

# Using Learner Profiles to Show Growth in Students as Learners

Kaylene Macnee, Principal, Pinehaven School  
Sabbatical Report Term 3 2019

## Acknowledgements

I would like to thank the Pinehaven School Board of Trustees for supporting my sabbatical application. The time to rest, re-energise, reflect, and investigate an area of interest has been much appreciated by my family and I. I appreciate the work and commitment of Rachel Johnston, Gregory Stanton and Samuel Blandford who acted in more senior roles to lead our school superbly in my absence. Thanks also our team at Pinehaven for supporting them and ensuring the school continued to hum. Thanks to our Pinehaven teaching team and to my principal colleagues who completed surveys, sharing their thoughts and practice with me. Special thanks to Shane Cunliffe (Te Puke Primary), Suzanne Su'a (Trentham School) and Ryan Clark (Fergusson Intermediate) for taking the time to discuss practice with me and share insights into how we might show growth in learning dispositions and characteristics. Finally, I would like to acknowledge the Ministry of Education for the provision of the sabbatical programme. This has been a wonderful opportunity to spend time exploring an area of interest.

## Purpose

To research the use of learner profiles in schools, with a focus on how these can be used for self, peer, teacher assessment and supporting transitions between classes and to intermediate. I was interested in looking at how the Key Competencies, learning dispositions and cultural competencies can be woven into and monitored through the use of a learner profile. I also wanted to examine how this information could be used for the Board of Trustees to get a 'big picture view' of what students are like as holistic learners as opposed to more traditional information about students as readers, writers and mathematicians.

My main focus has been to examine how our learner profile and how it could be used to show growth as learners and their learning pathway, as well as supporting transitions between classes and beyond our school.

## Background - Pinehaven School Learner Profile Development

Like most schools, we have well developed processes around assessment in reading, writing and mathematics, and have used this information effectively to inform strategic decisions, resourcing and

interventions to support learning outcomes for students. Over the last few years, our staff have started to ensure learning support interventions focus not only on the content of curriculum, but also on learning behaviours and skills related to the Key Competencies. We had initial hunches, and are now of the view that learning behaviours have a great impact on a child's ability to progress in specific learning areas. For some students whose achievement has been difficult to shift, a focus on them as a learner, their mindset and ability to focus on a task, has had a positive impact on their academic progress. This development around learning behaviours coincided with consultation with parents about their desires for our learner profile and the subsequent development of a strategic goal to grow our capability as learners.

Our students are usually able to articulate their learning goals in reading, writing and mathematics, but few can talk about what they need to do in order to be a better learner. Late in 2017, Pinehaven School set out to develop a Learner Profile, or what some schools would call a graduate profile that students, whānau and teachers could all understand and use to talk about students as learners. This process involved working with staff, BOT, parents and students to determine what makes a good learner. The process took longer than expected and at the end of 2018, we had developed a draft to trial for use in 2019. This outlines key skills and dispositions our students should have in 4 key areas - *Go Getters, Innovators, Planners and Collaborators*.

At the end of 2018, the profile was used to gather information about learners for transition, identifying some key strengths and 'work ons', using both student and teacher voice. At the beginning of this year, we used that anecdotal information to set some achievement targets around students as learners. The big unanswered question, is how do we show growth in these skills and dispositions that fall from the front end of our NZ Curriculum. How can we better understand the big picture needs of students as 'learners' and how can we use that picture to inform professional development for teachers, as well as resourcing teaching and learning programmes in our school?

This year, we have joined the *New Pedagogies for Deep Learning* community and have been exploring this programme to support our teachers in taking learning to depth and creating an exciting place to learn (one of our strategic goals). The resource hub has a range of learning progressions that can be used for self, peer and teacher assessment for the 6 Cs - communication, collaboration, character, citizenship, creativity and critical thinking (Fullan, Quinn & McEachen, 2018). We need to look at whether these resources may be useful to us in showing progress and growth for our learners.

## **Methodology - Activities Undertaken**

During my sabbatical, I have taken the time to:

- Engage in professional reading around the topics of goal setting, skills for life, what prospective employers are looking for, Key Competencies and growth within these.

- Look in more depth at the *New Pedagogies for Deep Learning* resource hub and considering how these resources can link to our learner profile and support us in the development of this work.
- Conduct a survey of the Pinehaven School teaching team (12 in total), seeking information about their current use of our learner profile, as well as how they see it being used to inform teaching and learning at our school.
- Conduct a survey of fellow principals. I sent surveys to 35 principals who I have worked with over the last few years. In order to try to get a varied range of voices, I surveyed Principals I have worked with on the WRPPA Executive, in our local Upper Hutt cluster, in my Springboard Leadership Programme cohort group, and my work as a Beginning Principals Mentor. The survey was sent to 35 principals and I received responses from 17. This survey focused around practices related to students setting learning goals, transition processes and the use of any school developed learner/graduate profiles.
- Talk to other principals who are at a similar place to our school, or slightly ahead, and seeking answers to the same question about how we show growth and know you are making a difference for students in the areas of learning skills and dispositions.
- Meet with our local intermediate to share our learner profile, seek information about any particular areas needed to focus on for our students, and look at how we can improve transition processes for our students with a focus on strengths and ‘work ons’ as a learner.

## Findings

In this section of the report, I have pulled out key themes that I have explored through the surveys, interviews and readings undertaken.

### The Importance of Learning Dispositions/Key Competencies

Regardless of what term we use to describe the skills of an effective learner, the professional reading I have undertaken has confirmed that the focus of what is often referred to as ‘the front end’ of the NZ Curriculum, needs to be a priority for us in schools. The Key Competencies and related skills and dispositions are key for students becoming life-long learners and for us at Pinehaven, key in reaching our vision of *nurturing and developing future leaders - he manukura mō apōpō*.

I found it really interesting to read information about employability skills and what employers are looking for. This reading confirmed our approach to increasing our focus on the learner profile in that while specific knowledge in relation to learning areas is important, there is a greater importance placed by employers on the ‘softer skills’ which are hard to learn, but are transferable across jobs (Chang, 2018). The Careers NZ website lists the 7 top skills in demand in NZ as:

1. Positive attitude (and ability to remain calm when things go wrong)
2. Communication skills
3. Teamwork

4. Self management
5. Willingness to learn
6. Thinking skills (used to solve problems and make sound decisions); and
7. Resilience

While content knowledge is important, these skills are as important. There is a need for us to ensure we have shifted the emphasis of teaching and learning to ensure more balance is placed on our NZ Curriculum as a whole, rather than just the learning areas.

The OECD position paper prepared in 2018 discusses the importance of individual and collective well being, with learner agency necessary for students to navigate a *“complex and uncertain world”* (OECD, 2018:4). The paper outlines 3 *transformative competencies* our students need to develop:

1. Creating new values - the ability to innovate, think creatively, collaborate and cooperate;
2. Reconcile tensions and dilemmas - an understanding of different perspectives, their place in the world and a need for an open mind; and
3. Taking responsibility - the ability to make well thought out decisions, considering the consequences and impact of decisions taken.

Again, these competencies support a greater focus on ensuring we can show progress and growth for our students in the Key Competencies and learner dispositions.

## Goal Setting

Students who set their own goals have greater confidence to take on challenges in learning and it is important that students know their areas of strengths and what they need help with (Department of Education and Early Learning Development, 2006). Flade, et al (2015) state that *“people who use their strengths every day are three times more likely to report having an excellent quality of life, six times more likely to be engaged at work, 8% more productive and 15% less likely to quit their jobs”*. With understanding and using strengths being linked so clearly to both work output and quality of life, we are doing our students a disservice if we don't help them to understand what they are good at from a young age. A narrow focus on academic learning areas can overlook key strengths of students that we should be building on. A focus on goal setting around learning dispositions will allow students to understand their strengths and use these to further improve and develop.

Our strategic goal of growing our capability as learners includes actions around using the learner profile for individual goal setting, with a focus on students knowing what their strengths and 'work ons' are. Progress in this area has not been as fast as expected this year, largely due to teacher confidence and need to gain familiarity with the profile content. Staff survey results show that 5 staff are using the profile for goal individual student goal setting, 3 for goal setting with groups and 2 for teacher directed class goals. All staff think it should be used for individual goal setting in Years 5-6 and all but one (Y0-2 teacher) thought it should be used in Y3/4 for this too. There was some variation in thinking about individual goals setting at Year 0-2 with only 7 staff suggesting this and only 1 of these being a Y0-2 teacher. The principals who were surveyed who had a learner profile developed also had greater use of it for goal setting in the Year 3-6 area of the school. 2 principals I met and teleconferenced with had begun trailing the use of goal setting across the school.

It is essential for students to understand what they are learning, why, and what actions they need to take in order to be successful. Goal setting is “an essential part of learners begin independent and self directed” (Boyes, 2018). This is critical across all levels of our school and there is a need for us to discuss this as a staff what the expectations should be for setting goals at each year level, including Years 0-2. In our Year 0-3 hub, there has been a move towards play based learning, which in my view, is the perfect opportunity for students to have goals related to our learner profile.

### Self and Peer Assessment

In order to foster life-long learning, we need to involve students in assessing their own learning (Hipkins, Bolstad, Boyd & McDowall, 2014). In order to do this, we must have involved them in setting and understanding their learning goals.

Amongst our staff, self assessment is an area that teachers felt was more appropriate for the Y3-4 and 5-6 levels. This is reflective of the goal setting to some degree, however some staff responses indicate goals should be set, but not necessarily self assessed or peer assessed. This is particularly evident in the Y0-2 area of the school where few thought that the learner profile should be used for self and peer assessment. Given a student’s understanding of their own strengths and areas for development are a key starting point for goal setting, this is an area worth exploring in more depth with the staff. If students are going to set goals, they need to understand how to achieve the goal and how they know when they have achieved it. All learners need to take a key role in this process and we need to ensure it is taking place across the school.

When asked about the use of learner/graduate profiles for self assessment, of those principals whose schools have a profile in development or developed, 4 were using it for self assessment across the school. There were no principals I surveyed using the profile for peer assessment. With this being early in development for ours and many schools, it does make sense that goal setting and self assessment will be the first parts of the use of this for any formative assessment processes.

### Communicating with Whānau

The Learner Profile was a key aspect of our mid-year reporting and all but 1 teacher reported using the content as a guide for comments in the reports. There seems to be a strong sense that the LP is helpful for writing report comments to parents and from a leadership perspective, use of this gives greater consistency in the types of comments teachers are writing.

The skills and dispositions in our learner profile are very much related to the context in which a student is working. This provides us with a great opportunity to strengthen communication with (rather than always to) whānau so that we are including their thoughts in the individual goals of students and the evidence that shows growth and progress. We have to ensure goal setting opportunities and assessment processes include parent/whānau voice.

A number of schools with developed learner/graduate profiles have used them for reporting to parents across all levels of the school. Teachers at Pinehaven strongly support the use of the learner profile as a conversation starter for parents and teachers to look at student strengths and weaknesses. In addition, 5 see them as an effective tool for conversations about strengths and 'work ons' as learners with whānau. I think what is essential here is that it is a two way conversation, rather than one way, where teachers are taking the lead in the conversation - we need this conversation to be viewed as a partnership, where whānau views of their child in contexts outside of school are considered as valid and worthy as those of teachers perceptions of the school context.

### Analysis of the needs of Learners

If we are going to increase the focus on students as learners, we need to have some way of showing if what we are doing is making a difference. We also need to understand the individual and group needs of students, as well as the professional development and resourcing needs for teachers and leaders. The Board of Trustees needs valid and quality information in order to set strategic priorities.

Interestingly, not all Pinehaven staff saw the learner profile as a tool for teachers to analyse the needs of their class, or for needs across the school. Teachers identified this more of a use at the higher end of the school and I am wondering if this is linked to their views on the use of it for goal setting. In some ways, it contradicts the staff view that it is a useful tool for reporting to parents if we don't understand the bigger picture of what success looks like and what the school wide trends and needs are. We have some work to do here as a staff in terms of what this means and how teachers might go about using the tool to focus on class needs.

Responses to the principal survey would indicate that reporting information about learner dispositions to the Board and identifying school wide trends, is a challenge. Of the 17 principals who responded, only 2 had developed a way to produce some information of this nature (1 of whom said the information is not moderated and the other who said the SMS doesn't provide a process for collating this simply, so they had developed a labour intensive spreadsheet). 7 principals were planning to look at this in the near future and 1 was using well-being survey data. The others were reporting anecdotally on school values and learning dispositions. Within our own staff, there is variation in the number of teachers who thought the learner profile should be used for reporting to the Board of Trustees. There are varying views on whether or not the learner profile can be developed with stages showing growth, or if they are a set of dispositions that are too context reliant and therefore difficult to place students at a certain point on a rubric. What is clear is that this is an area of heightened focus for schools to gather information about and there are no clear tools at our fingertips to make it an easy task!

### Transition

For many years, educators in New Zealand have been trying to overcome the achievement blips that take place as students transition from class to class, and school to school. McGee (2003) cited in ERO (2012) found strong correlations between difficult transitions and drop out rates as students move through the education system.

Like many schools, at Pinehaven, we have tweaked and reviewed transition processes to ensure:

- the students are involved in the process of transition;
- teachers trust in each others' assessment information (rather than wasting time testing students at the beginning of each year); and
- key information is passed on to new teachers at the beginning of each year.

While our processes are not as strong at the point that students move from our school to another, I see the learner profile as an opportunity to share information with new schools about students' strengths and 'work ons' as a learner.

Our staff support further development of the use of the learner profile within our school to support transitions as students move to a new teacher. The staff found the process of students and teachers identifying strengths and work ons, then handing these onto the new teacher to be useful, however felt there is a need to move it to a 'living document' that is then used to further develop students as learners. Interestingly, this is similar to the work of Shane Cunliffe and his team at Te Puke Primary who have developed a google doc for student goal setting in relation to their learner profile. This is something that they are trialing this year and the doc can be shared with parents.

I met with Ryan Clark, at our local intermediate where the large majority of our students transition to. This meeting included sharing our learner profile, how we have developed it and begun to use it. I was interested to explore in what ways we could use it to support our students as they transition beyond our school to intermediate. It was agreed that understanding students' strengths and 'work ons' is crucial for smooth transitions. For the first time this year, our students transitioning to start Year 7 at the intermediate knew their room and had had the opportunity to meet their new teacher at the end of last year. For many of our students, this significantly reduced the anxiety around starting at a new school. Our teachers discuss individual students with the DP and Principal of the intermediate at the end of a year, however Ryan and I agreed that it would be useful to trial direct teacher to teacher conversations, focused around the learner profile. Having the two teachers share information directly, it is less likely to be lost in translation. A living document as described above, could also be shared by the student with their new teacher.

When looking at the principal survey responses, for most schools, the within school transition processes reflect ours and appear to be rigorous. Students get opportunities to meet with new teachers, paperwork is handed on, as well as teacher meetings to discuss students. However, when looking at processes when students are transitioning across schools, this is still often focused around academic achievement, rather than strengths as a learner. The meetings between class teacher reduce significantly, with meetings often only taking place between senior staff and no principals reported teachers meeting with the next year's teacher directly when students were moving beyond the school. There is a significant missed opportunity here as much of the 'rich' learning information gets lost in translation with many of our current across school transition processes. When moving into this space, we do need to proceed with caution so that conversations are professional and students who need a fresh break at a new school get this opportunity without subjective views of individual teachers clouding this process.

## Showing growth

As I noted in the section about analysis of trends above, surveyed principals noted this as a really challenging area that we are all grappling with. As a member of the Curriculum, Progress and Achievement Ministry of Education Reference Group this year, it is clear that this is also proving to be challenging at a system level. There is wide support for more focus on the key competencies and well-being for students, however showing progress in this space is not easy. In Australia, it became mandatory for schools to teach these 'softer skills' from 2017, but how to measure progress was noted as a key challenge (Lucas, 2016).

PISA have begun carrying out assessments of collaborative skills, identifying these are critical skills for our students to gain before entering the workforce. The need to be able to solve problems where solutions are not obvious is a vital skill and the best way to do this is by working collaboratively, pooling understanding and effort (PISA, 2017).

In 2006, Boyd & Watson presented a paper that highlighted the debate as to whether or not the Key Competencies should be assessed. I believe this debate still exists today, however I think we have moved to a place where teachers, school leaders and the Ministry of Education understand the importance of students growing as 'learners', and that the development of the Key Competencies play a key role in this growth. The challenge is how we go about showing progress and ensuring any assessment we do engage in is formative, not summative, or collated in a manner that does not allow for league tables and ranking, as a student's ability to demonstrate learning dispositions are so context dependant.

Hipkins (2006) identifies a range of strategies for involving students in meaningful assessment that allows them to grow as learners. These include learning logs/stories, annotated samples of work, rich tasks, etc. where the learning goal is clear. Hipkins warns that if used in isolation, rubric can be limiting and should be used alongside richer strategies mentioned above.

With joining the *New Pedagogies for Deep Learning* (NPDL) global community this year, we have begun to make links between the 6 competencies and our learner profile. NPDL was noted by Lucas (2016) as one of the possible mechanisms for showing progress. Our Leadership Team have seen the potential for the global deep learning progressions relating to each of the competencies and the value these may have for teacher and self assessment. During my sabbatical, I spent time drawing the links between our learner profile and the NPDL progressions, and have identified a number of links that we could draw upon. While there are many links, I have noted the ones that I think are the best ones to use as a starting point for our work in the table below.

Pinehaven Learner Profile	NPDL Competency	NPDL Learning Progression Dimension
Go Getter	Character	<ul style="list-style-type: none"><li>• My Grit, tenacity, perseverance and resilience</li></ul>



Innovator	Creativity	<ul style="list-style-type: none"> <li>● Finding and taking opportunities</li> <li>● Asking the right inquiry questions</li> <li>● Developing new ideas and solutions</li> </ul>
Planner	Character	<ul style="list-style-type: none"> <li>● My role and responsibility in learning</li> <li>● Learning to deep learn</li> </ul>
Collaborator	Collaboration	<ul style="list-style-type: none"> <li>● Working with each other as a team</li> <li>● Interpersonal and team-related skills</li> <li>● Social, emotional and inter-cultural skills</li> </ul>
	Citizenship	<ul style="list-style-type: none"> <li>● Understanding different values and world views</li> </ul>
	Communication	<ul style="list-style-type: none"> <li>● Communicating clearly</li> </ul>

There is a real opportunity here to use some of the NPD Learning Progression resources to show growth in our students as learners. I believe the use of these, as well as some rich evidence gathering in relation to individual learner profile goals of students, is the way for us to move forward with this piece of work. As there are so many links, to cover them all off would be a potential overload for students/whānau and heavy workload for teachers. In order to keep it simple and focused on the key important elements for our community, it will be necessary to work with our staff, students, BOT and whānau to determine the ones we should focus on to show growth and progress of students as learners.

Two principals I discussed practice with were exploring this work as well. One had unpacked their learner profile using SOLO Taxonomy and one had developed a progression of seedling (kākano) through to a fully established tree (panekiretanga). Both principals explained that a student's placement on a progression can jump about due to the context in which they are demonstrating skills and dispositions, and that there are issues with subjective judgments if they are not moderated in some manner.

While we are all grappling with this big question of showing growth and progress in students as a learner, and don't yet have the answers, it is clear we need to take the plunge and start somewhere rather than continuing to carry on as we always have, placing less importance on this essential aspect of our students' learning pathway.

## Implications & Next Steps for Pinehaven School

I have identified the following next steps to discuss and progress with our staff and Board of Trustees:

1. To finalise the wording of our Learner Profile now that we have been working with it for a year. While doing this, we need to take care not to change the students' language back to teacher

speak. We also need to include the importance of understanding our bicultural heritage and being confident in the use of Te Reo and Tikanga Māori as this is not explicit enough.

2. Revisit the importance of goal setting and self assessment with the staff and develop goal setting expectations related to the Learner Profile across the school. At a minimum, I would suggest this includes class goals (with some individual ones) for Years 1/2, with individual goals for students in Years 3-6. The process of setting and monitoring goals should involve whānau and school wide expectations for monitoring needs to be explicit. There are some useful tips in the Department of Education and Early Learning Development reference (2006). Staff identified the need for the learner profile to be explicit in our classrooms and for students to understand *“what a Pinehaven learner does”*. Goal setting will be an effective vehicle for this.
3. Use the NPDL learning progressions as a formative assessment tool to show growth and progress in relation to our Learner Profile. This will involve working with the staff and Board of Trustees to determine the most important aspects of our Learner Profile for showing school wide growth and progress. We can then identify which NPDL learning progression aspects will help us to formatively assess these and to gather information to report to the Board of Trustees. The use of the NPDL learning progressions will assist in identifying some quantitative data, however we need to also provide information that outlines strengths and areas for development, in order to show a complete picture.
4. In order to provide accurate information to inform teaching and learning, there is some work to do with staff around how teachers might go about using the learner profile to focus on class needs.
5. Look at the development of some sort of record of learning in relation to the learner profile. Staff will need to have input into this to ensure it is manageable. Tools such as google docs and Seesaw may be useful in this space. From discussions with other principals, it might also be worth exploring Linc-ed as a possible tool for this. We may be able to capture aspects of this for reporting to the Board.
6. Ensure all staff are using the learner profile to guide reporting and conversations with whānau about their child as a learner. We also need to ensure our ‘reporting to’ is transformed into a lens of ‘communicating with’ whānau. We need to ensure that the conversations we have are viewed by all parties as a partnership, where whānau views of their child in contexts outside of school are considered as valid and worthy as those of teachers perceptions of the school context.
7. Add an aspect to our transition process with Fergusson Intermediate. Processes already in place will continue (Fergusson DP and Principal meeting Pinehaven teachers, handing on paperwork related to achievement, and students being able to visit their new class prior to the end of the year). In addition, we can trial teacher to teacher meetings where the Pinehaven teachers share

student strengths and 'work ons' in relation to our learner profile with the student's Fergusson class teacher and/or syndicate leader.

## Conclusions

When I went on sabbatical leave, I was determined to have a plan about how we could align our learner profile with other practices in place at Pinehaven. I have identified clear links with the NPD L programme that can support our work in this space and in particular, how we can show growth and progress in our students as holistic learners.

The recommendations above will enable us to refine and meaningfully grow the use of the learner profile in our school. It won't happen overnight - the recommendations are all pieces of work that can feed into our strategic plan, supporting or goal of *growing our capability as learners*. I could have used some of my sabbatical time to develop templates and processes to take back to school, however I believe the recommendations need to be developed with the staff, Board, students and whānau.

What is really clear to me is that showing progress and growth is important, yet I don't think our judgements in relation to these learner dispositions can ever be 'summative' as they are all life long learning skills that are hugely reliant on the context in which they are being demonstrated, and there is no finish line or end point. The way forward is for us to ensure we have clear and effective processes for formative assessment about students as learners, with evidence of demonstration and the use of learning progressions to help us identify trends, strengths and 'work ons'.

## References

1. Ackerman, C. (2019) *Goal setting for students, kids & Teens*. Online <https://positivepsychology.com/goal-setting-students-kids/>
2. Boyd, S. & Watson, V. (2006) *Unpacking the key competencies: What does it mean for primary schools?* A paper presented at NZARE, Rotorua, 6 December 2006. Online <https://www.nzcer.org.nz/system/files/15238.pdf>
3. Boyes, K. (2018) *Goal Setting in the Primary Years*. Online <https://www.spectrumeducation.com/goal-setting-in-the-primary-years/>
4. Careers NZ. *Skills employers are looking for*. Online <https://www.careers.govt.nz/plan-your-career/get-ideas-for-your-career/skills-employers-are-looking-for/>
5. Chang, C. (2018). *The 12 Skills Employers Want the Most*. The NZ Herald online [https://www.nzherald.co.nz/business/news/article.cfm?c\\_id=3&objectid=12121579](https://www.nzherald.co.nz/business/news/article.cfm?c_id=3&objectid=12121579)

6. Department of Education and Early Childhood Development. (2006) *Developing, Monitoring and Reporting on Personal Learning Goals*. Victoria, Australia: Department of Education and Early Learning. Online <https://www.education.vic.gov.au/Documents/school/teachers/teachingresources/social/personal/devperslearngoal.pdf>
7. Education Review Office. (2012) *Evaluation at a Glance: Transitions from Primary to Secondary School*. Wellington: Education Review Office.
8. Flade, P., Asplund, J. & Elliot, G. (2015) *Employees Who Use Their Strengths Outperform Those Who Don't*. Online <https://www.gallup.com/workplace/236561/employees-strengths-outperform-don.aspx>
9. Fullan, M., Quinn, J. & McEachen, J. (2018) *Deep Learning: Engage the World to Change the World*. California: Corwin.
10. Hipkins, R. (2006) *Why would we assess Key Competencies?* Wellington, Ministry of Education: Learning Media. Online [https://www.nzcer.org.nz/system/files/Key\\_Competencies.pdf](https://www.nzcer.org.nz/system/files/Key_Competencies.pdf)
11. Hipkins, R., Bolstad, R., Boyd, S. & McDowall, S. (2014) *Key Competencies for the Future*. Wellington: NZCER Press.
12. Lucas, B. (Nov 2016) *Schools will teach 'soft skills' from 2017, but assessing them presents a challenge*. Online <http://theconversation.com/schools-will-teach-soft-skills-from-2017-but-assessing-them-presents-a-challenge-68749>
13. Ministry of Education (2007) *The New Zealand Curriculum*. Wellington: Learning Media Ltd.
14. OECD (2018) *The Future of Education and Skills: Education 2030* Online [https://www.oecd.org/education/2030/E2030%20Position%20Paper%20\(05.04.2018\).pdf](https://www.oecd.org/education/2030/E2030%20Position%20Paper%20(05.04.2018).pdf)
15. PISA (2017). *PISA 2015 Collaborative Problem-solving Framework*. Online <https://www.oecd.org/pisa/pisaproducts/Draft%20PISA%202015%20Collaborative%20Problem%20Solving%20Framework%20.pdf>