

# What do Principals of High Performing Schools do to achieve Sustained Improvement Results?

## Abstract

Education systems across the globe have enacted national testing regimes to monitor and report student achievement progress as an outcome of teaching performance. This paper reports on an investigation of strategies that principals of high achieving schools use to achieve school results, based on NAPLAN reports (the National Assessment Program in Australia) and interpreted via the Alignment, Capability and Engagement (ACE) model of organisational readiness. Our findings identified specific principal behaviours, actions and attitudes as necessary for effective school-wide improvement programs, as well as the existence of commonly shared strategies and approaches that help to explain why these particular principals have been successful in pursuit of school improvement. These include a shared vision for improvement, use of data-driven decision making, and building positive, “transparent” relationships to encourage teacher buy-in. Importantly, these findings identified “organisational readiness”, a foundational principle of the ACE model, as a fundamental requisite to effective school improvement.

**Keywords:** principal leadership; organisational readiness; ACE Model; school achievement; school leadership.

## INTRODUCTION

Education systems across the globe place a premium on the teaching performance of their schools and have enacted various national testing regimes to monitor and report on student achievement progress as an outcome of this performance (Organisation of Economic Cooperation and Development [OECD], 2013; 2010a; 2010b; Hanushek & Woessmann, 2011). In Australia this regime is known as the *National Assessment Program – Literacy and Numeracy* (NAPLAN) (National Assessment Program [NAP], 2019), and school principals are required to respond to reported NAPLAN outcomes by enacting improvement programs (Buckingham, 2013). This paper reports on the behaviours of 16 principals who made significant and sustained improvement in the NAPLAN results of their school when compared to “similar schools” during the reporting period 2016 to 2018. The findings make an essential contribution to our understanding of effective school improvement because the paper

documents a range of behaviours taken by these principals to achieve such outcomes and aligns them to a transformational model of leadership. We begin by providing an outline of NAPLAN.

## **NAPLAN**

The National Assessment Program – Literacy and Numeracy (NAPLAN) (NAP, 2019) is an annual testing regime created by the Australian Curriculum, Assessment and Reporting Authority (ACARA). NAPLAN is a set of standardised tests that evaluate competency in reading, writing, language conventions and numeracy. These tests have been administered annually since 2008, to Years 3, 5, 7 and 9 throughout Australia. Following administration, schools receive a NAPLAN achievement profile for each student as well as overall cohort data. An essential function of these results is to provide comparative NAPLAN data for the achievement levels of each school. Schools can also compare achievement levels to the National average and to “similar schools”, based on like scores from the Index of Community Socio-Educational Advantage (ICSEA), which was developed to enable fair and meaningful comparisons to be made on the basis of the performance of students in literacy and numeracy as reported by the NAPLAN (ACARA, 2013). The ICSEA employs a multi-level regression model to reflect the combined influence of the student and school’s cohort Socio-Educational Advantage (SEA) components on NAPLAN performance, based on the following formula:

$$\text{ICSEA (student)} = \text{SEA [student]} + \text{student Indigenous status} + \text{SEA [school cohort]} + \text{percent Indigenous enrolment} + \text{remoteness} \text{ (ACARA, 2013).}$$

NAPLAN results can also serve as a proxy to compare teaching performance across schools (ACARA, 2018), and the use of NAPLAN results in this way is essential for the current investigation, because there is significant research that links positive teaching performance to effective school leadership (e.g., Hargreaves & Fullan, 2012; Hattie, 2009; 2011; 2012; Lachat & Smith, 2005; Leithwood, Harris & Hopkins, 2008; Marzano, Waters & McNulty, 2005; Shen & Cooley, 2008). From this perspective, we will now explore the impact of school leadership on student achievement, mediated through its impact on teacher performance.

## **IMPACT OF SCHOOL LEADERSHIP**

There has been an enduring focus within education on identifying what school leaders can do to improve student achievement (Hattie, 2009; 2012; Lakomski & Evers, 2016). In a meta-analysis of over 5,000 studies measuring the behaviours of school leaders, Marzano, Waters and McNulty (2005) found 69 studies from the previous 35 years that had examined “the quantitative relationship between building school leadership and the academic achievement of

students” (p. 6). They found that “principals can have a profound effect on the achievement of students in their schools”, and while not able to produce “any straightforward explanations” (p. 38), they defined 21 leadership responsibilities “important to effective leadership in schools” (p. 64). More specifically, in a meta-analysis of research on school leadership and student outcomes, Robinson, Hohepa and Lloyd (2009, p. 656) found five leadership dimensions that impacted on student outcomes as follows (effect size): establishing goals and expectations (0.42); resourcing strategically (0.31); planning coordinating and evaluating teaching and the curriculum (0.42); promoting and participating in teacher learning and development (0.84); and ensuring an orderly and supporting environment (0.27).

Reflecting on an extensive review of literature concerning effective school leadership, Leithwood, Harris, and Hopkins (2008) made a similar claim that: “leadership is second only to classroom teaching as an influence on pupil learning” (p. 28); “almost all successful leaders draw on the same repertoire of basic leadership practices” (p. 29), and; “school leaders improve teaching and learning indirectly and most powerfully through their influence on staff motivation, commitment and working conditions” (p. 32). Furthermore, Leithwood et al. (2008) stated, “there is not a single documented case of a school successfully turning around its pupil achievement trajectory in the absence of talented leadership” (p. 29).

The overwhelming conclusion to be drawn from these prior studies is that school leaders have a clear impact on student outcomes. However, of interest for the current investigation is that the focus for these studies has been on highlighting general dimensions, factors responsibilities or strategies by which school leaders have been able to influence student outcomes overall in relation to school improvement. In contrast to these approaches, our study has sought to determine the specific behaviours, attitudes and actions of principals in relation to school improvement, with a particular focus on leading teachers to prepare for the change agenda relating to school improvement, and from the perspective of transformational leadership, to which we now turn.

### **TRANSFORMATIONAL LEADERSHIP: THE ACE MODEL**

The current study seeks to uniquely contribute to this area of research by using the Alignment, Capability and Engagement (ACE) Model of transformational leadership (Schiemann, 2006) to interpret the responses of 16 principals as they reported on how they led successful school improvement programs. The ACE model represents a transformational model of leadership that focuses on how leaders optimise effective change via three dimensions:

- Alignment: the degree to which leaders align staff to the vision, mission and goals of a change program
- Capabilities: the degree to which leaders ensure that staff have access to the relevant resources, skill sets, and professional learning required to enact the change program
- Engagement: the degree to which leaders can inspire and motivate staff to engage in the change program.

This model is transformational in that it “emphasises leaders’ developing a compelling vision, providing individualized support, and intellectual stimulation to staff, and engaging them in the achievement of shared goals” (Sun & Leithwood, 2015, p. 500). Importantly, this model can provide a framework to contextualise research in educational leadership through the lens of Alignment, Capabilities and Engagement, which can be linked to prior research in the area of leadership impact as follows:

- Leithwood (2013) found *aligning* teachers by “direction setting practices” and *building their capabilities* by “developing people, redesigning the organisation and managing the instructional program” (p. 636) were useful strategies employed by successful leaders.
- Specific to transformational leadership, Moir, Hattie and Jansen (2019) found that teachers preferred transformational leaders who developed *engagement* through high levels of interpersonal skills such as trust and *aligned* their staff by placing a premium on student achievement.
- Behaviours which impacted most on student learning were those resulting in what Marzano et al. (2005) referred to as “second-order change” (p. 113). These included *aligning* through ideals and beliefs, *capability building* by intellectual stimulation, and *engaging staff* by way of affirmation.
- The principal’s role is to ensure teachers are *aligned* and *engaged* by bureaucratic structures that promote teacher autonomy through “open and innovative-stimulating (vision-building, intellectual stimulation) actions” (Buske, 2018, p. 274).
- Notably in the research of Robinson et al. (2009 - referenced earlier in this section), the dimension with the most substantial effect, “promoting and participating in teacher learning and development,” involves school leaders participating *in* and *with* teacher learning and development, which is considered an essential aspect of Schiemann’s (2014) conceptualisation of *organisational readiness*. This notion sits at the heart of

the ACE model and proposes that school leaders who are able to transform and direct Alignment, Capabilities and Engagement in support of the change agenda surrounding a school improvement initiative, are better able to enact positive improvement outcomes.

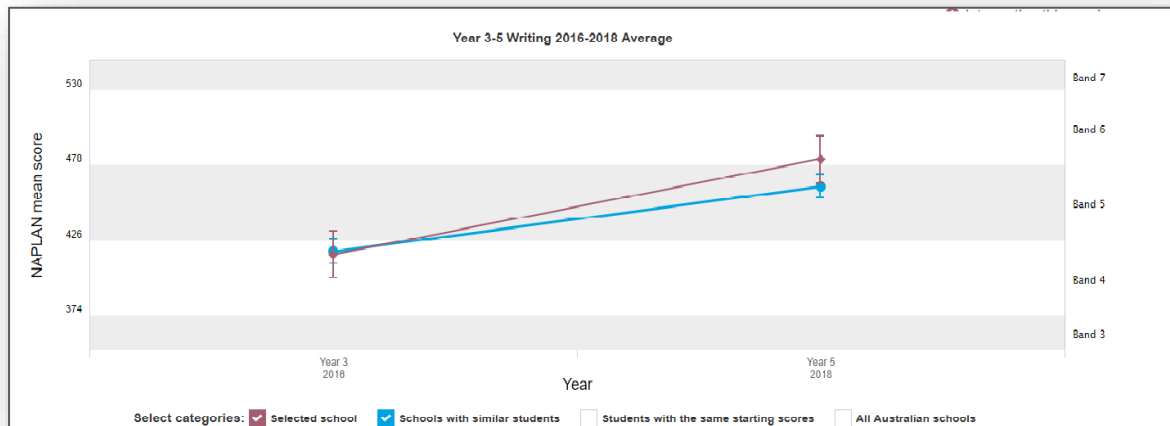
At a conceptual level, the ACE model can be viewed as a representation of the Theory of Planned Behaviour (TPB), which suggests an explicit relationship exists between attitudes, intentions and behavioural engagement (cf. Ajzen, 1991; Armitage & Conner, 2001; Lamorte, 2018). We also note that Dinham (2016) reported similar findings concerning the impact of this relationship on the role of school leaders in the United Kingdom and Australia. Working from this position and accepting that school leadership has a significant impact on student achievement, the question of primary interest for this particular report is to what degree the specific leadership behaviours of successful improvement-leading principals correspond to the notion of organisational readiness as a means of effecting consistent transformative change in education settings.

In this respect our application of the ACE model is echoed by Macklin and Zbar (2017), who argue that school improvement, and therefore student learning outcomes, “stands or falls on school leadership and what it does” (p. xx). This use of the ACE model is part of ongoing research on the part of the authors, in terms of investigating ways to frame specific practices and strategies employed by principals to promote readiness in their schools (Authors, 2018; Authors, 2019). The current study seeks to build on this research by using the ACE model’s notion of organisational readiness to explain why specific leadership attributes and behaviours are effective in the pursuit of improved student achievement outcomes. The primary focus of this report, therefore, is to investigate how the attitudes, intentions and behaviours of successful school principals act to implicitly operationalise organisational readiness as a fundamental factor in preparing for successful school improvement.

### **The Investigation**

A licence was obtained from the Australian Curriculum, Assessment and Reporting Authority (ACARA) to access national NAPLAN school achievement data for the reporting period 2016-2018. This identified the 20 highest ranked schools for “high-NAPLAN-gains” nation-wide. Schools with High-NAPLAN-gains had overall NAPLAN results that moved from being equal to, or below the results of “similar schools” in 2016, to being higher than the results of “similar

schools” in 2018. Diagram 1 provides an indicative example of a school with High-NAPLAN-gains in Writing for a cohort from Year 3 (2016), and Year 5 (2018).



**Diagram 1: Example graph showing a “high” student gain outcome for NAPLAN**

From these 20 highest ranked schools, 16 principals from 14 schools (one school had multiple principals during the course of the relevant NAPLAN reporting period) accepted an invitation to participate in the study and took part in semi-structured interviews that yielded five questions of interest for this report. These interviews took between 60 to 90 minutes and were audio-recorded, with the interviewer taking detailed notes as well. It is important to note that no reference, mention, wording or allusion was made to the ACE model, nor the notion of organisational readiness, the work of Schiemann, or the idea of transformational leadership at any time prior to or during these interviews or the course of this investigation. This was necessary in order to ensure against biasing the responses of these principals in any way, shape or form during the investigation. Our aim in this respect was to allow the principals to speak for themselves, using their own words and articulating their own concepts and principles. Thematic analysis was then used to inductively identify meaningful patterns from the audio-recordings and interview notes; and were followed by group discussions using comparative analysis techniques (Creswell, 2002; Moss, 2001) to inform this paper.

### ***Demographics***

Of the 14 schools, seven were primary schools and seven were combined primary and secondary schools, eight were state sector schools, and six non-state sector schools, and the locations of these schools were 4 from major cities, 4 from inner regional, 4 from outer

regional, and 2 from remote areas. Overall these schools represented all Australian states and territory education jurisdictions. The schools were all co-educational, with student populations ranging from 152 to 1141 students, and with an average of 476 students. The rounded full-time equivalent teacher to student ratios ranged from 1:90 to 1:20, with an average of 1:15. The ICSEA scores of these schools ranged from 981 to 1038, i.e., within a single standard deviation of the national median ICSEA value of 1000, allowing for meaningful comparisons to be made between the schools. In terms of age, one principal was aged 30-39 years, six were aged 40-49, eight were aged 50-59 and one was aged 60-69. With respect to gender, 9 identified as male and 7 identified as female. 15 principals had at least one prior principalship and at least ten years of experience as a principal. The principals had a mix of undergraduate and postgraduate qualifications, with the majority having completed a Master's degree.

### ***Findings***

#### ***Q1: Describe your overall approach to leading your school.***

Principals' responses were markedly similar in stating that building positive relationships with teachers was a central focus of their school improvement agenda. Principals emphasised engaging teachers through various modes of collaboration, including staff meetings to air grievances, and to discuss and decide strategic and operational issues. Principals also built the capacity of teaching teams via specific coaching and mentoring arrangements. The use of student performance data to make decisions was also a key point made by each principal.

These principals expressed the importance of teachers being active participants in a continuous teaching improvement agenda. A clear theme was that the principals were relentlessly focused on teaching improvement and used the development of a shared and agreed vision to align staff with this. These responses resonate with findings from Hallinger and Heck (2011), that successful school improvements are an outcome of the collective efforts of leaders and teachers, shaped by collaboration and activated by the embracing of mutual influence.

The two main themes to emerge from these Q1 responses were:

Theme 1: Enacting a clear and agreed vision with teachers

- A vision focused on improvement metrics
- Using data to make informed decisions
- Clear intents

Theme 2: Empowering staff through collaboration and capacity building

- A focus on building capacity via targeted professional learning
- Supporting people to improve
- Teaming; working together to solve problems and create capacity
- Involving teachers in decision making
- Providing opportunities to improve, e.g. coaching, mentoring arrangements

Further on Theme 2, “empower” came to mean ensuring teachers had the requisite knowledge, skills and confidence to undertake the task ahead, and opportunities to be actively involved. “Collaboration” meant providing opportunities to work with other teachers, and “capacity building” referred to making structural changes, e.g. resource allocations, designed to enable teachers to do what was required.

***Q2: What are the fundamental principles which inform your work as a school leader?***

A common theme was the principal being “visible” in their school. Participants clarified visibility as being involved in teaching and learning functions and being viewed as the “lead teacher” rather than solely as the “lead administrator.” They claimed that leading teaching and learning in their schools was imperative, with the operational management of their school a distant second and often delegated to others. All participants also indicated they undertook formal and informal coaching and mentoring arrangements with teachers, and contributed to all critical teaching decisions. They used every occasion to share how the school’s vision and associated plans were unfolding, and let teachers know that their efforts and expertise were valued, encouraging a culture where teachers sought assistance to meet their challenges.

Indicative Q2 themes:

Theme 1: Being visible in the core business

Theme 2: A relentless focus on teaching and learning

Theme 3: The importance of building and maintaining positive working relationships

Theme 4: Having and espousing high expectations

Theme 5: Working towards establishing shared values and agreed outcomes

These responses agree with Seashore Louis, Dretzke and Wahlstrom (2010), in that the two most important ways to impact student learning are to do so directly through instructional leadership and indirectly by supporting teachers in professional communities. Being visible in this way, establishing shared values and vision, and building positive working relationship are



all also inherent characteristics of organisational readiness, in that they all contribute to positive preparation for school improvement at the social level of Alignment.

***Q3: Your school has shown significant improvement in NAPLAN results during the reporting period 2016 to 2018. What do you attribute this to?***

In their responses to this question the principals often described themselves as being the conductor of an orchestra or the coach of a sporting team. More broadly, they indicated they worked to focus, enable and motivate their teachers to embrace continual improvement. Of interest was that it became evident that their approach had been explained many times before, that it was alive in their current thinking and that they had developed a personal model to explain their plans. This was often referred to as stemming from the work of researchers, most notably John Hattie's Visible Learning (Hattie, 2009; 2012).

While referencing research appeared to afford a certain sense of confidence in their approach, the principals also cited improvements in student performance data as central reference points for their plan, as well as being vital indicators of their success. We interpret this to mean that these principals felt confident in knowing how to undertake a whole of the school improvement program. They espoused a clear sense of what needed to be done to improve their school, and regularly revisited their plans in consultation with teachers and other stakeholders.

These responses revealed a core theme concerning school improvement, where a focus was placed sequentially on what Hirsh, Psencik and Brown (2014) have referred to as a "cycle of improvement". This cycle involved: a) reviewing data, b) enrolling teachers to a change agenda, c) working to build the required capacities, both organisationally and capability wise, d) enacting a common school-wide approach to the problem area, and e) reviewing progress with data. In accordance with this, the principals also revealed that their ultimate intent was to enact teaching change by improving what teachers did in their classrooms.

Three strategies were used to support this intent:

- (1) Use data-informed practices
- (2) Build teacher capacities based on evidence
- (3) Relentlessly focus on the core purpose of improving student learning

The principals' main attribution for NAPLAN success was that they sought to generate certainty through their intentional use of data as evidence. Generative questions such as "what is the data telling us" were used to focus teachers on analysing their teaching practice and

ensuring that their practices were focused on successful student outcomes. This accords with the ACE component relating to Capabilities, in that it ensures that staff have access to the relevant resources and skill sets needed to prepare for and then engage with the school improvement change agenda.

***Q4: What are the required conditions for you to successfully enact a teaching improvement program?***

While Question 3 sought to elicit the perceived causes of their success, this question and Question 5 asked principals to reflect on their school improvement journey, to reveal how they prepared teachers for change. Once again, positive relationships, as well as an imperative to have all teachers “on-board,” were pre-requisites to school improvement. Principals also spoke at length about how they used conversations around data to encourage teachers to embark on a program of school improvement, e.g., using “like school metrics” as a comparison tool to establish an agreed need for change, through to conversations about individual students and the teacher’s personalised learning needs.

With regard to personalised learning, the principals identified targeted professional learning as necessary to ensure teachers had the requisite skills to undertake the improvement program. “Targeted” was explained as meaning customising learning experiences to meet the range of teachers’ learning needs. From this perspective, the main theme around perceived successful conditions appeared to be for principals to demystify school data, present it as a positive tool for improvement, and then use it as a reference point for targeted teacher learning. Strategies to support this process included:

- (1) Build positive relationships
- (2) Share understanding of how to collect and use data
- (3) Have a strong focus on building school-wide willingness to collaborate on a solution.

***Q5: How do you prepare your teachers for whole school teaching improvement?***

Principals positioned teachers for whole school improvement by structuring a combination of information sharing sessions and professional learning (PL) opportunities, aimed at providing teachers with requisite skills and understandings. This was articulated as “positioning teachers for success” and was supported by establishing a clear understanding of the improvement agenda, building positive relationships and negotiating agreed improvement strategies. These findings are similar to Thoonen, Slegers, Oort, and Peetsma (2012), who found successful

school leaders were those who initiated vision-building processes, were empathetic to the emotional needs of teachers, and stimulated these teachers to pursue school-improvement aligned professional learning activities. In this sense, positioning was a strategic step through which the teachers came to trust each other and the principal, and where information transparency was valued.

The theme for Question 5 was that whole school preparation required multiple conditions, which we have grouped here in relation to the “required conditions” of Question 4:

Required Condition 1: Build positive relationships

- Transparency, share the whole story, share all data
- Encourage conversations and talk about how it impacts each other
- Personalise the message for change
- Focus on wellbeing as we change, focus on pastoral care
- Enable teachers to create teams and collaborate on ideas and solutions
- Be involved with teachers, challenge them to think differently

Required Condition 2: Share understanding of the data and the message conveyed

- Having good data sets- various sources
- Explaining what the data is telling us
- Helping teachers to understand the data
- Using data to create a sense of urgency for change

Required Condition 3: Have a strong focus on building school-wide willingness to collaborate on a solution

- A clear vision of what is focused on and why
- Enable teachers to collaborate and seek evidence-based solutions
- Use data to monitor outcomes
- Solution-orientated teams
- Commitment to the task as principal

## **Discussion**

We know from prior research that principals are pivotal to assisting teachers to improve their performance, aimed at increasing student learning outcomes. The specific attitudes, beliefs and behaviours involved in this have been explored to some extent by previous research

investigating school leadership, but such research has generally sought to understand the roles and functions of school leaders within frames of reference that are more generalised and categorical. In contrast, the current study employed an interview protocol to elicit information from principals with a proven track record of successful school improvement, concerning their specific leadership behaviours, actions and attitudes aimed at leading for school improvement, and with a distinct focus on how they lead teacher preparation for school improvement.

The analysis of responses gained through our investigation of these things has shown that the principals shared many behavioural and attitudinal characteristics in their approaches to change-focused leadership. Common themes included the need to develop an agreed vision, empowering staff through collaboration and customised professional learning, leading by example, using data to both motivate and guide change, and building positive, “transparent” relationships to encourage teacher buy-in. We have focused these themes through the ACE model of leadership, in particular how the principals embedded the concept of readiness for change. In this sense, a key point of inquiry for the current investigation has been to investigate the degree to which the actual strategies of principals compare to the ACE model of school readiness, as a particular approach to preparing for improvement change.

In this regard, all the principals espoused the importance of a clear, agreed school vision for improvement, based on teacher empowerment through the use of collaboration which provides opportunities to learn new skills, congruent with the ACE concept of Alignment. The principals also identified positive relationships as the typical basis for achieving staff willingness to collaborate and enact improvement solutions, galvanising teaching staff to their improvement agenda first, and then used collaborative processes, systematic coaching and mentoring to support these teachers in delivering school improvement. Importantly, this approach manifests the ACE concepts of Capability and Engagement.

The notion of systematic coaching and mentoring, and the need for principals to have a clear plan for directing continual school improvement, were fundamental precepts for change according to these principals. As an example, principals sought to mentor teachers into relevant skill-sets around data, engaging teachers in “similar school” data comparisons and using this data to focus teachers’ professional learning. Precise planning and systematic mentoring concur with the ACE components of Alignment and Engagement, as they direct teacher activity and inform how their engagement was supported. The use of data-driven analysis as the basis for monitoring and evaluating school improvement was another common element of success amongst these principals. The vehicle for this was the principals’ use of direct conversational

engagement, and we note that this approach – using data to both engage and motivate teachers – can also be seen as an overall theme for the ACE model.

A valuable subsequent study would be to interview principals of established low-performing schools to investigate if there are different types of activities undertaken by these school leaders in relation to improvement change and the ACE model. As supported by May, Huff and Goldring (2012), there may be differences between the two sets of principals which may be explained by context-driven priorities, e.g., principals needing to be more hands-on and reactive in lower-performing schools, and more strategic and proactive in higher-performing schools. Examining the other side of the coin in this way could, therefore, help to clarify the distinctiveness of these current findings.

## **Conclusion**

This report found specific behaviours, actions and attitudes that principals reported as necessary to engage in school-wide improvement programs. We examined these behaviours, actions and attitudes through the lens of the ACE Model, which focuses on how leaders ready their organisations for change. This focus was necessary as the specific behaviours, actions and attitudes required to ready a school for improvement change have not been a significant subject of preceding research, which has largely focused on what school leaders do during a school improvement initiative.

In this respect, a distinctive contribution of the current investigation has been its comparative analysis of specific leadership behaviours and attitudes in relation to the ACE model notion of organisational readiness, also informing us of what school leaders do to prepare for school improvement and linking these behaviours to how they then continue the improvement over time. This analysis has highlighted the existence of many commonly shared strategies and approaches that help to explain why organisational readiness is important to the pursuit of school improvement. We wish to share this information more broadly, in order to help delineate what may be involved in the preparation phase of a successful school improvement initiative.

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