys had become more sensitive to each other’s feelings and had a better understanding of the consequences of their behaviour.

I also found that the boys had an increased ability to “size up” interpersonal situations and plan appropriate actions. In one particular lesson, I arrived at the classroom to find that Participant Y was sitting at a different desk. When met with my “and now?” he went into quite a lengthy discourse telling the class and me that he had discovered that it created “a lethal combination” when he sat next to a certain boy. He stated, “he just pushes my buttons, Ma’am, so if I sit here—that can’t happen anymore!”

I experienced a definite sense of there being an improvement in empathetic maturity. Comments moved on from the dismal rugby performance and general aches and pains to a deeper-seated emotion. Participant Y articulated, “I thought about my granny because she was so kind to me. I loved her so much and I miss her too much.” Participant S exclaimed, “I thought about Jesus in Chapel because I was thinking about how lucky I was to have my family and friends and it was all thanks to Him.”
Boys began to verbalise their thoughts, feelings and attitudes towards mindfulness awareness sessions in a more intimate way. A frequent statement at the beginning of the project was similar to Participant A2’s, “it’s so nice.” By the end of the study, the statements were more emotive, like Participant C’s: “Today I thought I was making a circuit with thoughts. My brain was the cell and the conductor was conducting my thoughts into the bulb. I felt relaxed and happy.”

Much of what I noticed in the boys’ behaviour and attitudes remains unquantifiable and untestable. There was a sense of being in a more harmonious classroom; boys seemed to be more responsible, assertive, and pro-social. They seemed to have a better understanding of others, and were more considerate and concerned. This all pointed to higher self-esteem in the boys; a quality that is the very cornerstone upon which all emotional intelligence is built.

From my viewings of the video footage, I noticed that, although there were so many positive implications arising from mindfulness sessions and that most of the boys appeared to enjoy the sessions, there were a number of downsides for some boys. Making them sit still for extended periods of time can be extremely boring, and for boys who have been accustomed to being disciplined with “time-outs,” it can feel like punishment. Meditating publicly can also be difficult for some boys who feel self-conscious and unsure of how others are reacting to them. In fact, as Greenland (2010) affirms, “compulsory mindfulness is an oxymoron” (Chapter 2, para 5). If someone does not want to, or does not feel like being mindful, it defeats its purpose.

As a teacher, you can insist that the boys be quiet and sit still, but you have absolutely no control of what is going on in their minds. Greenland (2010) comments that, “it is not uncommon for thoughts and emotions to flood a child’s mind with a force and intensity that is difficult, if not impossible, for them to process on their own” (Chapter 1, Section 2, para. 3). I found this to be particularly applicable in the case of one the boys in my class who, at the time, was in a very bad place emotionally. I found it necessary to inform the school psychologist as to when I was hosting mindfulness sessions and what type of exercises we would be doing. Whenever possible and applicable, he organised to have debriefing sessions with the boy. I believe that these sessions, working in tandem with the mindfulness practice, had a positive effect on the boy’s emotional state.

The most powerful public endorsement of the mindfulness programme was received was from a colleague; a Grade 3 teacher assigned to cover my class in my absence. Generally, the teachers of the junior years dislike having to look after senior boys, and vice versa. This session, however, was a very atypical session for her. The boys settled quickly and got on with the business of keeping themselves gainfully occupied and drew her comment that “something was different.”

Conclusion

Sceptics on the staff asked whether the boys were actually meditating or not. My answer was, “it’s hard to really tell.” There will always be some people who can and who cannot meditate. The ability to meditate varies and is related to someone’s capacity to direct and maintain attention. Whether or not the boys were authentically meditating was actually not of significance. What was significant was that they were developing more stable attention skills than what was observed prior to the mindfulness programme. Video footage attests to the boys increased ability to remain still for longer periods of time. They also appeared more focused during the latter sessions.
In just six weeks, there was a palpable difference in the boys’ outlook, demeanour and attitude. Relationships had improved and the overall classroom atmosphere seemed calmer and healthier. To paraphrase Goleman (1996), the boys had learned better self-management, social awareness and relationship management skills, and were more self-aware.

Greenland (2010) asserts that mindfulness is not a “magic wand” (Chapter 1, Section 5, para. 6). It is, however, quite a magical experience to behold the growth in boys’ emotional intelligence. I believe that the participation in the mindfulness program had helped to create a more positive classroom atmosphere as evidenced in their growth in emotional intelligence (Appendix C).

IMPLICATIONS OF THE STUDY

Based upon the initial results, even before the finalisation of this first cycle of action research on mindfulness, changes were made to the Prep School’s daily timetable. We have now introduced reflection periods three times a week. These have been written into the timetable and are non-negotiable. There is an amazing sense of peacefulness and tranquillity, which resounds through the old buildings at this time.

In order for the boys to receive as much exposure as possible to reflection, the mindfulness practice is not only shared with class teachers within the regular schedule, but has flowed to Chapel services. Journal writing has taken on epic proportions, and these activities occur under the guidance of our Drama teachers.

During a recent trip to Zululand the boys, including those who had been part of the action research study, kept both diaries and journals of their experiences of the trip. They participated in daily reflections in one of the most idyllic settings in nature. In particular, it was of interest to note how they had reflected on the poverty of the area and on the atrocities of child abuse they had seen at a place of safety we visited.

I have spoken at a few staff professional development sessions and have received a fair amount of interest from teachers. I am keen to organise a staff mindfulness session as I firmly believe that if we would like our boys to develop healthy emotional intelligences and to reflect mindfully, then we should be modelling that behaviour.
Reflection

My participation in this action research project under the auspices of the IBSC has been an extremely empowering experience. Throughout the entire project, I have felt as if I have something noteworthy to say and that I have indeed made a difference in boys’ lives. My own interest in mindfulness practice has been strengthened and I believe that my own emotional intelligence has grown during this past year. I have been inspired by the rigours of this project to further my own studies in the field and would like to use this research as a stepping-stone towards studying for a PhD at the University of the Witwatersrand.

ACKNOWLEDGEMENTS

My sincere thanks go to Margot Long, our Head of Academics and dedicated IBSC action research project leader, for inspiring me to become involved in the initiative. It has been everything you said it would be and then some.

References


Further Reading


Appendix A

SELF-AWARENESS SURVEY

Apply the following points to each answer:
1 – Not true for me 2 – Somewhat true for me 3 – Very true for me

1. I am so busy that I sometimes feel I don’t have time to enjoy life.
2. I am willing to change my beliefs about myself.
3. I have trouble expressing or managing anger.
4. I feel anxious and/or depressed.
5. I often wish I had more freedom to do things I want to do in my life.
6. I have made promises to myself, or others, to change and then failed to follow through.
7. I wish I had more confidence.
8. I sometimes behave in ways that harm others or me.
9. In my daily life I would like to:
   Generate more energy
   Feel happier
   Be more confident

Appendix B

WHO AM I? WORKSHEET

Think about who you are as a person.

- Write your name and four adjectives (describing words) that are you.
- My fear/s are/is…
- I would love to…
- I love to try new things /I am too afraid to try new things
- I am going to…
- My closest friend is…
- I am always/not always supported by my family and friends
- My most treasured item is…
- My favourite colour is…
- My favourite music is…
- My favourite sport is …
- I feel ... about myself.

Now turn your responses into a Wordle (www.wordle.net/create)
Appendix C

WORDLE EXAMPLES

Appendix D

E-MAIL FROM PARENTS

Hello Karen, 31 October

We have for some time been meaning to pop you a short mail regarding your Mindfulness Action Research Programme. We simply wanted as a family to give you some encouragement and support in what we believe to be an incredibly valuable and often overlooked aspect in Education. In a fast paced “instant” world, less and less time is afforded to quiet reflective time. Personal experience has indeed given us many lessons in the value of stillness, reflection and awareness. Your enthusiasm and dedication in such a worthwhile exercise is quietly appreciated from the “side lines” and certainly does not go unnoticed. [Our son] has expressed his personal enjoyment of and appreciation for this “quiet” time. We look forward to perhaps learning more on the subject/appropriate feedback and wish you well with your continued research.

Best regards [Dad] and [Mom]
If You Build It, Will They Come?
– Flipping the Classroom

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Abstract

Online learning is on the move in education. From podcasts, vodcasts, blogs and wikis, to game-based platforms and second life environments, instructional design models are changing the face of teaching from a sage on the stage to meddler in the middle style (McWilliams 2009). McWilliams (2007) contends that teachers will need to spend “less time explaining through instruction and more time in experimental and error-welcoming modes of engagement” (p. 1). With an array of potential teaching approaches and strategies available, especially as Web 2.0 continues to offer seemingly limitless opportunities to engage boys in learning, the author wanted to test his idea that spending more time in his Biology class on practical collaborative activities, and less time on teaching content, would benefit his students and build stronger teacher-student relationships.

The researcher took a giant step in deciding to flip his classroom. Having little exposure himself to online learning and teaching, he wanted to test whether, for his lower level Biology students, placing course content online and leaving classtime for interpersonal practical activities would develop strong learning relationships between him and the boys. He introduced an online learning component where students were required to read and familiarize themselves with course content through guided worksheets supported by customized video casts. Surprisingly, and against the rich evidence that boys are more
engaged in delivery of lessons that are activity-based and grounded in what they know (Reichert & Hawley 2010), the researcher found that the online learning component did not seem to promote effective learning, nor did it enhance the teacher-student relationships in his classroom.

Although unexpected, the results led the author to constructive introspection and healthy discussion with peers; processes which contributed to much personal growth and greater school involvement in addressing the online learning needs of students. The study served as a catalyst for several new online initiatives and the development of a new vision for this type of learning at the school.

Rationale

St. John’s Northwestern Military Academy is a boarding school for boys, ages 13–18 years. The mission of our school is to “immerse young men in a culture of leadership that inspires their personal growth.” Central to the process of promoting personal development in boys is the need for positive and healthy teacher-student relationships to allow effective teaching, mentoring, and guiding. In my observations and experiences over the past 26 years, it seems that in almost every case where we haven’t been successful with a boy, we’d been unable to effectively build a meaningful relationship with him.

The success of our school in raising boys as responsible members of our learning community is dependent upon the quality of the relationship each boy has with his teachers. Researchers Reichert and Hawley (2010) state, “boys experience their teachers before they experience the lessons they teach” (p. 191). Their research supports the premise that boys are relational learners and note that boys are more successful in classrooms where they form positive learning relationships with their teacher. It follows that a successful teacher of boys would use approaches and strategies to promote the development of strong learning relationships with students.

Bearing in mind the notion of boys as relational learners, I interviewed some of our students as part of a reconnaissance for my action research, in an attempt to identify instructional methods that promoted positive relationships in the classroom. Students cited experiences that were student-centered, challenging, provided clear direction, and presented by a teacher who was authentic. These responses ignited my interest to explore the student-centered component. It seemed that, when students are given a role in the learning process, they are more apt to form a partnership, or relationship, with the teacher.

As a consequence of the boys’ mandate that we, as their teachers, provide the elements described above, it seemed appropriate to explore how the use of an online learning component might strengthen the relationship I have with my students. Congruent with our mission to promote a leadership culture, I assumed that students would become less dependent on the teacher, and would hopefully become self-learners; depending on the teacher as part of a collaborative partnership, rather than as director of their learning. In anticipation of the boys’ development towards autonomous learning, I was interested to document change in the teacher-student relationship within my classroom.
Literature Review

Boys are relational learners. Reichert and Hawley (2010) state, “we found boys sustain their engagement in classroom business when they feel held in positive, trusting relationships with their teacher” (p. 223). Rodgers and Raider-Roth (2006) describe this learning relationship as “presence.” They define it as teachers bringing their whole selves to full attention to better perceive what is happening in the moment. Presence enables teachers to connect to the mental, emotional, and physical workings of their students, and to hone their ability to respond with the best compassionate “next step.” Rodgers & Raider-Roth (2006) lament that this vital component of learning is “not often explicitly taught in teacher education programs” (p. 266). They also argue that the very elements of authentic classroom practice “are threatened by the current educational trends,” and that “past research suggests that the relationship between teacher and student is a keystone in student achievement, motivation and engagement and in their capacity to trust what they know” (p. 266).

The relational aspect, or the practice of teacher presence, cannot be overlooked in any bid to be a successful teacher of boys. Irwin (2009) states, “the relationship with the teacher is the first crucial factor [for boys]” (p. 12). Others, such as Lingard, Martino, Mills and Bahr (2002), also found this aspect of the learning experience to be vital. They observe that “there is very strong evidence… it is the quality of teacher-student relationships and the quality of classroom pedagogies that are central school-based factors in achieving good educational outcomes for both boys and girls” (p. 119).

Concurrent with the importance being placed on student-teacher relationships, the integration of information communication technologies (ICT) into learning and teaching has facilitated a strong movement towards online learning and a growing focus on self-directed learning, especially in initiatives such as the flipped classroom (Bergmann & Sams, 2012). The flipped classroom, according to Bergmann & Sams, is a reversed teaching model in which students watch recorded lectures for homework and complete their assignments, practical activities and tests in class. Commenting on the value of such a model, Douch (2012), an award-winning Australian teacher of Biology, professes:

> In the second decade [of the 21st Century], teachers no longer need to be ‘tech-savvy’ to transform their classrooms into thriving, connected, learning communities. Rather they need a willingness to question their 20th Century paradigms and rethink their roles as educators in a world where information is available on-demand and communication is instantaneous.

Douch goes on to give examples of how he has flipped his classroom, but cautions that flipping the classroom is not a silver bullet—It must work hand in hand with the teacher as an engaging force. Their “body language, eye contact, facial expressions, visual aids, posture and even his physical location in the room” (Douch, 2012) clearly demonstrates that no matter the technology, the teacher factor is important. It is the teacher, through his understanding of social and emotional intelligence, who continues to be the connecting force for boys and learning (Martin, 2002).

At first glance, it would seem that online learning is at odds with the development of positive teacher-student learning relationships. The stronger emphasis on an educational experience in the absence of a teacher might well mitigate against meeting the deep need boys have in the classroom for a positive mentoring relationship with their teacher. Yet, just as there are different teaching
strategies in the classroom, there are different methods of online learning. For example, asynchronous learning occurs when the student is ready to learn; that is, the student can access learning materials at a time when it suits him. Students can still meet with their teachers on a regular basis, but their interaction with the class material is not confined to the classroom. Swan (2001) states that, although some researchers suggest this type of learning to be impersonal, those researchers experienced with online learning seem to have found the experience to be hyper-personal; that is, teachers who use online learning effectively with their students seem to be able to build strong learning communities and relationships.

An asynchronous learning environment could be a useful strategy to facilitate both positive learning relationships with boys and the practice of teacher presence. Swan (2001) acknowledges that teachers using this methodology must be prepared to see their role change towards more collaboration and less direction; thus enabling a teacher to focus more on presence. According to Rodgers and Raider-Roth (2006), a requirement for presence in that the teacher needs to be free to observe and respond, and to be a part of the student learning process,

Given the compelling literature on the benefits of both a flipped classroom and effective teacher-student relationships, this action research study is situated in an asynchronous learning environment. The research question became, “How does an online learning component affect the learning relationship a boy has with his teacher?”

**Methodology**

I chose action research as my methodology, knowing that I could be flexible in my data collection techniques, and that I could analyze data as a continuous process from the early stages of data collection until the end of the data gathering period (Shenton, 2004, p. 159). I had read and reflected on student-teacher relationships (Lingard et. al. 2002; Irwin, 2009) and its link to achievement, and wanted to get as much first person evidence as possible by listening to my students’ views about the change in instructional delivery. As a methodology, action research suited my need to reflect, trial, gather, analyze data, and then reflect again (Stringer 2004).

**PARTICIPANTS**

My participants were the 12 young men in my Biology class. Each received and returned a signed information and permission sheet, which allowed them to opt out of the intervention (participation in an online learning community) at any time. They were also guaranteed anonymity and confidentiality in the recording and dissemination of responses.

**THE INTERVENTION**

To bring online learning into both the classroom and beyond, a website was designed through which students could access the course syllabus, assignments, notes, and videos as an adjunct to class activities. The students were expected to complete the learning of content outside the classroom as a prelude to class activities. This content was primarily delivered through a video that I prepared, or one chosen from an online source. The delivery of content was supported by hyperlinked worksheets in Google Documents. Actual class time was used for practical biology lessons, or discussions based on the online work assigned.
DATA COLLECTION AND ANALYSIS

Within the flipped classroom environment I had created, I wanted to investigate the quality of the relationship between the teacher (myself) and my students. Aware that the nature of relationships is dynamic, with many variables and intangible qualities, I decided to use a mix of quantitative and qualitative tools to collect my data. This also assisted in the triangulation of the data so that I could better substantiate the rigor and validity of my findings.

My qualitative data collection techniques included student journals, student interviews, and focus groups. Throughout the data collection period, the students were required to complete journal reflections about learning online (Appendix 1). I also set aside time to meet with several of the students to interview them about their experience. At the end of the research project, all students were involved in focus groups where they had the opportunity to discuss the intervention.

My quantitative data collection entailed the use of the Student-Instructor Relationship Scale [SIRS] (Creasey, Jarvis & Knapcik, 2009). It provided questions for the students about their perceived relationship with the teacher, and was given at the beginning and the end of the intervention (Appendix 2).

At the conclusion of the research, the quantitative data were correlated and graphically communicated. Qualitative data were analyzed by looking for patterns and themes that emerged from responses about the online experience, and from comments about engagement or disengagement with the course work. Data were read, and re-read, and key points were coded and then categorized. Once this process was completed, analysis for overall themes occurred. After the analysis was finalized, my students were asked to check my findings to verify their authenticity.

The final step in my analysis was to compare data collected at the beginning of the research with the trends and patterns identified during the study and the data gathered at the end of the research. The comparison of these data points communicated the nature of the change in the teacher-student relationship that occurred through the introduction of an online learning component in the traditional classroom.
Key Findings and Discussion

In the Student-Instructor Relationship Scale [SIRS], specific questions were designated as indicators of student-teacher relationship quality (Appendix 2).

The survey results clearly identified degradation in student-teacher relationship quality during the research period. The question, “The instructor is concerned with the needs of his or students.” returned responses that demonstrated teacher connectedness had dropped after exposure to online learning (Fig. 1).

Figure 1 Instructor is concerned with needs of students.

The survey results also reflected changing levels of student anxiety regarding the teacher (myself) before and after the study. Here, the question, “I’m afraid that I will lose this instructor’s respect” was asked. After the study, more students agreed with this statement. (Figure 2).

Figure 2 Students’ fear of losing instructor’s respect.

One can see a slight decrease in students’ belief about their teacher’s concern for them. This prompted me to reflect that the online learning in some way prevented the growth of the student-teacher relationship. This, I believe, is not an indictment on the strength of online learning, but an indicator that online learning as designed in this specific instance was not effective in promoting student-teacher relationships.

Although I created a website through which students could access subject content and engage in guided learning at their preferred time, this particular cyber-classroom experience did not favor a more engaged approach with the boys. It was found that very few students accessed the web resources, even though the boys were graded and evaluated on their online participation.
In the boys’ reflections as to why they lacked enthusiasm to access the online component of the course, Participant A commented that, “the Internet is too slow and sometimes study hours are too short.” Another participant gave an indicative response, albeit clichéd, representative of the cohorts’ age: “We are lazy.” It was Participant C’s response, however, that summed up the participants’ feelings that the online component was just another extra to their already full day, “we are teens, and most of us don’t really care, and we have a lot more on our minds at this school than just academics because of everything else that goes on.”

The students’ responses were surprising; given they were provided with two hours of study time each evening. I could only deduce that the students did not value the opportunity to engage in self-directed learning. This did not gel, however, with comments that online learning helps “teach us other ways of learning,” and “it teaches us to use resources”. The boys also stated that the Internet was a valuable resource and admitted that, “for us to learn, we have the Internet at our fingertips while doing assignments.” They agreed that, “it makes students use their resources to their advantage.” The boys also seemed to understand why I had embarked on a flipped classroom approach, and agreed that, “it’s so we can expand the way we learn.”

Boys in the focus groups were asked their thoughts on the use of a flipped classroom approach so that they could spend more class time on collaborative, knowledge-constructing activities. Participant D stated, “I’d rather have a teacher present me the subject in class because our teacher is good at giving good information that is easy to remember.” On the other hand, the boys seemed to negate the presence of the teacher in the flipped classroom components, focusing instead on the physical flesh-and-blood presence. Participants commented that, “I like how the teacher explains things in class,” and “I would rather have the teacher give the presentation.” Such attitudes may be a consequence of their immature autonomous learning skills; an area that needs to be addressed before moving too quickly into the flipped classroom model.

It seemed that the thought of learning independently of the teacher was not a method the boys preferred, nor a process for which they were adequately prepared. Based upon the survey results, and their conversations in class and in focus groups, self-directed learning caused students to feel their relationship with the teacher was not as strong when blended with an online learning component. They did not prefer learning online to learning directly from their teacher, despite my assumption that self-directed learning outside the classroom, independently of the teacher, would allow the teacher to be more in the presence of their learning within the classroom. I was surprised at this finding. Comments from the boys did not support self-directed learning, and indicated instead a preference for a more teacher-directed approach.

**Conclusion**

It was interesting that the students realized the advantage and opportunity online learning presented them, but at the same time did not take advantage of it. Of similar interest was the finding that this mode of learning failed to enhance the teacher-student relationship. In most cases, students preferred face-to-face contact with the teacher in order to learn new material, and did not value self-directed learning. It may be that students feel more cared for when their teacher personally instructs them.
I realized there are findings in other studies that support the growth of student-teacher relationships using online learning (Douch, 2012; Gresham & Gibson-Langford, 2012). In this specific study, however, this was not the case. It seems the students did not have the motivation to engage in online learning. With the understanding that my students have diverse backgrounds, and that many of them struggle with the learning process, it would be interesting to find out more about why these students did not choose to be self-directed and independent online learners. On reflection, it would seem appropriate to evaluate students’ understanding of the learning process, and then customize learning experiences to help them be more able and independent learners before adding, what I still believe, to be a valuable process and environment for enriching learning.

**IMPLICATIONS OF THE STUDY AND FURTHER RESEARCH**

During the study, I found myself incorporating the previous night’s online assignment into regular class time to allow students to maintain subject material knowledge. This led me to wonder if it was the style of website that prevented students from fully engaging in the process. Although only reporting on my first cycle of this action research project, reflection on my findings encouraged me to tweak my intervention and to incorporate Edmodo—an educational social media site that works like Facebook—in an attempt to engage students more fully in the online process. I believed that the familiarity of the Edmodo’s functionality, and its ability for students to create an online presence, would motivate students to be more engaged in learning online, and be better prepared for collaborative activities in the classroom. Interestingly, while there was a small improvement in student online usage, most students did not engage in self-directed learning.

In my next cycle, I will develop the flipped classroom idea more thoroughly by using online tools that allow the boys to feel my presence in their online learning space.

**Reflection**

*It was my intent to show that online learning can enhance student-teacher relationships in the classroom, but instead the introduction of online learning seemed to have a negative impact on this relationship. There are other studies of greater scope that have found exactly the opposite. Somewhere in my study something caused my students and myself to not connect as expected.*

*Online learning is a new concept to me and I believe part of the issue was my lack of experience with online teaching and learning; I did not take the time during the study to ensure I used best online teaching practices. I spent a great deal of time preparing online resources, but did not use them in a structure that allowed the students to experience my “presence.” My expectation was to have my students learn by themselves with greater access to me during classtime. It would have been helpful if I had been available to my students while they were doing the online activities.*

*Conducting an action research study was a new and exciting challenge for me. I was able to review current literature on teaching boys and then plan an intervention based upon other’s findings. It allowed me to learn more about teaching boys and then inspired me to implement something new. I was also able to learn about how to measure and interpret the changes in my classroom and listen to the boys’ voices in a more accurate way. Action research allowed me to grow as an educator of boys.*
References


Appendix

QUESTIONNAIRE SUMMARY

1. At the beginning of the year Mr. Thornburg set up a website for the biology class. He placed the outline for the year and other resources so you could access the information you needed outside of class. Yet he has noticed very few students actually use the website. Why do you think this is?
   - Because people think that since it’s not a assignment that you need to just turn in on paper they can come up with a lot of different excuses to not get it done.
   - We changed to Edmodo - Internet was too slow.
   - Because kids don’t think they need to because he doesn’t say to check it.
   - We are lazy. I actually like this idea and it is a new thing for me.
   - Students forget or are too lazy.
   - Because we are teens and most of us don’t really care and we have a lot more on our mind at this school than just academics because of everything else that goes on.
   - I think it’s because us students aren’t use to going online.

2. How often do you go to the class website each week?
   - 1–3 Times
   - Once
   - Not often
   - Once a day
   - A few times a week
   - Twice a week
   - Once a day
   - Once every two weeks
   - Once a week

3. When you are learning something new would you rather be given time to explore and research things to learn them on your own or would you rather have the teacher give a presentation to you about the subject?
   - I’d rather have the teacher present the subject in this class because our teacher is good at giving good information that is easy to remember.
   - I would rather have the teacher give a presentation.
   - Learn on my own.
   - I would rather explore and research things.
   - No, I like and enjoy how the teacher explains the class.
   - I’d rather find out from the teacher.
   - Have the teacher give a presentation about the subject.
   - More time to research and study.
   - Both, it depends on the material if it’s challenging I’d rather be instructed.
4. What do you think about the online things you have had to do this year in biology? Have you liked them? Why or why not?

- I like them because just doing paperwork is boring, typing even if on just a blank screen is a lot better and faster that writing because you can type faster than you can write usually.
- Yes, I liked them because they were easy and fun.
- I have and haven't.
- Some things were interesting and others were not.
- Not really, it's too complicated.
- I like all of them except Edmodo.
- I prefer to do my assignments.
From the Inside Out: Using Internalised and Empathetic Characterisation to Aid the Emotional Growth of Boys

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Abstract

It is enactment that makes Drama an ideal subject by which young men can enter a safe emotional environment and develop empathy, as well as learn about their psycho-social selves. Through the strategies of internalisation and characterisation, young people can become emotionally engaged, and experience for themselves “the construction and layering of texts, characters, roles, tensions and dilemmas” (Department for Education UK, 2010), whilst at the same time separate themselves from the character to gain an additional perspective.

The researcher was curious to see if, by bringing elements of the Senior Course forward by one year, the younger boys would benefit in terms of their emotional growth. He sensed that the Year 10 cohort were capable of handling the internalisation and characterisation techniques, and embarked on a month-long action research project with them. Integrating into the Drama curriculum texts that echoed the boys’ lived and current experiences, the boys worked towards performing a realistic character using internalised characterisation techniques. The intervention was intensively focused on connecting boys emotionally to the selected texts, and was designed to ascertain what effect, if any, the project would have on the boys’ emotional development.
Despite the use of quantitative comparative analysis of the effect these techniques had on the boys, it was the qualitative data that revealed the core effect of these strategies. The findings indicated that the strategies of internalised characterisation techniques increased the boys’ psycho-social and emotional awareness, and contributed to deeper levels of empathetic response. Thus, the first cycle of this action research project clearly demonstrated how the purposeful inclusion of techniques such as internalisation and characterisation can be used and improved upon to grow boys’ personal realisation and emotional lives.

Rationale
St John’s College, in Johannesburg, South Africa, is an independent boys’ school from Pre-preparatory to Secondary, and also comprises a Sixth Form (Year 13) for boys and girls. Dramatic Arts is a relatively new subject for a school whose history dates back to the late 1800s, but the subject enjoys a strong position as part of the school’s Arts offerings.

As the Head of Dramatic Arts, and in line with the school’s philosophy, I have instituted course programmes with my Grade 11 and Grade 12 students that involve specific strategies through which they play a character with credibility and subtext. As they experience the roles, tensions and dilemmas inherent in lived experiences, the boys become emotionally engaged in their character. By definition, these strategies encourage boys to tune into their emotions through the processes encompassed within these programmes.

Having observed the transformative effect on the senior boys through the enacting of specific characterisation strategies, my hunch was to bring these strategies into the Grade 10 Course. I wondered if the younger boys would rise to the challenge, and by so doing, develop confidence to portray a believable character using the performance style required to understand the emotional lives of others. It was also of immense interest to me to investigate the impact of Drama on the emotional lives of boys and to begin articulating my findings in an attempt to extend my understanding of the ways in which boys learn. The research question became: “What effects will strategies focused on internalised characterisation and empathy building have on boys’ emotional development?”

Glossary

INTERNALISED CHARACTERISATION
This process involves performing a character from a realistic perspective and the taking on of a character’s psychological truth. Attempting to portray the three-dimensional, psychological complexity of a character.

EMPATHETIC STRATEGIES
These are strategies that the actor uses to engage with, and take on, the character’s psychological truth. The intellectual understanding of character is followed by an internalisation of the character, reflected both vocally and physically in order to portray the believability and felt experience of the character.
Literature Review

Current research on teaching boys attests to the importance of schools devising strategies to nurture and develop emotional intelligence. Kindlon and Thompson (1999) argue that “boys need an emotional vocabulary that expands their ability to express themselves in ways other than anger and aggression,” and that “they need to experience empathy at home and at school and be encouraged to use it if they are to develop conscience” (p. 7). In his recent study of significance in the lives of boys, Cox (2011) noted that when boys in his focus groups were asked what they would most like their schools to teach them, emotional intelligence led the field. Norfleet James (2007) argues that boys are full of emotion, but “lack the skills or freedom” to articulate these emotions (p. 116), while Biddulph (1998) argues the necessity for “a new kind of man” capable of emotional mastery (p. 62). Considering the literature calling for pedagogy that promotes emotional intelligence, it would seem that the study of Drama would be one subject capable of supporting this need.

The use of Drama to enhance personal understanding and emotional mastery, however, has elicited mixed responses from theorists and practitioners. Most are in agreement with the notion that role-playing, whether “real time” or through the portrayal of a believable character, has a degree of emotional benefit, but that is where the similarity ends. McGregor, Tate and Robinson (1977) argue, “there is a danger in saying that Drama is to do with the life of feeling” (p. 22), while O’Toole, Stinson and Moore (2010) state, “educating the emotions is a very popular claim for Drama, but rather a double-edged sword” (p. 81).

Despite the misgivings of some, Drama has long been acknowledged by leading theorists, researchers and practitioners in the field of Drama-in-Education as having a transformative effect on young people. Slade (1958) and Way (1967) were two of the earliest practitioners to propose this view, whilst Heathcote (in Wagner, 1979) has been engaged with establishing and asserting the relationship between Drama and social development throughout her distinguished career. Hodgson (1972) considers Drama a “social and educational force” (p. 11), while McGregor (1976) sees it “as a means of understanding various aspects of behaviour, including interpersonal relations, feelings and the exploration of social issues” (p. 1).

The Drama classroom can be a site of immense change for boys. Sanders (2003) argues that Drama has a “notable influence on [boys’] social, personal, emotional and intellectual development” (p. 244). She argues further that Drama “can assist boys in connecting to the inner core of their emotional lives as they explore multiple dimensions of their own and others lived masculinities” (p. 268).

Existing dramatic texts that express the lives of psychologically complex characters can be used successfully to engage boys with the lived experience of those characters, and so possibly enhance their emotional intelligence (Bolton 1998). The theories of Drama practitioners such as Stanislavski, Rodenberg, Meisner and Hagen are acknowledged as practices that, when combined with a carefully selected series of supportive exercises related to the voice and body, can lead to personal realisation. Reichert and Hawley (2010) acknowledge the role that lessons which effect personal realisation play in the lives of boys (p. 137), while Sanders (2003) states, “what is unique about the Drama classroom is its capacity to act as an agent of change in boys’ lives by inviting them to explore meaning through dramatic form” (p. 274). More importantly, she asserts, “the opportunity for students to reflect on life experiences and associated emotions both inside and outside the dramatic event is one of the powerful educational aesthetic experiences we can offer boys” (p. 274).
Methodology

Action research was the methodology selected through which to investigate whether dramatic strategies such as empathy building and internalised characterisation, if brought in earlier in the curriculum, could enrich boys' emotional development at a stage when they are at the “gates” of manhood. This methodology works best for teachers who want to engage with their pedagogy through intense scrutiny, in the hope that they can better the actions they perform as teachers and so enhance their lifelong learning and the learning of their pupils (McNiff 2010).

ACTION

I had been aware for quite a while that the Dramatic Arts curriculum for the Grade 10 boys required tweaking, particularly with respect to their practical work. The dimension lacking was one that engaged the boys with internalised performance techniques that locked into lived experience, as opposed to more exaggerated, stereotypical processes that relied on externalised performance techniques—the main acting skill development at this level. I believed that boys at the Grade 10 level, were ready for such experiences, and could handle the strategies using age appropriate realistic monologues. In addition, many of the boys lacked the confidence with performance in general, which led me to consider that I ought to find ways to remedy the two problems. Having worked with the older boys on processes that engaged them with performing realistic characters from existing texts, I was aware that these had often led to increased confidence and had also provided the boys with a more mature and sophisticated approach to Drama. More importantly, I had witnessed the effect these strategies had on many of the boys in terms of increasing their emotional awareness. I decided, therefore, to trial a project with my Grade 10 boys with these factors in mind.

PARTICIPANTS

Permission for conducting the project was sought initially from the Headmaster, and thereafter, from all prospective participants and their parents or guardians. A comprehensive letter was sent out detailing the project. Both the boys and their parents or guardians signed the permission slips. Anonymity and confidentiality were guaranteed in all the related activities, such as videoing and recording discussions. Thirty-six boys participated in the research project, all of whom were Grade 10 Dramatic Arts students, averaging 16 years old. The boys ranged in ability from exceptionally strong in both the theory and practical components, to those who excelled in practical but struggled with theory, to those who struggled in both areas.

DATA COLLECTION AND DATA ANALYSIS

The reflective process in action research was foundational to my project. It was essential for the boys to actively reflect upon their experience. On a basic level, it was important to me to establish whether or not they had understood, and were attempting to harness, the necessary skills. More important, however, was my desire to find ways to assess the effect, if any, of the process on their emotional development. I was guided by the views of Edmiston and Wilhelm (1996), who argue that, “listening carefully to what puzzles students enables us to shape work around their concerns and explore ideas with them” (p. 85). It was essential that all of my actions were supported by reflection, and so I devised numerous reflective strategies using a variety of techniques to ensure triangulation of data for rigour and validity.
Questionnaires
I set up a survey on Google Docs to be completed by the participants prior to initiating the intervention. The function of the survey was to establish a baseline set of responses linked to levels of skills acquisition and confidence with performance in general, and with respect to creating and performing a realistic character. Aware that the boys had not previously experienced performing a realistic character using the specific strategies necessary to do so effectively, I used the survey to ascertain if the participants had preconceptions of what it would be like to perform the lived experience of a real person. It was against this initial set of data that I was able to compare their responses to the same survey at the conclusion of the project; thus allowing a comparative analysis between pre-experience and post-experience. Not only was the questionnaire a valuable way for me to gauge my initial assumptions about the boys’ levels of understanding, skills acquisition and confidence, but it also provided a way in for the boys to at least begin thinking about these issues from the outset. It was a successful exercise and the results (Appendix 2), while not overwhelmingly conclusive, proved interesting and assisted in guiding me in my interpretation of the anomalies identified in the data collected from the qualitative research instruments discussed hereafter.

Journals
I felt that the experiential learning process instituted in my project would be best supported by a journal that each boy would complete individually after every lesson or lesson series. In designing the questions for the journal, I deliberately focused on two areas: the skills that were being developed in each lesson or lesson series, and open-ended questions to ascertain how they felt after each lesson or lesson series. These questions proved valuable in establishing both the levels of understanding and skills acquisition, as well as the felt-experience of each boy as he moved through the process. The journals were analysed to establish thematic similarities. I grouped the questions under the following themes: skills development; levels of understanding; levels of confidence; and emotional connection to the process. I worked through each area of the journals systematically, noting differences, variances and similarities by employing a key of different colours.

Visual Presentations and Examination Question
I presented the boys with an open-ended task that asked each boy to create a visual presentation in the form of an A4 or A3 poster, or as a PowerPoint presentation, which captured the essence of what he had learned throughout the process of creating his realistic monologue as performance. In addition, I asked each boy to focus specifically on his own personal learning journey. These presentations were a wonderful way for me to confirm the thematic trends I had established in the journals, but were also highly valuable in encapsulating the effect the process had had personally on each boy. I derived great enjoyment from viewing these, but more importantly, I was able to confirm initial analysis with respect to personal discovery and growth. The open-ended question I posed in the final November examination enabled me to further verify the degree to which each boy had educationally and personally grown from bringing in these dramatic strategies earlier into the curriculum.

Other Techniques
Field notes and still-photographs were taken throughout the process to record my observations of how the boys were affected, both individually and as a group, as they immersed themselves in the lessons. I recorded observations such as how each boy was engaging with the process, and how they
were connecting to one another. We began and ended each lesson with discussion and sharing, which added to the body of knowledge I was accumulating through my own observations. After each lesson, I would interrogate my observations and group them under the themes previously identified. This was a valuable way for me to establish whether or not my observations were supported by the boys’ individual observations in their journals. At a later stage, my colleague in the Dramatic Arts Department took over the facilitation of some lessons, allowing me to be an observer at a more critical distance. The boys’ performances were video-taped, which gave me a further chance to analyse changes in the boys’ confidence and empathetic understanding of their character. Two days after they had performed, I also met with a group of 10 boys in a one-and-a-half hour focus group discussion. I recorded our conversation, which I later transcribed and analysed in a similar way to that of my field notes. There were some enormously valuable insights gained simply by observing them closely and engaging them in sincere and honest discussion. These added considerable value to the other findings revealed through the reflective instruments already discussed.

The qualitative data collection instruments proved to be highly effective, particularly the journals and visual presentations. They provided me with a clear sense of the individual journey each boy had undertaken and provided each boy with the opportunity to reflect deeply.

**Key Findings and Discussion**

Teaching is first and foremost about equipping students with the necessary skills to cope with the demands of the subject areas in which we work. There is no doubt that one of my objectives in this project was to do exactly that, and I spent a great deal of time on the lesson design and the sequencing of lessons to ensure that the process was clearly scaffolded and one which led the boys in a structured and non-threatening way towards the performance of their monologues.

The online pre-survey analysis confirmed my initial sense that the boys were largely lacking in understanding and confidence in expressing themselves emotionally (see Appendix 1, questions 1–6). Oddly, questions 7–12 (Appendix 1), which focused on perceptions about ability and levels of comfort and confidence when working with a character’s and their own emotions, suggested that the boys were generally a great deal more comfortable and confident—a case of blissful ignorance, I wondered?

A comparative analysis of the pre-survey and the post-project survey (Appendix 2) yielded fairly logical results for questions 1–6, with some very interesting anomalies for questions 7–12. This puzzled me, initially, but was better understood once I had engaged in an intensive analysis of the qualitative data. Critically for this project, the process of skilling the boys towards performing a realistic character was integrated with an absolute focus on working with feeling and emotion. The questions posed in the reflective journals after each lesson and lesson series were designed to interrogate this relationship:

- “What did you learn about in this lesson?”
- “What did you learn about yourself in this lesson?”
- More directed questions when linked to processes like the final preparations for the performance, such as, “How have you gone about preparing for your monologue?” and, “Have you found this process easy or difficult? Why?”
A final question, posed after every lesson and lesson series, “Any other comments you would like to make?” allowed boys to respond further if they chose to.

The boys’ responses in their journals to the first two questions above, clearly revealed the marriage of skills acquisition and emotional realisation. For example, Participant 4, after the first lesson on the body and centreing, stated, “I learnt how to relax. And just how good it feels when you’re relaxed and still. I learnt how the body, by just a few simple exercises, can really be at peace with itself.” Participant 12, after the consolidation lesson of the initial lesson series focused on releasing the body and voice, provided an overview of what he had learned and stated, “in today’s lesson we learnt how to connect [with emotion]… we did this by splitting into twos and had the chance to imagine a scenario in which we wanted to release emotion…. We also had a group discussion about the last time we cried, moments we felt inspired, etc.” This same participant’s view of what he had learned about himself after the initial lesson series was fascinating. He confided, “I learnt that I have a difficulty to tell people how I feel. As well as the fact that I have a lot of bad things stuck in me because of my inability to release emotion.”

Nearly two-thirds of the boys isolated similar areas of concern with respect to working with their emotions. What was interesting, however, was that their understanding of the reasons for their inability to connect with, and release emotion, was absent. Vague responses, such as those from Participant 20, “I don’t connect with his [the character’s] emotion and what he is going through,” and from Participant 33, “I struggle to get in touch with the emotion of the piece,” abounded.

There were, however, 13 boys who were very clear as to the reasons for their emotional “block,” and I was able to identify four specific areas of concern from their responses:

- Fear of humiliation from their peers
- Embarrassment and a lack of confidence
- Fear of and/or discomfort with revealing private thoughts and feelings
- Reluctance to dredge up feelings from their past

Participant 2 explained, “I do not want to show my true emotions and feelings; I think that’s how it is with most boys. I sublimate a lot of my emotions and just reading over it [the piece he selected]… brings them to the surface. It may force me to face my greatest fear, to show how I truly feel and break down this façade I have.” Participant 8 stated, “it is not easy to let emotions run freely; we are always trying to shadow our true emotions and prevent ourselves to be open with one another.” Participant 11 asserted, “drawing back into past emotions can be difficult because it can make me uncomfortable because I feel like my privacy is being compromised.” Lastly, Participant 10 revealed, “I find it hard to draw back on anger … it was just extremely hard because I didn’t want to remember.”
As the project progressed, it became clear from my observations and field notes that the boys were becoming increasingly comfortable working with their emotions. The skilling was assisting the boys in gaining confidence, which spun off into their emotional connection with and responses to the process. This was gratifying for me to witness. The boys’ journal reflections indicated a growing emotional awareness and understanding. Participant 12 stated, “this really challenged me and in the end I concluded real men shouldn’t be afraid to open up,” while Participant 7 noted, “I learnt that I should stop worrying what people think and embarrassing myself… your friends are doing the same therefore there is no reason to be embarrassed.” A compellingly and insightful response came from Participant 2, who revealed that he had been “opened up… to experiences that [he] had subconsciously or possibly consciously chosen to sublimate,” arguing further, “this release of that has emotionally liberated me and made me content with myself.” Participant 21 described the process as “therapeutic.”

As we moved towards the end of the process and the final preparation for the performance of the monologues, the boys became noticeably energised and excited by the prospect of performing. I surmised that it was a consequence of the increase in their levels of confidence, and this proved to be the case. In informal discussion and in their journal reflections, the boys made numerous statements about feeling less anxious and nervous. They became incredibly comfortable with accessing and expressing the emotional and psychological truth of their characters, and engaging with their own felt experience in doing so. Participant 1 noted, “the process is getting much easier… because you could see the emotions and make it believable and I could also see my errors…. I could also tell that it was not fake,” while Participant 2 observed, “this process has been very enlightening and interesting. It has helped me to… grow as a human being. It has made me learn more about myself and connecting with myself.”

It was always the case with this project that I intended to focus on both process and product although admittedly the journey towards the product had consistently been my point of emphasis. I was unprepared, however, for the vast improvement witnessed in the boys’ performances of their monologues. As the end result of the entire process, it was a valuable way for me to establish exactly how much the process had benefitted each boy in terms of using the requisite skills with proficiency and confidence. The videos of each boy’s performance allowed me to confirm this, but it was echoed wholeheartedly in the boys’ journal reflections after they had performed their monologues. In addition, I was struck by the clarity and perception of many responses, where it was highly evident that the boys were employing a far more rigorous and specific analysis of their
own practice. For example, Participant 1 stated, “I feel entirely satisfied with my performance. I was focused, relaxed and in the zone when I performed it, because I did those releasing tension exercises… I created a very believable character and drew the attention of the audience, even though I shouldn’t have had one focal point.” Participant 36 revealed, “I was quite frustrated with myself because I never set a focal point before the performance and so my eyes were all over the place and my head was down which I think affected my vocal quality and was probably very distracting for the audience.”

My sense that the process had been enormously beneficial to each boy in terms of skills and confidence was reinforced by their final journal entries, as well as the visual presentations and November examination responses. These three areas confirmed that all but one boy found the process valuable. Participant 27 noted in his journal, “in all honesty, I believe that I have not learned as much, either about acting or myself, as I would have liked. I did, however, find it a useful process to have in my dramatic arsenal and will use aspects of it to enhance my performances in later exploits.” This single dissenting voice was countered by all of the others. Participant 23, for example, stated, “I think that this process has helped me to identify the emotion of the character better than I could before. It has helped me to portray a believable character and subtext. This process has helped me immensely with my confidence when performing a monologue,” whilst Participant 8 revealed, “I have found this process an immense help…. In the past I had little to no idea on how to go about this process…. It is a skill I will be able to draw on throughout my schooling career and beyond.”

The post-project survey reinforced the above. When drawing comparisons with the pre-project survey, questions 2, 4, 6 and 11 revealed significant shifts in increased confidence levels. It is self-evident that, when a boy’s confidence improves, so too does his emotional life. Simply by giving each boy the necessary skills to improve and enhance confidence is a means to develop a boy emotionally. The critical issue for me, however, was to deliberately infuse the skilling with emotional engagement on every level, in an attempt to establish whether or not the emotional development went further than confidence. I turned again to the final journal entry—the visual presentation and the examination response—and was delighted to find that 12 of the participants had commented directly on this with immense candour. Participant 14 noted, “emotionally it [the process] helped me to unlock and grapple with memories that I would otherwise have left locked up in my memory and never touched,” and Participant 2 revealed, “I learnt that there are many experiences that I have not fully dealt with…. I have learnt how to deal with them and confront them … this is what I enjoyed the most, the connecting with myself and my centre.”
Reinforced by his visual presentation (Fig. 2), one participant was phenomenally articulate when reflecting on the process: “I believe that before this entire process, I was severely lacking in confidence, maturity, self-belief and happiness…. I went through an emotional journey and came out a happier person as I was able to purge myself of past rejection (the inherent feeling of the monologue)…. Lastly, I was happier. I had just come back from exchange from Australia and I feel that this process helped me settle in once again.”

Finally, the focus group allowed for an opportunity to discuss the process and, together with the qualitative data, to interrogate the anomalies as well as explore the reflective component of the project. The boys acknowledged that they had initially over-estimated the extent to which they were able to employ their life experience and feelings to develop a performance of a realistic character. Thus, they were far more pragmatic about these areas once the process had been completed. They were also unanimous in their view that the reflective components were enormously valuable to them in interrogating quite deeply their responses to, and feelings about, the process.

Conclusion

It was quite clear that the boys’ sense of themselves and of one another was enhanced through this project, and I was humbled by their honesty and trust in both their peers and myself. My relationship with each boy has been enhanced and will benefit us all in innumerable ways as we move through their senior years at the College. At St John’s College, we are tasked with “knowing and loving” the boys under our care; I certainly have got to know each boy much better and so am better able to value and honour their individuality. The strategies proved valuable, and both the final product and the boys’ verbalised reactions showed they grew in confidence, ability and perception. More important, however, is the fact that the experience of performing, in some way, enhanced their emotional growth and development.

IMPLICATIONS OF THE STUDY

Engaging deliberately in this research project made me aware of the fact that subconsciously I already used an action research approach in my pedagogy by reflecting informally on, and seeking ways to increase, the effectiveness of my teaching. Now that I have formalised this practice, I will always work within a more conscious action research paradigm.

I will continue to look for ways in which Drama can enhance emotional intelligence. Having now worked through this process formally, I can honestly say that it works, and so I am convinced that there must be many more ways to use Drama to develop boys’ personal realisation and emotional maturity.

I hope that my work in this field will inspire others to engage with processes that enhance boys’ emotional development.
Reflection

“Rewarding” and “empowering” are two words that come to mind when I reflect on this action research project, not just for myself, but the boys as well. I am at my most content as a teacher when I know that the boys are benefitting beyond the confines of the Drama curriculum, and so can honestly state that I have seldom felt as affirmed and satisfied with my practice as I have through doing this project. It was hugely challenging, and at times daunting, but so affirming at the end of the day.

I will always value this experience and hopefully, by sharing my feelings about it with my colleagues, will cause a shift in the way they too think about their teaching and their boys’ learning, no matter what subject they teach.

References
Appendix 1

INITIAL SURVEY RESULTS QUESTIONS 1–6

Questions:
1. I am aware of my strengths and shortcomings when I perform in front of an audience.
2. I am confident about performing in front of an audience.
3. I understand the process of working on a monologue from a play.
4. I am confident about the process of working on a monologue from a play.
5. I understand the process of working on creating a believable character.
6. I am confident about the process of working on creating a believable character.

RESULTS:

Pre-Project: Questions 1–6

INITIAL SURVEY RESULTS QUESTIONS 7–12

Questions:
7. I am able to access and understand the character’s psychological truth.
8. I am able to use my own life experience when portraying a believable character.
9. I am able to use my own feelings to assist me in portraying a believable character.
10. I am comfortable with using my own feelings to assist me in portraying a believable character.
11. I am confident about portraying a believable character in a naturalistic way in front of an audience.
12. I am able to portray the character’s psychological truth convincingly.

RESULTS:

Pre-Project: Questions 7–12
## Appendix 2

### COMPARATIVE TABLE OF SURVEY RESULTS

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Focus on Creativity—A Pedagogical Shift

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Abstract

In 2008, the Melbourne Declaration on Educational Goals for Young Australians (Ministerial Council on Education, Employment, Training and Youth Affairs, MCEETYA) recommended, “Curriculum will be designed to develop successful learners, confident and creative individuals and active and informed citizens” (p. 13). In a society where digital technology challenges teachers to re-think traditional pedagogies in relation to the teaching of boys, the re-designing of how curriculum is delivered could not be timelier.

Within the context of a changing pedagogical landscape, Knox Grammar took advantage of the opportunity to re-design an aspect of the Middle School curriculum. Teachers focused on fostering creativity and chose game-based learning as their platform for delivering course outcomes. The authors believed that this could be achieved through innovative programming and assessment, and realised through teachers who were prepared to listen to the voices of their students.

The researchers embarked on an action research project involving a cross-disciplinary task that required Years 8 and 9 boys to design a low energy, sustainable virtual city using the online gaming programme, Minecraft. The task ran for five school days, 20 minutes per day, and included an online Mathematics, English, Foreign Language and Science challenge each day.
Through observations of the boys as they worked on the various tasks, the authors discovered that the assessment of the 85 designs created by the boys, along with their evaluation reports, was both edifying and informative. The data demonstrated overwhelmingly that the boys became engaged learners through undertaking a task that was authentic and online, and which enabled them to work collaboratively to create original designs.

As the authors attest, the school’s approach to teaching and learning has been profoundly changed by what they have learned. Cross-disciplinary tasks that invite the boys to use technology to foster their creativity and sustain engagement in acts of learning, will be an essential feature of its future K–12 curriculum.

Rationale

An independent boys’ school in Australia, Knox Grammar School has 2000 K–12 local and international students and 197 teaching staff. Within a caring Christian environment, the school is committed to fostering young men of integrity, wisdom, compassion and faith, who hold a sure knowledge of who they are and how they should live. We have developed a strong framework of values to support our students to become valuable, responsible members of the wider community. In educating boys, we seek to develop their character and confidence, and teach them to value commitment. The school actively recognises and reward endeavours that lead to success, encourage innovation, and foster valued School traditions. The curriculum is conceptually grounded in honouring the past to enrich the present and future. Knox is striving to create a learning environment that will foster self-efficacy, responsible citizenship, creativity and innovation.

In the past at Knox, staff and the community equated the achievement of excellent academic results with rigorous testing and a focus on learning the content. Creative learning was considered to be the domain of English, Visual Arts, Music, and Design and Technology. This attitude, whilst still evident, no longer dominates. It is recognised, however, that any change in pedagogy can only be achieved when teachers’ voices are heard, when they feel supported and valued, and when meaningful evidence for a change in teaching and learning is provided. To this end, we believe that the key to ensuring our curriculum prepares the boys for a changing world, where creative and critical thinking and problem-solving skills will be essential capabilities, is through the transformation of programming and assessment, and therefore pedagogy.

It is acknowledged that sustainable and meaningful change in curriculum takes time and commitment from the executive, teachers, students and the community. Hence, this action research project was undertaken to trial our belief that we need to embrace a different approach to learning and teaching; an approach where creative and critical thinking, along with problem solving and risk-taking, are central to our pedagogy. Our research question became, “How can adapting our pedagogy to focus on the creative process, engage boys in risk-taking and critical thinking?”

Literature Review

In recent years, the call for schools to ensure that the focus on creativity in learning and teaching has intensified. The Melbourne Declaration on Educational Goals for Young Australians (MCEETYA, 2008), makes comment that all young Australians should be nurtured to become
creative individuals. It is claimed by some, however, that schools (Robinson 2006) and educators (Malaguzzi 1987) actually “kill creativity.” Advocates of this perspective note that if boys’ creativity is to be fostered, there needs to be a paradigmatic shift in curriculum design and delivery, and the development of a culture that values originality, active learning and invention (Craft, 2005).

Creativity is defined as “any learning which involves understanding and new awareness, which allows the learner to go beyond notional acquisition, and focuses on thinking skills. It is based on learner empowerment and centeredness” (Ferrari, Cachia & Punie, 2009, p. 5). All too often, the notion of creativity is used superficially as a desirable educational aim, but it is rarely analysed or linked specifically with educational programs. This project, therefore, strives to address the need to make meaningful connections between creative learning and curriculum.

Ferrari et. al. (2009) define creativity as new awareness that involves thinking skills. Similarly, the National Advisory Committee on Creative and Cultural Education (NACCCE, 1999) perceive creativity as any activity that enables students to generate something that is original and is valued by the students. They identify five characteristics of creativity: using imagination, a fashioning process, pursuing purpose, being original and judging value. Jeffrey (2005) and Runco (2003) both refer to creativity as active exploration and construction of meaning. In the context of the Melbourne Declaration, however, it is Loveless who provides the most apt definition of creativity as “an essential life skill through which people can develop their potential to use their imagination to express themselves, and make original and valued choices in their lives” (2002, p. 2).

If boys are to develop their creativity (Lassig, 2009; Runco, 2007; Morris, 2006), the learning community must value a culture of originality and innovation, and encourage imagination and risk-taking, Payton (2009). Craft (2005) and Williamson and Payton (2009) further this notion through an assertion that teachers need to be creative practitioners who favour a learner-centred pedagogy in which student-directed learning is privileged. Taylor (1998) suggests an explicit focus on teaching for creativity through stimulating students’ thinking skills, and valuing creative processes and products. Craft (2003) affirms this notion and notes that creative learning involves understanding and new awareness, which allows the learner to go beyond notional acquisition, and focuses on thinking skills.

If creativity is an active exploration and construction of meaning through stimulating the boys’ critical and creative thinking skills and valuing the creative processes and products, then it is important to find ways to achieve this. Although the literature is sparse in relation to how this can be achieved, it supports, albeit inconclusively, game-based learning as a potential strategy for eliciting creative and critical thinking skills. Wastiau, Kearney and Vanderberghe (2009), along with Burke (2007), assert that the use of gaming increases students’ levels of engagement. Furthermore, Barab, Hay, Barnett, and Squire (2001), Shaffer (2006) and Gee (2007) argue that designing virtual worlds through game-based learning intrinsically motivates students and encourages them to be competent, autonomous, and cognitively flexible risk-takers. Thus, integrating tasks into the curriculum that challenge students to respond to a problem through developing a virtual world should help to release the creative potential in boys.

Although the research literature on creativity is growing, research that considers how the curriculum can be shaped to include teaching and learning experiences that integrate elements of creativity is overdue. We felt it it worthwhile, therefore, to explore and evaluate one practical and
innovative approach that can be used as a springboard for eliciting creative responses in future teaching and learning activities.

Methodology

Action research as a methodology is empowering as it fosters active inquiry and continuous improvement. It motivates researchers to acquire new skills, deepen their knowledge and understanding of quality pedagogy through research and action, and improve the level of engagement and learning outcomes of their students (Melrose, 2001, Zeichner, 2001, Creswell, 2003). Our research carried real responsibilities as the action had the potential to instigate transformation in teaching and learning. It had the potential, through innovative teaching and learning, to enable boys to become creative and confident learners.

Participants

The participants were the Year 8 cohort, comprising 254 boys aged between 13 and 14, and a focus group of 24 Year 9 boys. The decision to invite Year 8 and 9 boys as participants was tactical, as none of the boys would be preparing for any major external examination. The focus group was selected to allow the researchers to observe the boys in action on the games-based learning task, and to enable the researchers to have informal and formal conversations with them.

The weakness of using the Year 8 and 9 boys as participants was that many of the boys had previous experience at home with the online design tool, Minecraft. The strength of the research, however, was that this was the first time at Knox that the boys experienced the coalescence of online gaming and assessment.

Action research is recognised as ethical when its methodology is transparent, the research findings are shared, and the research leads to an improvement in practice while protecting the rights of the participants in the research (Melrose, 2001; Zeichner, 2001). Written permission from the parents and the boys was obtained for the Year 8 cohort and the Year 9 focus group. In the case of the participants who were to be videoed, further permission was sought from the parents and the boys. We ensured that we were cognisant of the power relationship between a teacher and a student, and encouraged all boys to be candid. Confidentiality was guaranteed, and boys’ names were coded to ensure anonymity in any dissemination of the research. Whilst the Year 9 boys could opt out of the focus group, the Year 8 cohort involved had to complete the intervention as it was part of the compulsory learning and teaching. Importantly, they could opt out of having any of their data collected.

Action

Christensen, Johnson and Horn (2008), along with Woods (2002), assert that the implementation of student-centred technology has the potential to foster creativity. The choice of platform to develop a sustainable city was based on the boys’ response to a survey, where the greater majority (96%) voted for Minecraft, an online game which enables the players to mine resources and use the materials to build a virtual city. “Online gaming” is defined here as an interactive activity that requires technology and the Internet. As a game, a special environment is created where specific rules govern what the players are able to do.
The first cycle of our action research project was designed to be an innovative step in the transformation of curriculum. In consultation with the boys, the Heads of Department and parents, we developed a cross-disciplinary assessment task for Year 8 that required the boys to form small teams and, using *Minecraft*, design a low energy, virtual city in a time period of five days. Although the boys could use other digital technologies, the preference was for *Minecraft* as it was accessible to all boys, was used by many boys at home, and provided the necessary tools for the boys to create original designs (see Appendix 2). Throughout the week of the task, teams were issued with daily challenges in English, Mathematics, Science and Foreign Languages to ensure the assessment task was cross disciplinary. At the completion of the task, each team presented an evaluation report of their experience. The design of each virtual city was saved on the Knox intranet as further data for us to analyse and evaluate in terms of the boys’ creative and critical thinking.

It should be noted that, in the year prior, we had designed and undertaken a pilot study (Cardno & Piggot-Irvine, 1996) to gauge if we could sustain whole-year level change in learning and teaching via the use of gaming. Prior to this project, none of us had used online gaming, neither as a teaching and learning tool nor as a focus explicitly on creativity. Using online gaming, and in particular *Minecraft*, could be perceived as a seemingly audacious intervention, and we had to challenge our own approaches to teaching and learning, persuade the school community to allow this innovative approach to be instigated, and then design a task that engaged the boys and, importantly, fostered their creative thinking.

**DATA COLLECTION**

According to Golafshani (2003) and Creswell (2003), triangulation of data using multiple methods of quantitative and qualitative data collection, such as classroom observations, questionnaires, interviews and video recordings, will lead to more valid, reliable and rich findings, and increase rigour. McKay and Marshall (2001) also assert that the use of multiple participants and multiple data collection techniques increases the transferability of the action research findings. This was an important consideration to us as researchers. Qualitative data collection included questionnaires, observations, informal discussions, interviews, and student notes and reports, and quantitative data were collected through an online survey tool, the *Values Exchange*. These data were recorded both graphically and in written form.

Data were collected through the *Values Exchange* at the commencement of the intervention and at its completion. The structured questionnaire consisting of eleven questions focussed on the process of developing a virtual world to gauge student opinion as to its relevance, practicality and skill acquisition in terms of the elements of creativity. The participants were asked to consider creativity in curriculum design and class activities (see survey Appendix 1).

The eleven structured questions at the start and close of the task took approximately 15 minutes and were checked by all members of the research team as well as the Year 8 teachers, to ensure that we were not directing students to respond in a certain way, and did not reflect any assumptions the researchers might have about creativity (see Appendix 1).

The design and structure of the survey questions, classroom observations and the video interviews with the focus group participants were guided by four targeted questions on creativity and gaming...
that emerged from our review of the literature: What is creativity? Do current teaching and learning practices invite creativity? Do technology and gaming foster creativity? and, Does working collaboratively on a cross-disciplinary task, encourage risk-taking and creativity?

DATA ANALYSIS

The purpose of the initial questionnaire was to determine the boys’ understanding of creativity and gauge their feelings as to its relevance towards the way they learn. The follow-up questionnaire focused on the actual task of developing the virtual city and whether the task allowed the boys to explore, take risks, be imaginative and develop something that they valued. The survey software enabled the results to be graphed and clarified trends based on categories.

Common themes emerged from the interviews and the questionnaires in relation to the definition of creativity, the connection between risk-taking and creativity, and the role of online gaming in fostering creativity.

Key Findings and Discussion

Creativity is a prime need of a human being and its denial brings about a pervasive state of dissatisfaction and boredom (Bohm & Peat 2000, p. 232).

Beghetto’s research (2005) demonstrates that when schools try to focus on creativity, the attempts are overshadowed by other demands on teachers’ and students’ schedules, and by an insistence that any tasks involving creative learning will take important time away from the subject content that has to be covered. When we first approached the executive and the teachers about our intervention, the support was evident, but tempered by scepticism. Thus, we elected to design an assessment task that reflected the outcomes of the core subjects and involved extensive consultation with teachers, the boys, and their parents. Teachers who remained resistant to our intervention were invited to visit the classrooms during the execution of the task. We were heartened by their responses that expressed approval for the task; they were surprised at the boys’ diligence, independence and enthusiasm. One teacher stated, “what astonished me the most is that they were working on a very challenging task, yet they did not require the support of the teacher.”

The visit to the classrooms revealed that the boys were intently focused on developing their low energy city; very few even lifted their heads as we walked around the room. Their engagement in the learning task was palpable, and discussion in each team was lively, rich and informative. One group explained that they had read the articles on the Virtual Knox site about how the design of low energy buildings in Korea had been influenced by termites that build nests, which remain cool, even in high temperatures. They were then applying what they had learned to their own design. Participant A stated, “our team had access to excellent information on the Virtual Knox site that helped us to develop our designs. We enjoyed the freedom with how we were able to go about the task.” We witnessed learners in every classroom being empowered to create innovative designs informed by their research. Our observations were confirmed by the quality of assessment tasks that were submitted (see student work sample, Appendix 3).

The boys’ first reaction, when informed that they would be using online gaming to complete the assessment task, was one of disbelief. Participant B exclaimed, “we are going to be able to use
Minecraft at school!” The boys embraced the technology with gusto and used it to produce innovative cities. What was evident to us, and our sceptics, was that the participants were excited about the task, and their engagement and enthusiasm did not wane whilst focussed on the task.

The positive reaction to the assessment task can be attributed directly to the use of online gaming. In a survey question posed at the conclusion of the task that asked if a virtual environment such as Minecraft provided a good opportunity to develop skills such as critical thinking and problem solving, the greater majority of boys agreed. Confirming this finding in an interview, Participant C commented that, “the fact that learning was integrated into a game that I like to play during my spare time. It allowed me to really enjoy the task and be really enthusiastic about the work.” Participant D affirmed, “I enjoyed learning about sustainability in an enjoyable format such as through Minecraft. Learning practical solutions to pressing problems, such as the importance of sustainability, were heightened by the use of technology.” Participant E proffered, “through Minecraft we got to learn about sustainability in a fun and engaging format.”

When asked to define creativity and how it could be fostered, some 85 per cent of the boys identified being able to be imaginative, having the freedom to innovate, and being able to produce original work. In the interviews following the completion of the task, Participant F stated, “creativity typically involves problem solving, using your imagination and critical thinking skills. In terms of the actual assessment task there was lots of creativity involved, such as using your imagination to design the sustainable city and critical thinking skills to mine and use the resources to build the city.” Participant G affirmed this view stating, “I enjoyed the building task. It allowed me to express my creativity in a safe and controlled manner in the world of Minecraft. The task showed how resources are used and what different materials do different things. The different tasks helped display creativity in different areas.”

A common theme that emerged from the data was the boys’ enjoyment of the freedom to explore, take risks and be creative within a structured environment. The freedom to work collaboratively or independently, and have access to the necessary information when needed, allowed them to take more risks, and from there, creativity flowed. Participant H noted, “I enjoyed the free-roaming aspect where we were given certain parameters and were allowed to do whatever we wanted to do within those areas to demonstrate our ability.” This sentiment was echoed by Participant I who stated, “the freedom to create a virtual world that is totally your own; to think of ideas and draft them in a sandbox world where you can see the potential viability of your ideas is extraordinary.” Participant H added, “by taking a risk you are looking at things from a different perspective and using your imagination.”

Craft (2005), Runco (2003), and Williamson and Payton (2009) demonstrated that motivation is a powerful activator of creativity. They claim that students learn best when they see the relevance of what they are doing, and when they are intrinsically interested in the task. The project immersed boys in an authentic assessment task connected to a real world problem using a medium of production that they found engaging. The information and research provided prior to the boys commencing the task was current and diverse. Participant K confirmed that the majority of the boys were motivated and engaged: “My teacher observed that we were all actually smiling while we were working. We wanted to keep working after the bell had gone. This was actually a very intrinsically motivating activity.”
The evaluation reports produced by the boys revealed an impressive depth of knowledge and understanding. The table below provides the marks achieved by the boys:

<table>
<thead>
<tr>
<th>Task</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Virtual City Design /20</td>
<td>14.2</td>
<td>3.2</td>
</tr>
<tr>
<td>Evaluation Report /10</td>
<td>6.5</td>
<td>2.1</td>
</tr>
</tbody>
</table>

It is worthwhile noting that, although the cross-disciplinary task did not count towards formal assessment, the greater majority of the teams developed a virtual city and presented a detailed evaluation. Even though they were required to complete a challenging and demanding task, no participant expressed disappointment that the task did not contribute towards their subject assessment marks. Ninety per cent of boys, however, responded in the post-survey that they would like to see Knox make tasks such as this one count towards their summative assessment. Participant L stated enthusiastically, “This was a good alternative to learning about sustainability, in a way students could relate to, and should be done more often, as it gives students a chance to demonstrate their creativity.”

**Conclusion**

In the 21st century, education systems are acknowledging that schools need to cultivate their students’ creativity so they can move into the world with confidence, and make a unique and worthwhile contribution to the global community. This action research project demonstrated that technology, and in particular online gaming with its propensity to motivate and engage the boys and encourage collaborative risk-taking, has the power to foster creative responses to problem solving. This was evident when the boys were immersed in the design of a sustainable city, and in the subsequent analyses of the data. The boys’ enthusiasm was palpable and the designs and reports they generated were inspiring. During the final interviews with the participants, one of the boys stated, with a smile, “Knox has done a very good job introducing something new, unique and creative.”

The action, and the findings, challenged our teaching approaches as well as our design and delivery of curriculum and assessment. It also sharpened our awareness as to how Knox boys can become independent, innovative and creative learners. Despite our earlier trepidation about entering an environment in which we had little experience, we forged ahead with our action. The responses of the boys and the staff were affirming, and encapsulated by Participant A’s statement, “I believe that the assessment task was a step forward in education, and that it has opened up the door to a whole new way of learning in schools.”

**IMPLICATIONS OF THE STUDY**

When we listened to the voices of the participants in our research and heard their recommendations for the ways that technology and online gaming can be used even more effectively to foster creativity, we decided that we will focus the second cycle of action research on how other types of online gaming can be utilised in the classroom. As Participant L asserted, “We need more tasks that use gaming to invite risk-taking if we are to promote creativity as they are inherently linked.” The voice of Participant B reflected our resolution: “I recommend that gaming be incorporated into the curriculum. It would engage more students who do not enjoy traditional approaches to teaching and learning, promote interaction between students and enable the students to find and apply their creativity.”
Reflection

We believe that an innovative curriculum cultivates a culture of learning that values creativity, critical thinking, curiosity, risk taking and rigor. Innovation is creativity with purpose and meaning that brings learning to life in the pursuit of wisdom and knowledge. This action research has taught us that Knox boys should be immersed in tasks that challenge them to be creative and self-regulating. They need to be supported and encouraged to use technology to discover, investigate, communicate, collaborate and create. A curriculum that equips students for the challenging world of the twenty-first century needs to ensure that students are supported in taking increased responsibility for their own learning.

The research and the online gaming task have become the catalysts for transforming our curriculum. Moreover, we have realised that we must listen to the voices of our young men who can teach us so much, not only about how to unleash creativity, but how to design and deliver an innovative and exemplary curriculum.

Acknowledgements

The innovative approach to teaching and learning and our commitment to action research would not have happened without the support, wisdom and trust of our visionary Headmaster, John Weeks.

References


Further Reading

Appendix 1

BASELINE SURVEY QUESTIONS AND RESPONSES

1. We hear the term ‘creativity’ used from time to time. From the options listed, choose the one that you believe best defines this term.

2. Do you agree with this statement – “I am a creative person”?

3. Do you believe the school curriculum provides an environment that enables creativity to be encouraged?
4. Do you agree with this statement – “It is possible to demonstrate creativity in all subjects”?

5. What subject enables you to think most creatively?

6. Do you agree with this statement? “To be creative you have to be intelligent”?

7. Do you agree with this statement “Creative activities in class keeps students interested but it doesn’t help in the learning of content for exams”?
8. How often are your creative thinking skills stimulated in a typical day of school? (assume a 6 period day)

9. Self-regulation occurs when a student takes responsibility for their learning rather than the teacher, and in terms of academic progress, is seen as a key to success. Do you agree with this statement?

10. How often do you play computer games?

11. Do you think computer games could be used in class to improve your creativity skills?
Appendix 2

ASSESSMENT TASK DESIGNING A LOW ENERGY CITY

Rationale
Creativity is defined as active exploration and construction of meaning. This involves using the imagination to devise an original idea that has a purpose and value. Creativity and problem solving are essential skills for the future!

This integrated assessment task is about working with a team to explore, understand and create an original idea in response to a pressing world-wide issue: the need to transform cities into low energy, sustainable places.

The European Environment Agency (EEA) that has been advocating for European countries to move towards creating low energy, sustainable cities for a greener, healthier future, states “The urban environment influences human physical, social and mental wellbeing, therefore, a healthy, supportive environment is indispensable to quality of life in cities.”

When we collaborate together, our collective skills, ideas and knowledge can work synergistically and powerfully, to devise extraordinary solutions.

Your Team’s Task
Your team’s mission is to design a low energy, sustainable city that has been informed by research. You can use an online gaming program such as Minecraft where we have already allocated a space for your city to be constructed, or another program of your team’s choice, such as: a computer animated drawing program like Google Sketch-up or you can simply sketch and label the design or even build a city out of Lego or cardboard.

When you have created the city, the team has to write a report that summarises the findings of your research and the factors that influenced the design of your city. It must include a description of the aspects of your city that make it low energy. A Knox Virtual Site has been created for you that houses information and ideas about low energy cities. Your team will have time allocated for research and the generation of original ideas before designing the low energy city.

The teams of three to four boys will be formed in your Language classes. Each team member must be allocated a role. You will be surveyed prior to starting the task regarding your understanding of creativity.
During week 7 and Monday and Tuesday of week 8, your team will stay together for Foreign Language, English, Science and Mathematics classes. You will also be required to complete a range of challenges during the week that attract bonus points.

*Minecraft* Users

If you are using *Minecraft*, you will be designated an area that is already cleared, and provided with tools and a certain amount of material. If you were planning a city anywhere in the world today you would be restricted by the spaces you could use so we are emulating reality.

Our *KNOXcraft* environment has been developed by Knox staff and sits on one of the school’s computers. It is secure and cannot be accessed by anyone without permission from an administrator. It will only be available during specific times of the school day. In order to access the *KNOXcraft* virtual environment, students must have a legitimate version of *Minecraft* from Minecraft.net.

The environment will be monitored and administrators have the ability to restrict access to any individual. The *KNOXcraft* environment has been set to ‘peaceful’ mode (no Mobs), to enable students to work in a positive and constructive manner.

*Your team will be assessed on how they:*

- Demonstrate evidence and application of research.
- Synthesise and apply the knowledge and skills of your KLAs.
- Communicate creative ideas and understanding through the design of a low energy, sustainable city and a 500-word report.
- Work collaboratively as a team to create a low energy city.
## Outcomes to be Assessed

### English

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<table>
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<tr>
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<tbody>
<tr>
<td>3</td>
<td>A student responds to and composes texts in different technologies.</td>
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<tr>
<td>11</td>
<td>A student uses, reflects on and assesses individual and collaborative skills for learning.</td>
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### Mathematics

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<tbody>
<tr>
<td>WMS4.5</td>
<td>Working Mathematically: Links mathematical ideas and makes connections with, and generalisations about, existing knowledge and understanding in relation to Stage 4 content.</td>
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### Science

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<tr>
<td>4.4</td>
<td>Identifies choices made by people with regard to scientific developments.</td>
</tr>
<tr>
<td>4.16</td>
<td>Accesses information from identified secondary sources.</td>
</tr>
<tr>
<td>4.18</td>
<td>With guidance, presents information to an audience to achieve a particular purpose.</td>
</tr>
<tr>
<td>4.26</td>
<td>A student recognises the role of science in providing information about issues being considered and in increasing understanding of the world around them.</td>
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### Geography

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<tr>
<td>4.5</td>
<td>Demonstrates a sense of place about global environments.</td>
</tr>
<tr>
<td>4.8</td>
<td>Describes the interrelationships between people and environments.</td>
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<tr>
<td>4.10</td>
<td>Explains how geographical knowledge, understanding and skills combine with knowledge of civics to contribute to informed citizenship.</td>
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### Technology

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<tr>
<td>4.1.2</td>
<td>Describes factors influencing design in the areas of Built environments, Products and Information and Communications.</td>
</tr>
<tr>
<td>4.2.1</td>
<td>Generates and communicates creative design ideas and solutions.</td>
</tr>
<tr>
<td>4.4.1</td>
<td>Explains the impact of innovation and emerging technologies on society and the environment.</td>
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<tr>
<td>4.6.1</td>
<td>Applies appropriate evaluation techniques throughout each design project.</td>
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<tr>
<td>4.6.2</td>
<td>Identifies and explains ethical, social, environmental and sustainability considerations related to design projects.</td>
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### Languages

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<tbody>
<tr>
<td>4.UL</td>
<td>4 uses available resources to access structures and vocabulary to build a message.</td>
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Timeline

<table>
<thead>
<tr>
<th>Day</th>
<th>Task</th>
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</thead>
</table>
<pre><code>        | ■ Decide upon the design of an environmentally sustainable city and what innovations you will include in the design, such as solar panels, water recycling, water harvesting, use of kinetic energy, etc. |
        | ■ Decide on the method to be used for the development of the city. E.g. Minecraft.|
        | ■ Allocate roles in the team. I.e. Creative designer, developer, report writer, researcher. |
</code></pre>
<p>| Tuesday   | ■ Begin planning and designing the city. |
| ■ Do the Mathematic Challenge. |
| Wednesday | ■ Continue developing the city. |
| Thursday  | ■ Continue developing the city. |
| ■ Do the Science Challenge. |
| ■ Do the Language challenge. |
| Friday    | ■ Continue developing the city. |
| ■ Do the English challenge. |
| Monday &amp; Tuesday | ■ Continue developing the city. |
| Wednesday | ■ Complete the city and the report. |
| ■ Submit the report via email or paper copy by 9:00am. |</p>

Report

The report must address the following questions and use the format provided.

Team Members:

1. Why do we need to design low energy, sustainable cities? (Provide at least five reasons that are grounded in research.)

2. What the main factors that influenced the design of your low-energy, sustainable city? (Refer to at least four factors)

3. Describe the main design features of your low-energy, sustainable city. You could refer to the use of building materials, placement of buildings, power sources, such as solar panels. (300 words minimum)
<table>
<thead>
<tr>
<th>Performance Descriptor</th>
<th>Marking Guidelines</th>
</tr>
</thead>
</table>
| Perceptive Skillful    | ■ Evidence of perceptive application of research.  
                        | ■ Skilful synthesis of the knowledge and skills of your KLAs evident in the tasks.  
                        | ■ Communicate skilfully creative ideas through the design of a low energy, sustainable city.  
                        | ■ Communicate perceptively understanding through a 500-word report. |
| Thoughtful Effective   | ■ Evidence of thoughtful application of research.  
                        | ■ Effective synthesis of the knowledge and skills of your KLAs evident in the tasks.  
                        | ■ Communicate effectively creative ideas through the design of a low energy, sustainable city.  
                        | ■ Communicate thoughtfully understanding through a 500-word report. |
| Sound                  | ■ Evidence of sound application of research.  
                        | ■ Sound knowledge and skills of your KLAs evident in the tasks.  
                        | ■ Communicate soundly creative ideas through the design of a low energy, sustainable city.  
                        | ■ Communicate soundly understanding through a 500-word report. |
| Working Towards        | ■ Limited application of research.  
                        | ■ Limited knowledge and skills of your KLAs evident in the tasks.  
                        | ■ Limited creative ideas evident in the design of a low energy, sustainable city.  
                        | ■ Limited description of design in a report. |
| Not Demonstrated       | ■ Little or no attempt to engage with the demands of the task. |
STUDENT SAMPLE – REPORT AND DESIGNS

Problem Situation: [Question 1]

The European Environment Agency (EEA) that has been advocating for European countries to move towards creating low energy, sustainable cities for a greener, healthier future, states ‘The urban environment influences human physical, social and mental well-being, therefore, a healthy, supportive environment is indispensable to quality of life in cities’.

The need for sustainable cities has increased due to Climate change, increased Pollution, unsustainable Population growth, Urban sprawl, a Lack of Resources and an increased and unsupportive Demand of Resources. The rapid climate change that has occurred over the past 100 years has called for the need of sustainable cities. Due to increased pollution and co2 emitted into the atmosphere, temperatures have risen and environments are being destroyed. The devastating effects of Climate change such as sea level rise and pollution have made governments revise the way the harvest and use energy.

Because of rapid growth, cities have become polluted due to overflow in waste management, lack of respect for the environment and increased mass consumerism. Cheap materials that are often harmful to the environment are used as an inexpensive alternative in largely distributed products.

Population has drastically increased leading to the demand on resources rising at an exponential and unsupportive rate. More pressure is being put on cities in order to cater for the increased demand for food, electricity, water, waste management and resources. The unsustainable growth is leading to a drop in quality of life and an increasingly harmful effect on the environment. Population has grown 15.31% in the past decade while production of food inside Australia has only grown 3%; the unsustainable growth is putting an overwhelming demand on resources and
the environment as manufacturers are forced to use cheap packaging and methods to supply the large demand for their products.

Urbanisation and unsustainable population growth have increased the demand for sustainable cities that can independently support themselves on matters of food, energy, waste management and water treatment.

**Brief:**
Your team’s mission is to design a low energy, sustainable city that has been informed by research. You can use an online gaming program such as Minecraft where we have already allocated a space for your city to be constructed, or another program of your team’s choice, such as: a computer animated drawing program like Google Sketch-up or you can simply sketch and label the design or even build a city out of Lego or cardboard.

When you have created the city, the team has to write a report that summarises the findings of your research and the factors that influenced the design of your city. It must include a description of the aspects of your city that make it low energy.

**Limitations: [Question 2]**

- **Time period: 18th of Nov to the 30th of Nov (12 Days)**
  We only had a certain amount of time to create the city on different mediums. This limited the time that we could have to create our design, which meant we had to simplify the design of the city so that it could be completed in the time frame.

- **Materials/Resources:** Wood, Minecraft, sketch up, internet, library, work shed tools, camera
  We only had certain materials to work with which also influenced the design of the city. Also the workability of some of these materials also affected the design as for some cases with the wood we could not get it into the desired shape.

- **Minecraft Space** (mine for resources and size of world)
  Since we were building on our own single player world we had unlimited resources and space to build on. This meant we could create our design fully having free rein on all the resources that we needed.

- **Money (buying material)**
  We had a certain budget to stick to which limited the amount of resources that could be purchased. This impacted our design because we had to alter it so that the full thing could be conveyed by the available budget allocated.
Type of City (Topography, Coastal, accessibility to resources (near a lake or mine)). We were making models meaning we could choose what type of city we wanted to build. We chose a Coastal city because it relates to Australia and also because coastal cities often have ready access to resources (i.e. Water, Ports, Large Commercial and Industrial Areas, Complex Transportation Systems, etc.)

Criteria for Success

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Description</th>
<th>Judgement of Success</th>
</tr>
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<tbody>
<tr>
<td>Energy Consumption Reduction</td>
<td>The amount of energy an average household requires is reduced due to education about saving energy, energy saving practices and a change in how the energy is used (i.e. Turn off lights, introduce low energy machines).</td>
<td>Any reduction in energy consumption levels would reflect a change in practices, machine efficiency or respect for energy use (turn off the lights).</td>
</tr>
<tr>
<td>Reducing Water Usage</td>
<td>The amount of water an average household requires is reduced due to education about saving water, water saving practices and a change is how the water is used (i.e. Water Tanks, Shower times, Efficient water machines).</td>
<td>Any reduction in water consumption levels would reflect a change in practices, machine efficiency or respect for energy use (Shower times).</td>
</tr>
<tr>
<td>Waste Reduction</td>
<td>The amount of landfill waste an average household produces is reduced due to waste management practices and methods (i.e. Recycling, Brown water management).</td>
<td>Any reduction in the amount of landfill waste produced by the average household would reflect a change in waste management practices (i.e. Recycling – non-landfill waste).</td>
</tr>
<tr>
<td>Uses Renewable Sources of Energy</td>
<td>The amount of Renewable and clean energy an average household uses increases due to education, change in energy source, change in practices and change in equipment (i.e. Solar Panels, Wind Turbines, turn off lights).</td>
<td>Any increase in the reliability of renewable and clean energy would reflect a change in practices and energy methods.</td>
</tr>
<tr>
<td>Reduces Demand for Un-green Building Materials</td>
<td>The amount of new building materials being made decreasing and the amount of clean recycled building materials.</td>
<td>Any increase in recycled and green materials would reflect a reduction in demand for environmentally harmful building materials thus meaning the city is becoming more environmentally friendly and sustainable.</td>
</tr>
</tbody>
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RESEARCH

Plan of Attack

The Three Spheres of Sustainability

- Environmental
  - Waste Management (Suborbital Gland of a Penguin, Sewage bricks, sand filtration)
  - Renewable Power Sources (Solar Panels, Solar Ponds, Wind Turbines, Osmosis, Water Tanks)
  - Resource Use (Recycling – Sewage Bricks, Grey water for Osmosis Reactant, Waste recycling in manufacturing)
  - Pollution Prevention (Recycling, Environment/Climate Change Awareness programs)

- Social
  - Standard of Living (Sustainable growth awareness, provided green transport, tax incentives)
  - Education (Sustainable Awareness Campaigns)
  - Community (Free green transport – maglev, green bus)
  - Equal Opportunity (tax incentives, green energy subsidising)

- Economic
  - Profit (Subsidising means little cost to convert to clean green methods)
  - Cost Savings (tax Incentives, Government subsidises)
Social-Environmental

- Natural Resources Stewardship (Equal Distribution of energy production across all renewable energy sectors allowing weight to be spread, green transportation alternatives are broad giving commuters many alternatives and also spreading the weight)

Environmental-Economic

- Incentives and Subsidises (Tax Incentives will be given to green households and companies and the conversion from non-renewable to renewable energy practices will be subsidised by the government)

Economic-Social

- Fair Workers Rights (any possible company losses will be subsidised and all workers jobs will have full security during transition phase from unsustainable to environmentally friendly)
Main Points Researched and Applied to EvoCity: [Question 3]

Commercial
- Deep Lake Water Cooling

Industrial
- Vertical Farms

Residential
- High Density
  - Sewage Bricks
  - Water Tanks
  - Deep Lake Water Cooling
- Low Density
  - Sewage Bricks
  - Water Tanks
  - Plants and Animals

Power
- Solar Panels
- Solar Ponds
- Wind turbines
- Osmosis
- Methane Burning

Transport
- Maglev
- Green Buses
- Carpooling

Waste Management
- Sewage Bricks
- Suborbital Glands of a Penguin
- Methane Burning
- Recycling
Deep Lake Water Cooling Proposal Plan

Deep Lake Water Cooling is a clean way to air-condition office buildings. Cool water is pumped from the bottom of the lake (or in the model, water tanks from the top of the building) and run through the whole building. When it moves around it generates hydroelectricity and helps power office lights. The system is currently in use in Canada.

Traditional methods of Deep Lake Water Cooling require the office building to be located near water and have the water pumped up through the building meaning energy would be needed. In order to solve this problem, we moved the water source higher, our model clearly shows our water source being from water tanks up on the top meaning no energy will be needed in order to pump the water around and cool the building. Since the water source is above the building we can use hydroelectric to generate electricity when it flows down, and use the lifts which are powered by solar panels as a way to bring the water up therefore no outsourced energy is needed for this project.

Statistical Data backs up the proposed plan to cool the buildings as due to our model, no outsourced energy is needed. A building in Toronto uses a less efficient method that requires outsourced energy yet still generates 207 MW of cooling and has the capacity to cool 3,200,000 square metres of office space. Below is the implemented intended Minecraft model for a sample commercial building.
Maglev Proposal Plan

In any city, getting around is a major issue when large numbers of people are concentrated. EvoCity finds a solution to this through several means.

The main transport system functioning in EvoCity is a network of Maglev trains. This is a system that uses magnetic levitation to suspend, guide and propel vehicles instead of using mechanical methods such as axles, bearings or wheels. The Maglev system levitates a train along a guide rail and creates both thrust and lift suspending it a few inches above the surface. Because of this, friction is dramatically reduced and acceleration and deceleration can surpass other methods of transport. The power needed to levitate the train is not a very large percentage of the overall energy consumption, the majority being used to overcome air resistance. Compared to other transports, the Maglev is both more efficient and more environmentally friendly. The power for the Maglev comes from solar panels on its roof and small wind turbines that are not enough to dramatically affect its speed but enough to generate energy for powering the train. Depending on need, the train can either power or draw electricity from the electricity grid. Maglev trains are green alternatives to transport and emit no pollutants. The train is driven by electromagnets and because of no friction between the rails or the “wheels” then the train can travel up to speeds of 581km/hr. The trains are very quiet and are very popular in Europe and Asia.

Electromagnetic—Electromagnets on the cars lift the cars

In our city model, green transport is completely free (money is raised from carbon tax and non-green tax). Maglevs are cheap because the low cost to maintain them, run them and build them. The trains are run by electromagnets, a process in which a metal is energised and made to repel/attract another metal and it emits no pollutants.

Below is the proposed maglev model on both Minecraft and a real 3d scale model.
Waste Management Proposal Plan

95% of Australians are linked up to some kind of sewage treatment plant, meaning 21,212,360 peoples’ waste is stored and treated in large centres. New technologies are arising to help make use of this large collection of waste, one of these is sewage blocks. Sewage is incinerated, and then mixed with vegetable oil to create a brick that can be used as a building structure. The bricks do not smell and are currently in use across Leeds and Yorkshire in the UK. 30 tons of incinerated waste can make 30,000 bricks.

Waste, sewage and rubbish are a major obstacle to creating a city, as effective removal is often complicated and expensive. EvoCity reduces the amount of waste emitted through several means. For solid rubbish, EvoCity's bin system is divided into several sections: plastics, metals, glass and other recyclables; green waste and general rubbish. General rubbish is collected and then taken to landfills where the rubbish is compacted. This is then taken to special collectors which collect the methane gas that the rubbish emits in order to generate power. After the methane emissions have been collected, the rubbish is then burnt to create ash. This ash is then combined with a vegetable oil-based binder to create bricks. The carbon dioxide produced is offset by the surrounding plant plantation which provides oil necessary for brick construction. The green waste is used as compost in vertical farms and other plantations while the plastics, metals, glasses and other recyclables are separated and recycled.

For sewage and liquid waste the system is relatively similar. A city-wide sewer system, connected to every building in EvoCity, allows waste to be delivered to sewage treatment plant, which then removes all the moisture from the sewage. This moisture is then treated with a system similar to the sub-orbital gland of a penguin which takes the waste water and from it produces fresh water which can be re-used by the city. The remaining dry solid sewage is then also burned to create ash, which is, again similarly to the solid rubbish, combined with a vegetable-oil based binder to create bricks and ecologically friendly concrete.

The suborbital gland of the penguin is a natural filter that can be implemented artificially. It is extremely effective at extracting fresh/clean water from polluted water, removing all the pollutants in sludgy goo. This is feasible as a filter because of the works of Aquaporin who have already designed membranes based on the natural osmosis of plants.
Solar Panel and Wind Turbine Proposal Plan

One main consideration in any city is power. In the modern age, electricity is a must, and producing it a major concern to any urban planner.

To produce energy, EvoCity has offshore wind turbines. These turbines anchored in the water, and all the energy they generate will be sent to a central hub. The energy in the hub is then offloaded into the grid for further use. This model has already been used by many European countries, and in the Baltic Sea there can be found several offshore wind farms. One successful example of this is the Middelgrundel wind farm in Denmark, just outside Copenhagen. The 20 turbines together produce 40 megawatts of power, or about 4% of Denmark's energy needs. Solar panels are also installed on the 'islands' that the turbines are on and also on the 'stalk' of the turbine itself. They have been strategically placed to receive the most wind and sun as well as not interrupting bird flight paths or areas for swimming.

To avoid using greenhouse gas-emitting oil or gas for heating, EvoCity has several solar ponds. These ponds are filled with salt water, which allows the ponds to avoid having convection currents. As the water does not move, the heat builds up, and can be piped to residences in the city for hot water and other heating-related uses.

Solar energy is the utilization of radiant energy from the Sun. Solar energy is one form of renewable energy that is environmentally friendly and does not use fossil fuels or contribute to harmful carbon emissions. Solar is the fastest growing renewable energy source. When radiant energy from the Sun (photons) hits a solar panel, a semiconductor (often silicon) releases electrons into an existing wire and an electric current occurs. Solar energy accounts for 2.1% of total renewable energy in Australia yet goals of 20% reliability on solar have been set for 2020.

Wind Turbines harness the power of the wind and use it to power turbines that create energy. Wind energy is completely clean and green and often has solar panels on the turbine's wings to help power on-board computers. By 2050 it is estimated that a third of the world's power will come from wind turbines.

Vertical Farms Proposal Plan

In order to promote self-sufficiency within EvoCity we decided to use the idea of vertical farms. Vertical farms are skyscrapers where each level can sustain life from plants to animals. They have specific climates which are controlled by using hydroponics and aeroponics technology. The buildings can be made airtight so that they are not tainted by pollution from outside, but can be opened to help clear the atmosphere. These farms provide both sources of food and work as well as helping the environment significantly.
The food provided by these farms is used directly by the city, reducing the needs for importing goods. Because the amount of transportation is decreased, so too the amount pollution produced is decreased. The farms have solar panels and wind turbines which will provide its energy requirements such as lighting or climate, however if it needs more it can draw energy from the electricity grid. Likewise, if there is an excess of energy, it can offload some into the grid. Like all tall buildings in the city it has a hydroelectricity system: water is dropped down pipes to the ground. The water spins turbines, generating energy. The large number of plants in the farm helps clean the atmosphere by absorbing carbon dioxide and producing oxygen. The dung provided by the animals is used as fertiliser for the plants so that the need for chemicals is decreased. Grey water produced by the sewage filtration system is used as well so the impact to the environment will be reduced. Another aspect that will be incorporated are methane collectors on animals such as cows which produce large amounts of methane, this methane will be collected, sent to methane power generators and used as power. Treadmills will also be used for a number of benefits. Research has shown that when animals such as cows or goats exercise while eating they produce better milk. When moving on these treadmills energy will also be generated. There are also other benefits from these vertical farms such as providing job opportunities and reducing urban sprawl because of the usage of space will be reduced.

Vertical Farms are a way of producing a lot of plant and animal life in a tight area. The idea of stacking farmland on top of itself and creating a glasshouse skyscraper has existed since the 1950’s yet has only been implemented in the past decade. Water is collected in water tanks up the top and light is provided naturally through windows during the day and stored energy during the night. Each ecosystem can be set to a certain humidity and temperature to provide an ideal growing space for plants and animals.

Carpooling Proposal Plan

Under the new green EvoCity revised plan, subsidises will be in place for smartphones. Smartphones will enable civilians to monitor energy use and have access to a City App Called “EvoCity Carpool”. Evocity aims to keep up in the latest technology and by providing all its civilians with the latest tools; it gives them access to thousands of resources and lots of information. Carpool is an easy system, an eye for an eye and also a way to generate income for the government. Since private transport will always be a preferred option for commuters, EvoCity government has decided to save fuel and let people turn their private transport into a semi-public transport system. Everyone is issued with 10 initial “trips” in which the input their destination and anyone going that way who is willing to share their car will pick them up. The commuter loses 1 of his 10 free trips and the Driver gains 1 in which he can use later to trade in for cash. Commuters can buy “trips” which further enables the drivers to earn giving them an incentive to share their car.

With this incentive for people to open up their cars, the amount of carbon emissions per capita is reduced because more people are getting to their destination on the same tank. The buying and selling of “trips” is also in line with the buying and selling of “carbon credits” in which companies trade emission limits under the “emission trading scheme”, a scheme which was put forward by the Australia Government.
Of course, all trips would be taxed and would go towards providing more reliable green public transport like the proposed Maglev or green buses.

This method of travelling will also appeal to tourists who would like to get to know the local people and better know what they should see in their visit to EvoCity. All trips are logged so lost items can be traced and chat is available between commuter (hitchhiker) and the driver meaning they can communicate where they should be picked up and also details about the car so picking up the person isn’t too difficult.

Other incentives lie in carpool only lanes enabling a fast-track to the destination because of the mere fact that the transport is shared.

Residential Proposal Plan

Low Density

The first step in creating a green city is to provide a place for residents to live. This can be done in a number of ways, such as using sustainable building materials, collecting and using water from rainwater tanks and using ecologically-friendly insulation, among other things.

Using sustainable building materials goes a long way to creating a green house. For example, our low-density housing model uses a type of block in its construction that is created using sewage and landfill rubbish. For these blocks, sewage and/or garbage are incinerated, creating ash. This ash is then mixed with vegetable oil to create the blocks. Despite being created from sewage and rubbish, the blocks have no smell. A chemical process changes the oil to a solid binder that bonds the particles. Better yet, despite the ash being created by burning material, the plants needed to get the oil absorb more Carbon Dioxide than the process of burning emits. As a result, the blocks are carbon negative. The binder stores carbon dioxide and decreases the amount of material that would go to a landfill. Producing the blocks and bricks uses no water and creates no waste.

Houses generally use excessive energy attempting to cool and heat the house to a comfortable temperature. EvoCity reduces this need by using materials such as recycled cellulose fibre, an ecologically sustainable and recyclable material that is very effective at insulation. In addition, instead of tiling, eco-concrete is used, which also acts as an insulating material. The concrete, while having the same benefits as normal concrete, has none of the drawbacks, being created from ash from burned sewage and rubbish. Again, the carbon emitted by the burning of the material is offset by the oil used to bind the ash.

In the modern age of electricity, power is a necessity in any home. The average household in Australia today uses 18 kilowatts of power daily. However, electricity generally indirectly emits greenhouse gasses by absorbing energy from the power grid, which is generally in most countries powered by coal or other dirty fuels. To combat this, our house generates most of its own power. It does this through solar panels. In order to receive maximum sunlight, the house has solar panels on the roof, oriented towards the north, south, east and west, as well as on the flat section of the roof. By arranging the solar panels this way, they receive the maximum sunlight at all times of the day.
High Density

In order to make the high density residential buildings green, various technologies have been integrated. Firstly, water tanks are installed on the roofs of the apartment blocks in order to reduce dependency on the water system. As the water runs down pipes into the apartments they run through small hydroelectric generators in the pipes, generating electricity for the building. In order to generate energy and reduce dependency on the electricity grid, solar panels are installed at an angle on the sides of the building, orientated to the east-west to collect energy. Eco Concrete is substituted for traditional tiling and will act as floor insulation, collecting and storing heat. This is both environmentally friendly and acts as an efficient insulator. Each floor is layered with recycled cellulose fibre, which also acts as insulation and has minimal impact on the environment. In high density residential areas the buildings have been made ecologically sustainable with renewable sources of energy and insulated with recycled cellulose fibre, an eco-friendly material to prevent the loss of heat.

IDEAS
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