SABBATICAL REPORT

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WAIMEA COLLEGE

Sabbatical period: Term 2 2018

Contents

Focus

The focus of this sabbatical has been:

A curriculum and pedagogy focussed investigation including strategies for:
1. Supporting improvements in NCEA achievement with endorsements for Merit and Excellence;
2. Closing the gender and ethnicity gap in academic achievement;
3. Investigating structures for school curriculum self-review that sustains innovation, remains modern, relevant and community focussed.

Acknowledgements

After 18 years in the secondary sector and after nearly 10 years of principalship, I have very much appreciated and benefited from this opportunity for a period of research, reflection and refreshment. This is rare in our profession and has been thoroughly revitalising.

This sabbatical has also been very timely in terms of having the opportunity and headspace to reflect on some of the significant challenges facing Waimea College at present.

This sabbatical has only been made possible by the generosity and support of others, who I would like to acknowledge and thank:

- The Board of Trustees of Waimea College for their support with my application.
- The Associate Principal of Waimea College, Graeme Smith who took up the role of Acting Principal in my absence.
- The wider-Waimea College Senior Leadership Team for their willingness to pick up additional responsibilities in my absence.
- The funding and commitment from the Ministry of Education to support the Principals' Sabbatical Scheme.
- The Principals and Senior Leaders and Teachers across 15 schools in New Zealand, Singapore, Thailand and Japan that generously committed the time to meet with me to discuss my sabbatical focus area and to show me their environments and practices.

    Important Note – It is a real privilege to be welcomed into other schools for meaningful, and at times sensitive and confidential discussions about what is working well and what is not. In exchange for this I have agreed not to identify schools or individuals in this public document, but rather to synthesize and summarise the findings.

Executive Summary

1. There is a huge amount of high quality and easily accessible research that is available to support Principals and Teachers in reducing patterns of inequity and improving outcomes for students.

2. New Zealand is seen by many countries as a leader in this research.

3. Professor John Hattie's (2009) synthesis of over 800 meta-analyses related to student achievement definitively quantifies the effectiveness (effect-size) of over 140 000 different interventions.

   Next Steps: Having read this research it is clear that this is a fantastic resource for Principals and other school leaders as it helps inform the likely effectiveness of our decision making and resource allocation. I have purchased several copies of this publication for the school leadership team and the Specialist Classroom Teacher with the intention of widening the focus of effect size-quantified decision making.

4. In an updated publication in 2012, Hattie further builds on the usefulness of his earlier research by providing a tool that summarizes what is known about the factors and interventions that influence students' academic achievement around the world. Teachers and school leaders can easily apply this knowledge base to their own school development and classroom settings.

   Next Steps: I look forward to reviewing the findings of this publication with our Senior Leadership team and key others including our Curriculum Leader, our Priority Learner Leader, and Specialist Classroom Teacher with the intention of introducing this content to the teaching staff in a palatable and engaging way.

5. The publications produced by the Education Review Office are also high quality and easily accessible. They cover a range of topics. The publications focused around student achievement were informative and useful.

   Next Steps: I have updated our school charter goals to include several strategies contained in the various ERO best practice publications. In particular the "Improving Student Achievement through Targeted Actions" (2015) resource was very well aligned with my sabbatical focus and provided a number of practical strategies.

6. School Visits: In addition to the professional readings outlined above, the opportunity to visit other secondary schools in New Zealand, Singapore, Thailand, Japan and New Zealand was useful and provided outstanding Professional Development.

Next Steps: During these visits I took extensive notes and, photographs (where permitted) documenting strategies and practices of interest and potential value to share with colleagues at Waimea College. I look forward to debriefing with colleagues at Waimea College regarding these strategies.

Purpose, Background and Rationale

Waimea College is a Decile 8 co-educational Secondary School with a roll of 1600 students located in Richmond, Nelson.

The levels of academic achievement at Waimea College are generally very pleasing with NCEA results that are consistently above National Averages and generally above or broadly consistent with Decile 8 averages across most metrics.

Two areas where Waimea College academic achievement levels are deficient include the NCEA statistics with endorsements for Merit or Excellence and the gap in the achievement levels for male and female students and students of different ethnicities. Female student achievement rates at Waimea College are currently above Decile 8 averages but males are currently below Decile 8 averages.

In addition to the desire to explore opportunities to reduce the gender and ethnicity gap between our learners and to grow the level of NCEA endorsements, Waimea College is also in the process of undertaking comprehensive curriculum and timetable changes. As part of this sabbatical I was interested to investigate how other schools undertake curriculum and timetable self-review that sustains innovation, remains modern, relevant and community focussed.

Methodology & Activities

The methodology that I followed for this sabbatical focus included:

1. **Visiting Schools: Visiting secondary schools both in New Zealand and overseas.**

    During the course of my sabbatical I was privileged to visit 15 schools across New Zealand, Singapore, Thailand and Japan.

    School visits were mostly based around where I had professional contacts. Specifically, I was keen to visit:

    a. **New Zealand Schools:** in particular, New Zealand Secondary Schools of similar size and demographics to Waimea College so that I could see how these schools managed similar challenges regarding student outcomes and curriculum development.

b. **Schools in Singapore:** Singapore has been an area of professional interest for a number of years given its consistently high ranking in the triennial PISA rankings in assessments for Science, Reading and Mathematics. The Organisation for Economic Cooperation and Development (OECD) document "PISA 2015 Results in Focus" (OECD 2018), shows that Singapore is the top ranked country for Science (PISA score of 556 compared with the mean of 493), the top-ranked country for Reading (PISA score of 535 compared with the mean of 493) and the top-ranked country for Mathematics (PISA score of 564 compared with the mean of 490). The document further explains that a staggering 39.1% of students from Singapore were top performers (calculated as having a mean performance score above the OECD average) and only 4.8% of students from Singapore were classified as being low achievers (calculated as having a mean performance score below the OECD average for all three subjects).

I was naturally very interested to visit several Secondary Schools in Singapore to investigate the curriculum and teaching practice that sits behind these results.

c. **Schools in Japan:** Japan is currently undergoing a significant education reform (Clavel, T. 2017) & (Japanese education reforms to further prepare students for globalised world (2015, March 27).

A government education ministry panel has recently made a number of recommendations including raising the global status of universities, improving English competency among Teachers and Students, a focus on teaching morals, increasing the flow of international students both in and out of Japan, reforming university entrance procedures and providing more of an emphasis on individual student instruction.

I have visited Japan several times but have never had the opportunity to explore how Japan is responding to these education reforms and what this looks like.

d. **Schools in Thailand:** A number of school visits took place in Thailand through personal connections and professional interest rather than for any specific reason. It is always interesting and useful professional learning and development to visit other schools and to be exposed to alternative approaches to education.

My approach when selecting schools to visit was to make initial contact via email and then with a follow up phone call to the Principal to arrange the visits.

A few weeks prior to my visit I sent a brief email to the Principal outlining my sabbatical focus and providing some reference material about Waimea College so that the people I was visiting had some background information about my focus area and the environment that I was coming from. I am pleased that I took the time to make contact and to provide this

information because it helped refine what I wanted to observe and discuss and it made my visits more purposeful.

Also in advance of each visit I invested time researching background information about the school I was visiting, its culture and community. This information was gathered from a range of sources including the school's website and from conversations with professional contacts who knew the school.

I spent approximately one day in each of the schools and during this time met with the Principal in most cases (or their delegate), other staff members and students. I toured the facilities at each school and spent time observing and discussing areas pertaining to my sabbatical focus as well as other un-related areas of interest or contrast (of which there were many!).

At the commencement of each visit I requested permission to take photographs for my future reference. Nearly all schools I visited had strict protocols around the use of photographs and photographing students and/or staff so I agreed not to publish any photographs in this report.

2. **Research: Identifying and reading current educational research and best practice both from New Zealand and overseas about the areas identified above.**

After returning to New Zealand at the conclusion of the school visits I enjoyed the opportunity for some uninterrupted time to read, reflect on, and make notes about a number of the Education Review Office publications. While there are numerous ERO publications on their portal I selected publications specifically related to my sabbatical theme i.e. reports relating to improving student outcomes, reducing gender and ethnic inequity and those with a Curriculum focus.

Specific reports that I found very useful and high quality include:
What Drives Learning in the Senior Secondary School (2018)
Raising Student Achievement Through Targeted Actions (2015)
Leading Innovative Learning in New Zealand Schools (2018)
Effective Internal Evaluation for improvement (2016)
School Leadership that Works (2016)

3. **Reflection & Planning**
In addition to the above, I was able to enjoy the opportunity to think reflectively about strategies for supporting improvements in NCEA achievement with endorsements for Merit and Excellence; closing the gender and ethnicity gap in academic achievement and investigating structures for school curriculum self-review that sustains innovation and remains modern, relevant and community focussed.

Findings

The following observations are personal findings and observations that resonated with me from the combination of school visits in New Zealand, Singapore, Thailand and Japan and from extensive best practice professional readings. The list below is in no particular order:

From Professional Readings:

- **Hattie's Visible Learning Meta-Analysis.**

  Without a doubt, the most useful sabbatical reading relating to improving student achievement were two books by Professor John Hattie. I first read "Visible Learning: A Synthesis of over 800 Meta-Analyses Relating to Achievement" (2009), followed out of further interest by the later publication, "Visible Learning For Teachers: Maximising Impact on Learning" (2012).
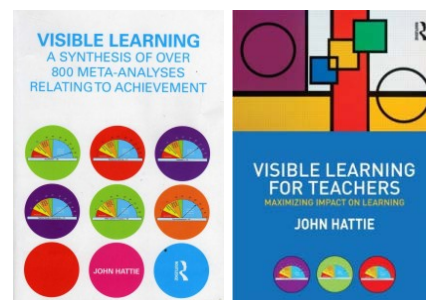

Figure 1: Two outstanding titles relevant to supporting student achievement - Visible Learning (2009) and Visible Learning for Teachers (2012)

  While these titles may sounds heavy going (they did to me!), the content contained within these pages are the product of hundreds of thousands of hours of research spanning more than 50 000 studies studying more than 140 000 effects on a sample of more than 80 million students. They are therefore results that are able to be relied upon! In fact the [Times Educational Supplement](#) (TES) describes this piece of research as *"perhaps education's equivalent to the search for the Holy Grail - or the answer to life, the universe and everything."*

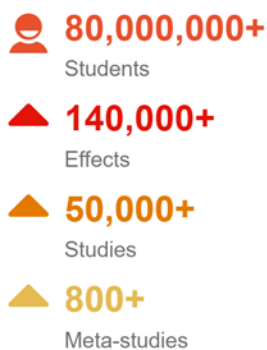*Figure 2: Infographic relating to Hattie's 2009 Visible Learning synthesis of over 800 Meta-Analyses Relating to Achievement*

  From my perspective, one constant in schools is that Principals, Teachers, Parents and Students are always looking for the next strategy of initiative to support student learning. As a principal I have found that with so many initiatives and professional learning and development opportunities on offer, it is often a struggle to know which initiatives to support. Here's where Hattie's Visible Learning Meta-Analyses can help!

  One of the most useful takeaways from Hattie's 2009 book is the quantification or "effect" of over 1400 interventions or strategies. Many of the results make sense but many are also surprising! I found this condensed one paragraph summary of Hattie's Visible Learning (2009) really useful:

  - What's bad? Retention, summer holidays

- What's neither bad nor good? Team teaching, open vs. traditional classes
- What helps a bit? Class size, homework
- What helps a bit more? Cooperative learning, direct instruction
- What helps a lot? Feedback, Student-teacher relationships

Other key learning for me were perhaps obvious and common-sense, but perhaps not widely-enough practiced – by me as a principal anyway!

Firstly and unsurprisingly, the never-fail recipe to improve student outcomes is to improve the level of interaction between pupils and their teachers. It's refreshingly simple in this complex world, but definitely not rocket science. According to Hattie, who has definitely done the numbers on this, improving feedback between teachers and students and giving both parties the information they need to improve <u>and</u> supporting students to take responsibility in "self-report" making sure that students are sufficiently stretched academically, is the number one strategy in improving student achievement.

Hattie explains that students are often the most accurate when predicting how they will perform. After reading Hattie's books I watched a [Ted Talk video of Hattie](#) where he explains that if he re-wrote his book Visible Learning for Teachers (2012) again, he would re-name the top influence he calls "Self-Reported Grades" to "Student Expectations" to express more clearly that this strategy involves the teacher finding out what are the student's expectations and pushing the learner to exceed these expectations. Hattie explains that once a student has performed at a level that is beyond their own expectations, he or she gains confidence in his or her learning ability.

Another common-sense and refreshing key learning for me was realisation, after reading this research, that working with teachers on reforms within the classroom will do more for student achievement than principals will ever achieve through structural or organisational reforms, or the size of classes, or whether learning takes place in the carpeted barn of a modern learning environment or in a traditional classroom.

I thoroughly recommend [Hattie's publications](#) to all principal

The Top 10 influences on achievement

Self-reported grades (d=1.44)
Piagetian programs (d=1.28)
Formative evaluation (d=.9)
Micro teaching (d=.88)
Acceleration (d=.88)
Classroom behavioral (d=.8)
Comprehension interventions...
Teacher clarity (d=.75)
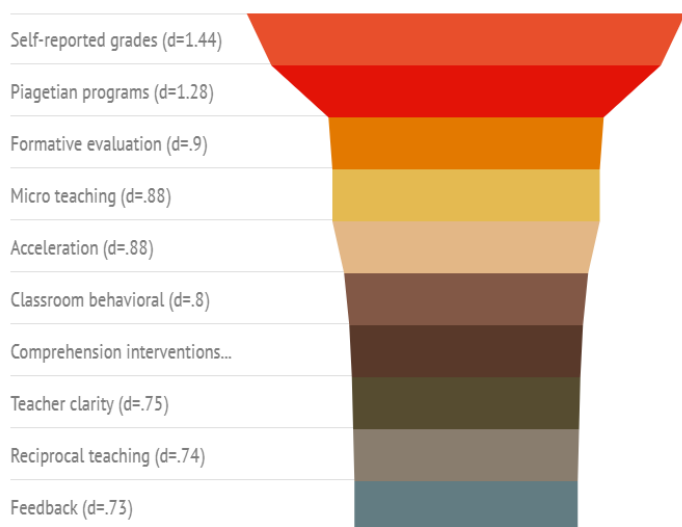Reciprocal teaching (d=.74)
Feedback (d=.73)

Figure 3: The top 10 influences on student achievement identified by Hattie in the 2009 publication "Visible Learning: A Synthesis of over 800 Meta-Analyses Relating to Achievement"

colleagues who are considering the best strategies to enhance student outcomes. It has certainly helped refine my focus.

- **Improving Student Achievement Through Targeted Actions**
  The ERO Publication "Improving Student Achievement through Targeted Actions" December 2015, was an outstanding read and was perhaps one of the most useful documents I have read recently in support of developing strategies to improve student achievements. This document has provided considerable information and useful strategies that I intend to employ upon returning from sabbatical.

  This document outlines four key factors for school success:
    - Schools clearly identifying the target students who needed to make the desired lift
    - Schools resourcing the required actions to lift achievement
    - Staff translating goals and targets into focused actions
    - Teachers and leaders collaborating, and involving parents and whānau, in designing and implementing a solution to underachievement.

- **What Drives Learning in the Senior Secondary School?**
  The ERO Publication "What Drives Learning in the Senior Secondary School" published in May 2018 was a very interesting and informative read and was well aligned to my sabbatical focus.

  This publication focused on an analysis of 12 schools selected because they had made clear connections between the curriculum and the key competencies of the New Zealand Curriculum (NZC) in their school documentation. ERO looked at the ways these schools provided a coherent curriculum, rather than one dominated by assessment requirements. They found that a minority of these schools showed it was possible to plan and implement senior learning pathways based on the principles, vision, values and competencies, outlined in the NZC. These schools were able to show student progress towards broader outcomes that amount to deeper learning.

  The schools with a coherent senior curriculum had established practices that contributed to coherence through:
    - the principal's leadership of professional practice
    - the principal's capacity to address community perceptions about the value of NCEA together with NZC
    - leaders' support of curriculum and assessment development that aligned with the school's vision and direction
    - career guidance that contributed to school-wide decisions about providing student pathways
    - the willingness of leaders and teachers to review teaching practice and school systems, in order to help students progress towards deeper learning

- students who were respected participants in their own learning and could recognise their own development of the competencies outlined in NZC

  (ERO Publication: "What Drives Learning in the Senior Secondary School" May 2018)

Observations that resonated with me from school visits in New Zealand, Singapore, Thailand and Japan:

- **Starting with Building School Culture - "The Success Campaign".** The principal of a school I visited in New Zealand indicated that she had improved student academic outcomes and reduced inequity patterns by focusing on the school culture, rather than by looking at curriculum, pedagogy or assessment. This principal cited a 22% improvement in NCEA Level 2 results over 3 years by focusing on what she called 'the success campaign". This school captured stories of student success and promoted and celebrated this widely both within the school and in the school community. The principal said that for the first few years the success campaign focused purely on celebrating academic success. Sporting success and success in other areas was initially excluded from the success campaign because the school felt that success in these areas was already being recognised and the strategy was to profile academic success. The Principal indicates that this strategy was very successful and she credits this with being a defining action in influencing school culture towards celebrating academic success. The school has operated the Success Campaign for 7 years now and for the last 2 years it has widened its criteria to include all forms of student and staff success.

- **Provision of a Homework club/Supervised Study club** – a number of schools I visited in New Zealand operated "homework clubs" or supervised study programmes. One school operated this during the school lunch-hour but most operated one or more days per week after school and were operated by a Teacher (or in one case by a Teacher Aide) and open to all students. The principal of one school claimed that this was the number one strategy that the school had used to improve NCEA attainment as it was well subscribed by "fringe dwellers"/students At Risk of Not Achieving.

- **"Teachers' Day"** – annual event organised for students, families and communities to celebrate and honour teachers. The Principal of the school that operated this strategy indicated that the intention was initially to provide a vehicle for students, parents and the community to show their value and appreciation for the work that teachers do, however over the years he believes that this strategy has helped create a school culture that is more accepting of academic success rather than defining success as being in the 1st XV or the A Netball team.

- **"Principal for a Day"** – This strategy also came from the New Zealand school that operated the "Teachers' Day". Principal for a Day is an annual event at this school where students express interest in being selected to be the Principal for a day. After a selection process the chosen student spends the day as the principal – leading staff briefings, attending meetings with DP's, Resource Managers and teachers learning about what happens in the school and

how things work. They then report back to students at assembly. While this is occurring the principal becomes the student for the day and attends their classes – the principal reports that this is a great way to observe life as a student and to see another perspective about what is happening in his school.

- **Make everything a Game …Gamification:**
  The buzzword in Singapore right now is Gamification – blending the game design, competition and rewards with learning and study. Several of the schools I visited in Singapore are "gamifying" the curriculum to increase student engagement and motivation.

  During discussions with these gamified schools the main use cases emerged:

  a. **Badges**
     As with many games where badges are earnt, the teacher will award badges (virtual, stickers or real badges) to students for each completed assignment, for pass grades in assessments, or even for consistent attendance. The schools report that this is very motivating for students.

  b. **Not Grades but Experience Points or XP**
     One school in Singapore has abandoned grades for each assignment, test or exam in favour of awarding students with experience points or XP. The final grade that the student is awarded at the end of the course is determined by the number of Experience Points accumulated. The Principal of this school said that the concept is not dissimilar to what was operating before, but the school has "re-branded" to use terms that students easily understand, identify with and feel positive about.

  c. **Friendly Competition: Leader boards, Top Scorers, Tournaments**
     A feature that seemed to be common across all of the schools where I witnessed gamification was the element of competition between students. Some classes I observed had "leader-boards" on display or "This week's Top-Scorers" while other classes I observed were in the middle of tournaments aiming to beat their peers at the mastery of whatever topic they were learning. It was really cool to watch and it took significant restraint not to join in!

  d. **Class-wide reward systems**
     One of the elements of gamification that I really liked at a school I visited was the class-wide reward scheme that encouraged and challenged students through group responsibility. Students would receive rewards in exchange for achieving challenges as a group e.g. 90% attendance class attendance for the week, 100% homework submission, 80% of students passing an assessment etc. A very cool idea.

  e. **Video-Gaming the Curriculum**

Another element of gamification that I really enjoyed watching was the integration of video-gaming into the curriculum. Some classes were playing educational video games (and competing against each other of course), while in one school, students were using software to develop their own games to illustrate or apply their learning.

I was interested to learn what software schools were using to gamify the curriculum. The schools I visited appeared to be using a range of providers including:

Gametize.com
Gamification Solutions Asia

Some of the tertiary providers in Singapore are even running Gamification Professional Development Workshops for Teachers

- **A singular focus on academic achievement:** In many of the Singapore schools I visited, it was apparent that improvement in academic achievement is achieved by focusing exclusively on academic excellence and study and providing no focus on extra-curricular and co-curricular activities (I wouldn't want to adopt this strategy in any school that I was part of!)

- **The Singapore Three Step!:** A number of schools I visited in Singapore had a documented three-step strategy for reducing inequity and improving student outcomes. It appeared that this was part of a system-level strategy, however I could not find any information to verify this:
    1. **Look for patterns of disparity:** Deliberate strategies to use achievement information to search for disparity patterns in student achievement. Identified disparities are then prioritised to close the gaps when setting annual achievement targets.
    2. **Identify the individual students who are Not Achieving or are "At Risk":** From the patterns of disparity identified above, Heads of Learning Areas identified individual students who were not achieving or were at risk of not achieving.
    3. **Differentiating Teaching Strategies:** Regular department meetings to identify the strengths, needs and interests of each targeted student with collegial discussion about how best to differentiate the curriculum to meet individual student needs.

- **Japanese School Curriculum – Core Competencies first**
  In Japanese schools, students don't take any exams before Year 4 (about 10 years of age). The goal for the first three years of school is not to judge the students' knowledge, but rather to teach them soft-skills similar to the Key Competencies in the New Zealand Curriculum document. Qualities including good manners and respect for one another. In addition they are taught about nature and to respect animals. They are taught values such as generosity, compassion, empathy, grit, self-control and justice. Several Japanese schools I visited were very proud of this "manners before knowledge" approach. It has certainly got me thinking about how I can apply some of these values in my own setting!

- **BYOD is Global**

  A feature that was common to every school I visited both in New Zealand and overseas was the prevalence of students with their own devices. In these schools students from Year 2 right through to Year 13 were all using their own devices to support their learning. The make and type of the devices varied – in New Zealand it was more common to see students using laptops or netbooks with a mixture of Windows PC's, Chromebooks and Macs, whereas Singapore, Thailand and Japan were almost exclusively Apple supplied with iPads being popular among the younger students and Macs or various models and sizes dominating the senior students.

- **Smaller Class Sizes:** This is a potentially controversial topic as Hattie's effect size research discussed earlier shows that class size only has a 0.22 effect on student outcomes (where larger is better and 0.4 is the typical effect size). Despite this research, a majority of principals I spoke with regarding student achievement strategies felt that reducing class size, particularly in the senior school, was a key driver of improved student achievement.

Conclusion

a. **Focus:** The focus of this sabbatical study has been:

A curriculum and pedagogy focused investigation including strategies for:

1. Supporting improvements in NCEA achievement with endorsements for Merit and Excellence;
2. Closing the gender and ethnicity gap in academic achievement;
3. Investigating structures for school curriculum self-review that sustains innovation, remains modern, relevant and community focussed.

b. **Purpose:** This sabbatical focus was selected as it represents an area of challenge that I am currently working through as Principal of Waimea College.

c. **Methodology:** The methodology followed was:

1. School visits: 15 visits undertaken in secondary schools across New Zealand, Singapore, Thailand and Japan.
2. Research: Identifying and reading current educational research and best practice both from New Zealand and overseas about the areas identified above.
3. Professional Reading centred around:

   - Professor John Hattie's 2009 synthesis of over 800 meta-analyses related to student achievement definitively quantifies the effectiveness (effect-size) of over 140 000 different interventions.
   - An updated publication from Hattie in 2012, where he further builds on the usefulness of his earlier research by providing a tool that summarizes what is known about the factors and interventions that influence students' academic achievement around the world.

- The publications produced by the Education Review Office are also high quality and easily accessible. They cover a range of topics. The publications focused around student achievement were informative and useful.
4. Reflecting, Planning & Writeup.

d. Findings:

School Visits: the opportunity to visit other secondary schools in New Zealand, Singapore, Thailand, Japan and New Zealand was useful and provided outstanding Professional Development.

In addition to the strategies detailed in the findings section of this report, during these visits I took extensive notes and photographs (where permitted) documenting strategies and practices of interest and potential value to share with colleagues at Waimea College. I look forward to debriefing with colleagues at Waimea College regarding these strategies with a view to determining how we can use this information in our planning to support improving student outcomes.

Professional Readings: It has been refreshing to have the uninterrupted opportunity to commit to professional readings and research in support of raising student achievement, reducing patterns of inequity and sustaining curriculum innovations.

The reading that resonated most strongly with me and left the biggest impression is the 2009 research publication from Professor John Hattie. This is a fantastic resource for principals and other school leaders as it helps inform the likely effectiveness of our decision making and resource allocation. I have purchased several copies of this publication for the school leadership team and the Specialist Classroom Teacher with the intention of widening the focus of effect size-quantified decision making.

e. Acknowledgements:

The opportunity for a period of research, reflection and refreshment is rare in our profession and has been thoroughly revitalising. This sabbatical has also been very timely in terms of having the opportunity and headspace to reflect on some of the significant challenges facing Waimea College at present.

I extend my grateful thanks to all of the individuals and organisations listed in the acknowledgements section.

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