



Principal's Sabbatical Report:

The Role of Preview in Accelerating Achievement for Priority Learners.

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Sabbatical was completed in Term Three of 2018

About the Author

I am the principal of Goodwood School, a rural school of 350 children, just north of Cambridge. I have been a principal for 18 years, leading schools in the Waikato, King Country and Auckland areas.

Acknowledgements

In this, my 30th year of teaching, including 24 years as a school leader, being awarded a sabbatical has been a very welcome chance for reflection and refreshment. I would like to thank everyone who contributed to making this a most worthwhile opportunity.

I would like to thank the board of trustees of Goodwood School, and in particular chairperson Mike Gascoigne, for their wholehearted support. Thank you also to the TeachNZ team for making these essential sabbaticals possible. My two most recent appraisers / mentors Allan Bull and Rachel Allen have provided important support and critique.

James Nottingham's Challenging Learning team at Alnwick and in particular administrator Ellspeth Marshall, director of Strategic Operations, Tom Burston and Evaluations Manager, Lisa Cook gifted their time and expertise during my UK visit. Professor Steve Higgins from the University of Durham also provided valuable research.

The staff and students of Highweek, Dovedale and Ashtongate Schools, and especially school leaders Nik Smith, Jane-Marie Bassett and Jennie Malloy must be acknowledged for their hospitality and generosity.

I would like to thank Karl Woolcott and cycling guides and clients of Ride Holidays for an amazing experience chasing the 2018 Tour de France around the Alps and Pyrenees!

My huge gratitude goes to the teaching, leadership and support staff teams at Goodwood School for doing an outstanding job during my absence. I would especially like to thank Deputy Principal Marsha Copping for fulfilling the acting principal's role with great skill and aroha for our team. My sabbatical was that much more enjoyable knowing that our school was in such great hands.

Finally I would like to thank my family, including my wife Cathy, for their unwavering support not only during this sabbatical, but for always being there, particularly during those frequent hectic and challenging times that we face as principals.

Executive summary

As I enter my fourth decade in this wonderful profession, my frustration increases in that, despite endless initiatives and reforms, for a small but significant proportion of our students, the challenges of learning and life at school remain woefully the same. The latest educational descriptor for this group is 'priority learners.' Last century, when I met my first class, this group were called 'children with special needs.' Over the past thirty years I have taught with skilled, committed and passionate educators all determined to accelerate the progress of these learners but with limited success. I believe that it is time for a shake up and to challenge some of the approaches that have been embedded over this time. I have been privileged to hear author and researcher James Nottingham speak a number of times over the past few years. Recently James introduced me to the notion of 'preview.' A concept that could change the school experience for our most at risk students and allow them to progress at a rate that may enable them to experience the same degree of success as their peers.

Purpose

The purpose of my sabbatical is to investigate the role of preview in accelerating achievement for priority learners. Also to develop such practices in my school, taking an acceleration rather than a remedial approach in supplementary support, allowing priority learners to access learning content prior to their usual guided session.

Rationale and background information

Current Approaches

The definition of insanity is to always do what you have done, yet to expect different results. However this is the case for many schools in our attempts to accelerate the learning of the children who find learning the most difficult.

New Zealand has had a small but significant number of children who struggle with their learning and who progress at a speed less than that of their peers. This has always seemed to be the case with percentages of children achieving below expected levels remaining static despite well intentioned interventions from teachers and schools (Education Counts, 2014).

This has been the catalyst for me to carefully examine the practices for accelerating learning at my school, to question their impact and to seek better solutions.

Many current practices are centred around a remediation approach, where children are provided with extra support to reinforce the basic concepts of the material they need to

know and understand. Often, the time taken to provide this remediation comes at the expense of time in the classroom working in the current classroom programme.

Such approaches often achieve little other than to extend the 'gap' between the priority learner and their classmates. Ponderous plugging of gaps can never place children on the trajectory they need to maintain to catch up and succeed.

Traditional approaches have seen children removed from class to work individually or within a small group supported by a teacher aide. While this occurs the rest of the class do not stand still and wait for the gaps to be filled. Instead they move on, creating more and more gaps until the gulf will never be filled.

It is now more common for children to remain in class but to once again be supported by the least qualified people on the staff in the hope that the teacher aide will be able to accelerate a child's progress faster than the teacher with the degree.

(Dis)ability Grouping

Even when working with the teacher, priority learners are often joined together in (dis)ability based groups with equally struggling children. This approach disadvantages the disadvantaged child even further by isolating them from talented peers and the useful modelling and support that they could provide.

Remediation is based on the misconception that for students to learn new information, they must go back and master everything they missed. So, for example, all of the students who are weak in math—probably determined through a pre-test—are herded together and assigned a teacher who will re-teach them basic math skills. The students who have the largest gaps and are thus the most academically vulnerable are sent the furthest distance back. (Pepper Rollins, 2014)

A greater hindrance than this isolation, is that the lower ability group will experience a vastly different approach from their teacher than will be the case for their more talented counterparts in the other groups. Compounding this disadvantage is that teachers can be generally unaware that they are treating the groups differently.

As a small example from my practice I recorded data on a small indicator of writing success. One way that I actively encourage teachers to acknowledge progress in writing is to send writers along to me, as principal, to celebrate with a high five and some words of encouragement. As a school we have identified, surprise, surprise, that our boys are achieving at a level below that of our girls.

It stands to reason that I should expect to see a greater number of boys to celebrate their progress as writers, or at the least an equal balance of the genders. Somewhat surprisingly, after a term, my data revealed that around twice as many girls (64% of total children) were sent to celebrate writing progress with me.

When this data was shared with the staff, there was surprise and even shock that this was the case. Such is the potential invisibility of our actions or discourse. The impact of this small aspect of practice in disproportionately celebrating the writing success of our girls was unlikely to contribute to our school goal of accelerating the progress of our boys. Conversely there could be a risk of reinforcing gender based stereotypes in writing.

This same invisibility or bias is evident in teachers' different approaches to groups of differing perceived abilities.

Ability grouping is least effective for students in the lower groups. Often teachers who teach the lower groups have lower expectations, despite their best intentions. When working with lower ability groups, teachers usually give students less challenging tasks below their curriculum level, including problems which are less complex or with smaller numbers. This becomes inequitable for these students as they are denied the opportunity to access the curriculum at a higher level. (Pine, 2018)

Such inequity raises questions of how we ensure that education serves social justice (Collins, 2018). Education in Finland is being celebrated in many spheres, with the Finnish system generating enviable results in terms of overall achievement and a relative lack of inequality. It is interesting to note that that the Finns beliefs about the potential damage of ability based groups have resulted the the concept being outlawed! (Wilby, 2013)

Grouping underperforming students together risks exacerbating their struggles with classwork and increasing inequalities in education (Epple, Newlon and Romano, 2002).

Emotional Nature of Grouping

We know much about the emotional nature of learning and that a positive belief about oneself as a learner in general, and in a particular subject, represent a core component for deep understanding (Dumont, Istance and Benavides, 2010).

Despite this knowledge many current approaches systematically undermine these positive beliefs. A prime culprit is, once gain, ability based grouping.

Teachers try to minimise the harm through a few tricks. Groups are rarely named the 'aboves,' the 'ats' and the 'belows' but it takes savvy students very little time to see past cute names. I once saw swimming groups labelled as marlins, sharks and starfish. No prizes for guessing the group of struggling swimmers!

The problem of this approach is that it can become self fulfilling. I am in the squares group, not the octagons or dodecahedrons therefore my teacher believes that I can't do maths. Therefore I believe that I can't do maths.

There can be much stigma and shame about being in the 'bottom group.' Learning is inseparable from its social and cultural context. (NZC 2007, Page 34). Nuthall (2007) reminds us that Students' learning experiences are shaped by their relationships with their peers and by the peer culture of the classroom.

There is no surprise that the result of this emotional harm caused by lowered expectations of self and negative reactions of higher placed peers is lowered motivation.

In the systems that separate students into different schools or programmes more, students tend to report less instrumental motivation for mathematics than students in systems with less horizontal stratification. (OECD, 2016)

Motivation is a key driver for success. Without motivation, effort is limited. Hattie identifies effort as an important driver of success with an effect size of 0.77.



With the Challenging Learning Team. Alnwick UK.

Nottingham firmly believes that the reason Diweck's (2007) work on Growth Mindset is yet to deliver results is that many schools' practices undermine their beliefs. It is pointless telling a child that they have a growth mindset and can achieve anything while placing them in a fixed group working

only with other strugglers.

A frustration for me has been that when high motivation is in place, 'at-risk' learners can achieve astonishing things, just often not directly curriculum related. At the risk of showing my age I remember when Pokemon first arrived on the scene. A learner I had tried in vain to support in learning a few important times tables could suddenly name 140 Pokemon and correctly identify their powers, categories and juvenile forms! Ah the power of motivation.

The Mixed Ability / Flexible Grouping Alternative

The alternative does seem somewhat obvious? Why not follow the Finns and outlaw what seems a damaging and archaic practice? Anthony and Walsh contend that *"When groups include students of varying mathematical achievement, insights come at different levels; these insights will tend to enhance overall understandings"* (2009, p10.)

Research shows a strong correlation between teacher expectations and student outcomes. If teachers have high expectations for all students, then all students are likely to be challenged and extended, leading to positive learning outcomes for all. (MOE, 2007)

The Best Evidence Synthesis (2012) states that leaders should encourage teachers to use a flexible grouping model and cater to individual differences within this model. This should include the construction of small, heterogeneous, collaborative groups that work together to solve open-ended group-worthy tasks. Consequently, there should be a multiple ways in which students can contribute and in which their contributions can be valued.

But How?

While teachers are generally supportive of the concepts behind mixed ability or flexible groupings they often remain reluctant to put this into practice. Such approaches challenge the status quo and require significant pedagogical modifications. As Pine (2018) cautions...

Mixed ability grouping is more than just mixing students up and expecting them to be able to work collaboratively on problems. Groups of 3–4 students must be carefully selected and it is essential that the tasks that students engage with are designed to be low floor, high ceiling and develop a clear mathematical understanding.

Teachers have cited to me the potential risk of 'holding back' higher achieving students to allow everyone to access the content of the lesson. There is also the often stated refrain that 'these children' lack the prior knowledge to access the curriculum at the

same level of their peers. These are barriers that we must overcome. The first listed principle of the New Zealand Curriculum (2007) is high expectations **for all**.

Preview

Research suggests that preview could be a significant factor in addressing the barriers identified above. Preview is the notion of 'preloading' learners with the essential knowledge and skills that they need to achieve a particular task or activity. James Nottingham (2018) suggests the effect size of preview can be as great as 0.9.

The correlation between academic background knowledge (preview) and achievement is staggering: prior knowledge can determine whether a 50th-percentile student sinks to the 25th percentile or rises to the 75th (Pepper Rollins, 2014)

Students learn best when they are able to integrate new learning with what they already understand. This can be an area of disadvantage for priority learners, often their prior knowledge is less than that of their peers. It is important to ensure preview is available for **all** children but **especially** priority learners.

With the demands of an already crowded curriculum and school day, finding the time to implement preview has its challenges. Reimagining traditional homework as preview is a potential solution with which schools have enjoyed success (Nottingham, 2018). However, there could be risk of further disadvantaging children if whanau do not engage with a preview programme. This risk could be mitigated with initiatives such as a 'preview' club. Either before school, lunch, after school or timetabled.

The home is our first, and highly influential, learning environment so that building connections between the home and school is vital to learner success. This includes proactively involving families in their children's schooling and extending personalised invitations to them to become involved. (Dumont, Istance and Benavides, 2010).

Strategies as simple as putting a notice in the window for example... next week we will be investigating shape or number bonds to 10you could support your child by playing this game.

Parents could be informed ... If you can spend some time discussing / finding out about shape / the water cycle / our local maunga - then your child will have an **advantage**.

Nottingham promotes the use of language such as your child will have 'an advantage' to encourage families to engage with preview programmes. My experience is that parents are eager to have access to information and tools that may advantage their child.

Nottingham (2018) suggests homework has an overall effect size of 0.29 and for primary aged students (5 - 11 years) this could be as low as 0.01. The effect size of preview is 0.9. By using homework for preparing for following learning we can double the rate of expected progress or 0.4. Homework could become homeprep. Nottingham also suggests that for those teachers who work with success criteria, give the full range of criteria the week before you need it, allowing children to discover, question and explore what is required in the lead up to the learning.

Preview example from Ashtongate School, Bristol UK:

Year 2 Pre-Teaching Term 1 Weeks 3-4

English

The children will be developing their writing skills by using the words **because** and **when** to write more detailed sentence, for example *Joe can't practise kicking because he's injured / Everyone watches when Sam does a back flip.* We will be encouraging the children to write more sentences using expanded noun phrases, for example the *blue butterfly / it was a dark gloomy night* to add more description.

Maths

So far we have been revising our number work and improving our understanding of number up to 100. The children will be using number lines to compare and order numbers. They will also be carrying on their work of counting in ones and tens to make a two-digit number. Please can you also discuss odd and even numbers.

Spellings

The children have been introduced to their non-negotiable spellings (key words). These are the spellings that we hope the children will be able to spell accurately in all their writing. Throughout the week the children will practise these regularly and they will then be given a spelling quiz each week. Yellow spelling books will be sent home so that parents/ carers can see how they are getting on. Spelling quiz will be every Thursday and new spellings will come home fortnightly.

was with went children they saw have like

Teacher aides could also work on this premise. Teachers could ensure that teacher aides know next week's lessons and prepare priority learners through preview. This approach has potentially so much more power than using this precious resource for remediation work.

The amount of preview required is often not onerous. For example a parent, or teacher aide could support a child to learn a limited number of required basic facts.

Prerequisite skills could be scaffolded - either through learning in a preview session, or by providing tools such as times tables 'cheat sheet' to remove a barrier to a more advanced concept.

	6	7	8
6	36	42	48
7	42	49	56
8	48	56	64

Programmes that promote preview support acceleration of priority learners as opposed to the more traditional remediation approaches that I have witnessed over my many years as a teacher and a leader. Pepper Rollins (2014) provides a good overview of the key differences between the approaches.

	Acceleration	Remediation
Self-efficacy	<ul style="list-style-type: none"> Self-confidence and engagement increase. Academic progress is evident. 	<ul style="list-style-type: none"> Students perceive they're in the "slow class," and self-confidence and engagement decrease. Backward movement leads to a sense of futility and lack of progress.
Basic skills	<ul style="list-style-type: none"> Skills are hand-picked just in time for new concepts. Students apply skills immediately. 	<ul style="list-style-type: none"> Instruction attempts to reteach every missing skill. Skills are taught in isolation and not applied to current learning.
Prior knowledge	<ul style="list-style-type: none"> Key prior knowledge is provided ahead of time, enabling students to connect to new information. 	<ul style="list-style-type: none"> Typically does not introduce prior knowledge that connects to new learning.
Relevance	<ul style="list-style-type: none"> Treats relevance as critical component to student motivation and memory. 	<ul style="list-style-type: none"> Relevance is not seen as a priority.
Connection to core class	<ul style="list-style-type: none"> Instruction is connected to core class; ongoing collaboration is emphasized. 	<ul style="list-style-type: none"> Instruction is typically isolated from core class.
Pacing and direction	<ul style="list-style-type: none"> Active, fast-paced, hands-on. Forward movement; goal is for students to learn on time with peers. 	<ul style="list-style-type: none"> Passive, with focus on worksheets or basic software programs. Backward movement; goal is for students to "catch up" to peers.

Activities Undertaken (methodology)

Throughout the course of my sabbatical I travelled to the UK to visit James Nottingham's Challenging Learning Headquarters along with a number of English

schools. These schools were all using aspects of preview to support priority learners. Leaders at Highweek School spoke of the huge difference that this had made in their school. One of the main benefits identified was the strengthened partnerships between home and school. In some examples the use of preview was helping to build trust with parents who themselves had struggled with their learning while at school.

Prior to, during and subsequent to sabbatical I have worked with teams at my school to look at how we might implement aspects of preview and mixed ability / flexible groupings to accelerate the progress of our priority learners in maths and literacy.

We focussed on two areas. How we might improve the phonetic knowledge of our junior children and how we could accelerate the progress of cohorts of priority learners in mathematics.



Visiting Highweek School Newton Abbot, UK:

Using preview to accelerate progress in early literacy.

Analysis of achievement data, including six year nets at my school, indicated that a significant proportion of children were achieving below expectations. Our junior team worked hard to increase phonetic and phonemic awareness.

One of the initiatives used by the team was to engage parents by previewing the letters and sounds that would be the focus of the following week

Section of typical Junior fortnightly email

Your child will be at a distinct advantage if they know about...

Literacy

- blends - bl & br
- making sure our reading sounds right and makes sense
- making similes in conversation (using like or as to compare)

Maths

- Number - fractions - recognise and name half and a quarter of a shape
- Length: compare and measure using non-standard units

Inquiry - Kaitiakitanga

- Zero Waste - how we reduce our rubbish

We look forward to our continued partnership with you this term.

Nga mihi,

Results

Throughout the year we monitored improvement in stanines for six year nets from 2017 to 2018. The following improvements were noted

6 Year net average stanine scores

Item	from (2017)	to (2018)
Reading Words	4.3	5.1 (+16%)
CAP	4.1	4.9 (+19%)
Writing Vocab	4.1	4.9 (+19%)
Letter ID	5.4	6.0 (+11%)
Dictation	4.8	5.5 (+12%)

Mean scores in all of these domains improved with average gains of 0.7 of a stanine (overall 15% gain). This was a significant improvement due in part to a focus on preview to allow parents to support their children prior to classroom

Using preview and mixed ability groupings to accelerate progress in mathematics.

A team of teachers used aspects of preview and mixed ability groupings to accelerate learning in maths. Teachers again connected with whanau by 'previewing' future learning to frontload the learning of our priority learners.

Below: Section of typical maths email to parents.

Dear Parents

I hope you're enjoying the long weekend.

I just wanted to take the time to give you an update regarding our learning in ALiM (accelerated learning in maths) this term.

You will see that I have emailed out a survey for you to please complete - thanks in advance for your time on this - any queries please let me know.

I also wanted to draw your attention to our google classroom page. The girls that I work with each morning have decided to name their group 'The Maths Minds'. Please ask your daughter to show you this google classroom page to talk about some of the learning that we have been doing so far.

The girls have a challenge this week to work on which links closely to our learning around measurement. If you are able to support them with this that would be great. **Our upcoming focus in class next week will be around capacity. Your daughter will be at an advantage if they have already discussed capacity at home with you prior to our learning next week.**

Week 6 challenge:

Find two or three objects at home that you can estimate and weigh using your kitchen scales.

Add the weights together - what is the total weight of the products altogether?

How many grams do you need to add or subtract to take your total weight to the nearest kg?

Record this total using kg

We are also working hard on learning our times tables by heart so that we can apply this knowledge to our problem solving.

Here is a [youtube link](#) to a song we are using in class.

We have been working on using known times tables to solve unknown facts such as:

$$8 \times 4 = 32$$

$$5 \times 8 = 40$$

$$40 - 8 = 32$$

Whanau received email updates regarding our learning focus along with maths challenges and ways to support learning at home. Teachers used the notion of preview and let parents know explicitly that their child would be at an **advantage** if they discussed certain mathematical concepts e.g. measuring in grams/kg before class a given week. Students also had a google classroom page as a way to share their learning and continue the learning conversations at home. Whanau were also surveyed to explore their mathematical dispositions.

Teachers also spent ten minutes with their identified cohort above the rest of the class - working on tomorrow's problem. At times the whole class was working on real life problems across math curriculum - with two mixed ability groups.

One teacher used four, ten minute sessions every week during a 9:00-9:15am 'Soft Start' time. This allowed for preview of upcoming learning without compromising learning time. The same teacher identified instances where the cohort, (or individuals within the cohort) could not engage in a problem because they had no prior knowledge or understanding to hang it upon. The solution used to this was to walk around the problem and identify something that the cohort (or individual) could grasp.

The teaching team identified the following aspects that were successful in their acceleration of learners

Talk moves to develop quality mathematical discourse (revoicing, repeating, reasoning, adding on, waiting, turn and talk)

Low floor-high ceiling problems (multiple access points within problems).

3 Act Math problems - Dan Meyer.

Parallel tasks.

Regular formative assessment to inform next steps.

Pushing learners' zone of proximal development by providing challenging tasks with high expectations for every learner.

Front loading learners with a key piece of information or a key concept that would have the biggest impact for their learning in real time - asking ourselves "What can I do today that is going to have the biggest impact for my learners now/tomorrow?"

Planning for the Pepper Rollins' six steps of acceleration.

Building a collaborative and supportive culture within our groups.

Prioritising maths time and building habits and practices within our learning (using a timer to build set routines).

Sharing the 'why' with our learners - involving them as active participants not just passive receivers of learning.

Using Jo Boaler's work around growth mindset and the importance of making and celebrating mistakes in our learning.

Providing real world relevance and connections.

Creating room within our maths programmes for deep and rich learning in order to bring maths to life - LESS IS MORE!

Results

From the start the students displayed enjoyment for challenging problems and working together, regardless of ability. They very quickly became able to articulate the strategy or knowledge they used to solve problems. Some contributed more than others, but they clearly taught each other.

Student voice captured at the end of the intervention indicated the gains made in confidence and motivation.

"It's good to ask people because it's taking you out of the learning pit"

"I ask for help"

"Sometime I ask a buddy or the teacher"

"If I'm stuck on something I just ask the person beside me"

"I like asking people for help"

"I think it's okay to make mistakes because you grow your brain"

"There is always a solution to a maths problem and I just need to ask questions, ask for help"

“I really like challenges in maths.”

“I’m really good at maths and that’s why I’m excited about maths”

“Because it’s really fun at maths time because you get with your group and solve problems with equipment. I like using equipment”

“I think it is ok to make mistakes and it is ok to be stuck”

“Mistakes are important and they get you to a new level”

“When I made a mistake (last week) it felt a little bit weird inside but I still felt proud of myself because I learnt something new I made a mistake and I kept on going”

When I am asked to share my ideas... “I don’t normally like sharing my ideas but now I do”

When I am given a maths problem to solve... “I am using more persistence... because I don’t give up, I keep on trying”

Cohort One Selected Year 4 and 5 Girls

Over the 20 week (5 month) intervention 16 out of 18 girls moved at least one curriculum sublevel (approx. 8 month progress)

All made progress in terms of dispositional improvements.

Cohort Two Selected Year 3 - 6 Students

Over the 20 week (5 month) intervention 20 out of 25 students moved at least one curriculum sublevel (approx. 8 month progress)

All made progress in terms of dispositional improvements.

Implications

My findings throughout this sabbatical have strengthened my view that ‘preview’ has huge potential in terms of allowing priority learners to make accelerated progress across the curriculum.

Through my readings, school visits and examination of our own practice I am convinced that ability groupings have limited impact in supporting at risk children to make the gains necessary to work alongside their peers. At worst such an approach limits motivation and potentially locks children into a cycle of underachievement.

I have also noted the power of strong home and school partnerships and believe that preview can help to structure this partnership, encouraging parents to play an active role in preparing their children for increased success at school.

I will continue to support our teachers to use preview as an integral part of their practice. I will encourage teachers to use innovative methods to share key skills and knowledge prior to lessons and units of inquiry. Some of these are already established, such as regular communication with parents through Google classroom and fortnightly emails. Some continue to emerge such as structuring teacher aide programmes to focus on future learning where possible and using a ‘soft start’ to the day to provide time for teachers to work with selected cohorts and individuals.

Teachers will be encouraged to investigate the role that acceleration and preview can play as part of their teaching inquiries and will also be encouraged to share their findings, as our maths team has done this year.

Teachers will also be supported with curriculum design to assist them to plan rich and appropriate learning tasks with a low floor and a high ceiling along with multiple pathways to success.

Conclusions

To always do what we always done and expect different results is indeed, somewhat insane. It is important to challenge existing constructs as we seek to make a difference for our priority learners. We must question the role of remediation and look for opportunities to accelerate progress. Mixed ability and flexible groupings have this potential. To allow our at risk learners to work successfully in this environment they need the skills and knowledge to do so. Preview can help to provide these tools.

Acceleration jump-starts underperforming students into learning new concepts before their classmates even begin. Rather than being stuck in the remedial slow lane, students move ahead of everyone into the fast lane of learning. Acceleration provides a fresh academic start for students every week and creates opportunities for struggling students to learn alongside their more successful peers. (Pepper Rollins, 2014)

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Note

My sabbatical also provided a valuable opportunity for refreshment. I spent two weeks on the Tour de France climbing 14000 metres on many of the Tour's famous mountains. I was also able to spend much appreciated time with extended family in the UK. Thank you to TeachNZ for the opportunity.



Nearing the summit of Mt Ventoux: France