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In good hands? Foresight and strategic thinking capabilities of regional university leaders.

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Abstract

Regional universities are systemically critical to nation building and in particular regional wellbeing. Their impact is broad, encompassing the full diversity of sustainability indicators across ecological, social and economic dimensions. Regional universities significantly contribute to regional resilience, adaptability and economic growth. Approximately 80% of Australia's exports are generated in regional areas. The relative health of regions is broadly acknowledged as fundamental to Australia's future and international standing.

This study is concerned with the role of senior university leadership in enabling regional universities to continue to have a meaningful presence in regional systems and optimise their impact in times that are undergoing significant flux and typified as 'regional communities under threat'. Leadership of regional universities, by implication, play a critical role in achieving regional wellbeing, productivity and resilience through the relative success or not, of their universities.

The study builds on previous studies that confirm the importance of foresight competence and strategic thinking in leadership and organisational performance. The study adopts the notion that leadership is the primary enabler of university strategic direction and that these leadership capabilities are antecedents to university strategic decision making, policy formulation, primary pedagogical assumptions and mission. It adopts a validated and reliable model to investigate the related cognitive profiles of senior university leaders.

This is the first empirical study that investigates the foresight competence and strategic thinking of strategy-level leaders of regional universities. The study adopts a survey methodology. The results confirm the importance of foresight and strategic thinking capabilities in senior university leadership. They also illustrate the averaged foresight and strategic thinking profiles of leaders in Queensland regional universities and that these may be an indication of leadership in regional universities more generally. The study concludes by illustrating ways in which the 'flatlands' of higher education can be overcome by developing futures-orientated core competence in regional universities.

Introduction

> "Universities play a vital role in shaping Australia as a highly-skilled, innovative and prosperous nation. We are the champions of change, driving ideas and thinking for tomorrow". Belinda Robinson, CEO, Universities Australia, 2012

Regional universities are systemically critical to nation building and in particular, regional development (Trani & Holsworth, 2010). Beside the traditional attributes associated with universities' role in the community, the impact of regional universities is broad and encompasses the full diversity of regional sustainability efforts across ecological, social and economic dimensions. Regional universities significantly contribute to regional economic growth, adaptability and resilience and this impact has been relatively unexamined. Indeed the main premise of this study is that regional universities are indispensable to regional economic and community development (Trani & Holsworth, 2010) which is also fundamental to Australia's future (Henry et al., 2012).

The study is concerned with the role of senior leadership in enabling regional universities to continue to have a meaningful presence in regional systems and optimise their impact in times that are generally typified as placing 'regional communities under threat'. In particular, the purpose of the study is to determine the cognitive profiles of senior university leaders in regional Queensland and answer the question *"How and to what extent do senior leaders in Queensland regional universities engage the future and fulfil the task of strategic thinking in formulating strategy?"* This is especially pertinent in terms of the increasingly acknowledged importance of leaders' foresight and strategic thinking competences in contributing toward effective, future orientated strategy (Bonn, 2001; Major, Asch, & Cordey-Hayes, 2005; van der Laan, 2008). The underlying premise of the study is that within context of the national importance of regions and their response to an environment in flux, leaders of regional universities are key stakeholders in determining nations' growth and resilience in global competitive markets. Indeed, it adopts the notion that leadership is the primary enabler of university strategic direction and that these leadership capabilities are antecedents to university strategic decision making, policy formulation, primary pedagogical assumptions and mission.

The study builds on previous empirical research that confirms the importance of foresight competence and strategic thinking in leadership in formulating effective strategy which is a primary indicator of organisational performance and sustainability (Finkelstein & Hambrick, 1996). It adopts a validated and reliable model to investigate the strategic competency profiles of senior university leaders in Queensland regional universities.

This is the first empirical study that investigates the foresight competence and strategic thinking of strategy-level leaders of regional universities in relation to the development of strategies and policies aimed at enhancing their performance in meeting publicised national priorities. The study adopts a survey methodology based on a previously validated measures and theoretical model.

The results confirm the importance of foresight and strategic thinking capabilities in senior university leadership. This is especially applicable within the dynamic regulatory environment, rapidly changing structure of HE institutions, emerging research priorities, and the shifting pedagogies and technologies currently being experienced across the sector. The study concludes by illustrating ways

in which the 'flatlands' of higher education (Butson, 2003) can be challenged by developing futures-orientated competences in strategy-level leadership.

Literature review

Higher education functions in a time described as ‘post normal’ and is marked by complexity, chaos and contradictions (Sardar, 2010). ‘Post normal times’ are driven by these characteristics and are directly related to increased uncertainty for those responsible for an organisation’s future direction. This inevitably leads to “different types of ignorance that make decision making problematic” (Sardar, 2010, p. 345). Foresight is regarded as a leadership competence that allows strategy-level leaders to address uncertainty especially in terms of their strategic thinking and strategic decision making (Day & Schoenmaker, 2008; Hamel, 2009; Hamel & VÃ¤likangas, 2003). Strategy-level leaders are defined as top level leaders associated with the dominant coalition of the organisation that exerts the most influence on the organisation’s strategy (Storey, 1995).

University Leadership

Contemporary university leaders are called upon to creatively embrace innovation, complexity, change and exploit ambiguity in ethically sound directions in order to overcome these types of ignorance. Good leadership is increasingly viewed as values and needs driven rather than typically short term profit-orientated only (Jaworski, 2012; Senge, 2005). Studies of leadership repeatedly refer to the need of leaders to creatively anticipate the future while encouraging participation in the creation of shared visions and the alignment of the whole organisation to such visions of the future (Kouzes & Posner, 2002).

Strategy as developed by an organisation’s leaders is only meaningful in relation to interrogating the future (Narayanan & Fahey, 2004) and leads to the conclusion that leaders should be predominantly future-orientated in the everyday work they do (Kouzes & Posner 2002). The praxis of engaging in anticipating possible futures and driving organisational strategy is associated with a leader’s foresight and strategic thinking cognitions (van der Laan, 2010). Indeed, Thompson, Stuart and Lindsay (1997, p. 70) confirm that “Foresight and Strategic Planning competencies … were highly correlated against the top team members who exceed expectations” and were of “critical importance”.

Leaders are required to be futures-orientated with developed hybrid competencies which include foresight and strategic thinking abilities (Buchen, 2005). As such, university leaders’ performance should be appraised not only in terms of the achievement of short-term objectives typically associated with key university performance indicators but also in terms of the longer-term vision and initiatives they promote and implement. Indeed, much of the short-term workings and performance outcomes are largely still highly associated with deeply embedded traditional modes of university operation and practices.

Queensland Regional Universities

Approximately 80% of Australia’s exports are generated in regional areas. The relative health of regions in Australia is broadly acknowledged as fundamental to Australia’s future and international standing (Henry et al., 2012). Also broadly acknowledged is the fact that regional areas in Australia are facing high levels of discontinuous change and generally decreasing wellbeing (Sorensen, Marshall, & Dollery, 2007). This is closely related to demographic, regulatory, technological and

social change amidst high demands of resource availability and exploitation (mineral, agricultural and environmental). Within the context of the high levels of flux and competing interests, regional universities may function as catalysts that support successful regional adaptability as a product of learning, resilient open systems as opposed to the attitude and behaviour of closed dominant systems of the present. Indeed the PASCAL Universities' Regional Engagement (PURE) interim synthesis report (2010) acknowledges the importance of university engagement in contributing to regional development but concludes that the potential of universities to contribute to the economic, social and cultural development of their regions is not fully realised.

Regional universities account for a combined AUS$6 billion direct and indirect economic contribution (van der Laan, 2011) to the regional economies of Queensland. Leadership of regional universities, by implication, play a critical role in achieving regional wellbeing, productivity and resilience through the relative success or not, of their universities. The Australian Government's objectives as set out in its White Paper "Australia in the Asian Century" (2012), and specifically as related to the role of regional Australia imply the increasing importance of regional universities in sustaining regional growth and development. Indeed, it would be counter-intuitive to ignore the importance of universities' leaders being foresightful and astute strategic thinkers within the context of their important role in regional Australia and the nation's future. Yet, the PURE report (Duke, 2010, p. 2) concludes that regions in its study "often find universities opaque and monolithic".

Foresight competence

Strategy and leadership research have illustrated the importance of individual competences which, when 'pooled' develop organisational capabilities and competencies (Sanchez, 2004). Individuals' competencies are central to the development of organisational core-competencies and leaders' propensities form part of the collective learning of the organisation (Prahalad & Hamel, 1990). Indeed, it is asserted that the accumulation of a company's foresight core-competence and use of foresight builds on the competency of one leader or the competencies of small teams (Major et al., 2005).

This study places a strong emphasis on the role of individuals as strategy-level leaders in their relation to their role in strategic decision-making. The concept of competence links strategy with individual job performance (Sandberg & Pinnington 2009). Similarly, it has been noted that foresight competence as a cognitive ability precedes strategic thinking as a leadership task required for effective strategy formulation. Foresight competence is defined for the purposes of this study as *"a human ability to creatively envision possible futures, understand the complexity and ambiguity of systems and provide input for the taking of provident care in detecting and avoiding hazards while envisioning desired futures"* (van der Laan, 2010, p. 62).

Strategic Thinking

The literature is indecisive about what strategic thinking is (Bonn, 2001; Goldman, 2007; Heracleous, 1998). There is however increasing agreement that strategic thinking encompasses both analytical and creative cognitions aimed at fulfilling the task of formulating organisational strategies (Raimond, 1996). O'Shannassy (2005) deduces that strategic thinking as "a particular way of solving strategic problems and (opening up) opportunities at the individual and institutional level combining generative and rational thought processes".

From the above, strategic thinking is regarded as analytical in terms of determining current conditions and involves a level of creativity in terms of choosing a future direction. It also implies making a choice from alternative future options and makes provision for possible emergent strategies that will contribute to realised strategies. This is a significant observation that focuses the leader's thought processes on the evaluation of strategic choices based on a mixture of analysis and creative prospects. The outputs of foresight competence then, contribute to this evaluation of options by providing representations of possible futures. For the purposes of this study strategic thinking is defined as "*a synthesis of systematic analysis (rational) and creative (generative) thought processes that seek to determine the longer-term direction of the organisation"* (van der Laan, 2010, p. 75).

Summary

The underlying premise of the study is that within context of the importance and response of regions to an environment in flux, regional universities remain critical to nations' relative economic, social and natural resource health. Regional universities in Queensland make a combined $1.5 billion direct economic contribution to Queensland regional economies (van der Laan, 2011). This is estimated to stimulate three times this amount in indirect and induced economic benefit (Rolfe, Cui, & Sidiropoulos, 2008). Deductively, a further premise of the study is the proposal that leadership of regional universities play a significant role in achieving regional wellbeing, productivity and resilience through the relative success or not, of their universities.

The study builds on previous studies that assert the importance of foresight competence and strategic thinking in leadership. It adopts a validated and reliable empirical model (van der Laan, 2010) that illustrates the empirical relationship between foresight competence and strategic thinking as key leader tasks antecedent to strategy. The model affirms that foresight competence and strategic thinking are separate yet highly related concepts with foresight competence functioning as an antecedent of effective strategic thinking and the development of strategy. Strategic leadership has previously been found to be directly related to organisational performance (Finkelstein & Hambrick, 1996) in addition to the literature recognising that strategy-level leaders enable sound strategy (Hamel & Prahalad, 2005; Kouzes & Posner, 2002).

This is the first empirical study that investigates the aggregated and averaged foresight competence and strategic thinking profiles of strategy-level leaders of Queensland regional universities. While the focus of this study has been delineated to Queensland, it is proposed that regional universities throughout Australia and New Zealand, and indeed internationally, face similar challenges and will benefit from the contributions made by this study. Similarly, while the quantitative data for this study has been collected using validated and reliable measures via a survey methodology in Queensland alone, the conclusions may apply more broadly. Further research is proposed to explore the application of the findings across regional, nation and international contexts.

Method

The study adopts a survey methodology based on a previously validated theoretical model and instruments. The study forms part of a larger mixed methods research design which includes qualitative rich data and Causal Layered Analysis (Inayatullah, 1998) to discover deeper meaning and underlying assumptions. For the purposes of this study survey research is regarded as the strategy to

acquire empirical data that relates to one or more groups of people (Leedy & Ormrod 2005), in this instance strategy-level leaders in Queensland regional universities.

Sample

The study adopted a purposeful sampling strategy. Participants were selected within the parameters of; a) all regional universities in Queensland forming part of the study, and b) all participants being identified in terms of common hierarchical positions of authority (Vice-Chancellor, Deputy Vice-Chancellor, Pro-Vice Chancellors and Senior Strategy Professionals). There are four universities in Queensland that are classified as regional. These are Central Queensland University, James Cook University, University of the Sunshine Coast and The University of Southern Queensland. The sample contains 17 respondents from all four universities including Vice-Chancellors, Deputy Vice-Chancellors, Pro Vice-Chancellors and Senior Strategy Professionals. The population according to the organisational executive structures of the four universities totals 27 senior strategy-level leaders. The sample does not include discipline specific leaders, middle managers or council members.

Using a confidence level of 95% and 50% standard likelihood that respondents will choose the same answer, the Confidence Interval (CI) or margin of error relating to generalising the results is 14.74%. This is a significant reliability indicator indicating that the likelihood of the whole population would fall within 7.37% of the sample mean response. While the generalizability of the study is statistically strong, further research would be required to confirm the extent of this due to the relatively small population size.

Instruments

Two criteria were considered in the appropriate selection of instruments used in this study. The first was to determine the appropriateness of the measures based on suitable reliability and validity indicators for all the instruments. The second criterion was to include measures that are associated with the constructs in a theoretical model that has been empirically validated by Structural Equation Modelling (SEM). Structural Equation Modelling is an advanced statistical analysis technique for investigating the causal relationships between variables based on reliable measures of the variable constructs (validated by Confirmatory factor Analysis of the instruments). It has been described as a combination of exploratory factor analysis and multiple regression (Ullman, 2001). This study adopts a SEM of the relationship between foresight competence and strategic thinking operationalized using multiple measures based on a validated theoretical model (van der Laan, 2010).

Leaders' TimeStyles

Fortunato and Furey (2009) refer to Furey's theory of MindTime. The theory proposes that "three distinct patterns of thinking evolved in concert with the ability to engage in mental time travel" referred to as Past, Present and Future thinking perspectives (Fortunato & Furey 2009, p. 241). The theory asserts that; i) the extent to which individuals utilize the thinking perspectives differ and can be constituted in terms of a combination of perspectives, ii) the differences of extent can be measured, iii) the extent to which the perspectives are utilized determines how the individuals develop perceptions of and interact with their environment and others (Fortunato & Furey 2009).

Foresight competence is associated with a dominant future thinking orientation (Ability to see gaps in knowledge, patterns and trends that diverge. Creatively imagine infinite hypothetical future possibilities in order to foresee and adapt to environmental changes). This combined with a back-up

past thinking orientation (Retrieval of past experience and knowledge by reflection and contemplation in order to reconstruct, analyse and critical evaluate information in order to reduce risks associated with anticipated current and future events), constitutes one dimension of foresight competence. The other dimension relates to the foresight styles a leader adopts when faced with matter related to the future.

Leaders' Foresight Styles

Dian (Dian, 2009) proposes that Foresight Styles are in essence a reflection of the style with which individuals cognitively respond to change and their envisioned prospects of the future. Foresight is embedded in the roles and tasks of strategy-level leaders. Foresight Styles explain the how foresight cognitions differ from individual to individual within the context of their internal disposition used to understand the future. Gary (2008) notes that these cognitive dispositions emerge from an individual's innate innovativeness and time orientation. These differ according to their propensities to tolerate risk, creativity, tolerate ambiguity, their value orientations, in addition to their predominant focus on the past, present and future.

Gary (2008, p. 76), in his study to empirically test the FSA, concludes that the refined four factor FSA "is valid and reliable with minimum construct validity for exploratory research". The four factors and attendant characteristics were further validated yielding high reliability indicators in a confirmatory factor analysis of the instrument (Van der Laan & Erwee, 2012). Table 1 lists the Foresight Styles and associated cognitive dispositions.

Table 1: Foresight Styles Assessment: Styles and cognitive dispositions

Framer	Interrogates the future Future time orientated Interested in the long-term issues that define the future Envisions 'bigger picture' futures
Adapter	Adjusts to new situations as future demands Balances multiples challenges and choices Helps others adapt / Is flexible / Activates action Flexible leadership / Change Orientated Influencer
Tester	Adopts new trends / Confirms diffusion of innovation theory Experiments with new trends when they arise Opportunistic / Not cognitive trend analysis
Reactor	Preserves own position Mitigates and resists change

Source: Gary, 2008; van der Laan , 2010

Respondent foresight competence is measured by the extent of agreement with statements in a Likert scale about a) their dominant orientation to future thinking and lower but significant orientation to the past (Fortunato & Furey, 2010) and b) their propensities to adopt dominant framer and back-up adapter foresight styles (Dian, 2009; Gary, 2008). Strategic Thinking is operationalized in terms of the Decision Style Inventory scale which measures the degree of analytical and creative leader cognitions in decision making.

Leaders' Decision Styles

Tavakoli and Lawton (2005) link strategic thinking and decision making. Strategic thinking precedes and is reflected by the strategic decisions made. It is therefore assumed that the decision-making propensity, or styles, of strategy-level leaders reflect the dominant cognitions of the individual and

thus serves as a reliable indication of their strategic thinking propensity. The Decision Styles Inventory (Rowe & Boulgarides 1994) show parallel indicators to the elements of strategic thinking as illustrated in Liedtka's broadly adopted strategic thinking model (Liedtka, 1998). As noted, strategic thinking is regarded as a synthesis of systematic analysis (rational) and creative (generative) thought processes that seek to determine the longer-term direction of the organisation. The construct is operationalized in the study in terms of interval scale measuring respondent's propensities to adopt a dominant conceptual style and back-up analytic decision style (Rowe & Boulgarides, 1994).

The elements of strategic thinking identified as systems perspective, intelligent opportunism and thinking in time correspond to the Conceptual Decision Style as measured by the Decision Style Inventory (Rowe & Boulgarides, 1994). The elements of intent focus and hypothesis driven are clearly linked to both the Analytic Decision Style as well as the more creative Conceptual Decision Style. The study therefore adopts the operationalization of the strategic thinking construct as validated in earlier studies (van der Laan, 2010) which establishes that propensities toward the Conceptual Decision Style as a dominant style with a back-up Analytic Style would reflect the propensity of an individual to be a strategic thinker. Goldman (2007) supports the assertion that strategic thinking is fundamentally one of conceptual style and resides at the level of the individual.

Survey Administration

The questionnaires were administered on one occasion to all respondents during the period August 2011 – October 2011. The questionnaire included three instruments (Foresight Styles Assessment, TimeStyle Inventory and Decision Styles Inventory) which have been validated as measuring the concepts of foresight competence and strategic thinking. High model fit statistics of a Structural Equation Model (SEM) were achieved as well as concomitant high reliability scores (Confirmatory Factor Analyses) of the relevant instrumentation used to operationalize the concepts. This provides a rigorous quantitative framework that assists in profiling the strategy-related capabilities of regional university leaders. The relevant reliability indicators and SEM model fit statistics are listed in Table 2.

Table 2: Foresight and Strategic Thinking SEM model fit statistics and CFA instrument reliability statistics.

SEM Model Fit Indices	
Chi-square (x^2)	6.678
Degree of freedom (df)	3
p	.083
Normed chi-square (x^2/df)	2.226
SRMR	.0404
Root Mean-Square of Error of Approximation (RMSEA)	.066
Goodness-of-fit Index (GFI)	.991
Adjusted Goodness-of-Fit Index (AGFI)	.953
Tucker-Lewis Index (TLI)	.905
Comparative Fit Index (CFI)	.971
Instruments	**CFA Cronbach Alpha**
TimeStyle Inventory (Fortunato & Furey, 2010)	0.719
Foresight Styles Assessment (Gary, 2008)	0.820
Decision Styles Inventory (Rowe & Boulgarides, 1994)	0.793

Source: van der Laan, 2010

Results and Discussion

Descriptive Statistics

The analysis of the data included the presentation of descriptive statistics that describe the demographic profile of the sample. In addition, descriptive statistics related to dimensions of strategy formulation in the universities is averaged and presented for possible inferential discussion. The analysis further includes averaged scores related to the sample responses as related to the instruments and model adopted. Table 3 presents the descriptive statistics of the sample.

Table 3 Demographic profile of study sample and strategy formulation descriptors

Population	*n*=28	**Strategy-level (Senior) Leaders in Queensland Regional Universities**
Sample	*n*=17	*Vice-Chancellors, Deputy Vice-Chancellors, Pro-Vice Chancellors, Executive Professionals*
Male	88.24%	88% of the sample was male
Female	11.76%	12% of sample were female
Australian	94.12%	
Other	5.88%	
Age of Respondents		
Age u34	0.00%	65% of the sample were aged between 55 and 64 years old. 24% are aged between 45-54 years old. 12% are aged between 35-44 years old. Given the data related to service in the industry and service in the role, it can be deduced that 12% of the sample are upwardly mobile leaders in the sector.
Age 35-44	11.76%	
Age 45-54	23.53%	
Age 55-64	64.71%	
Years Service in the HE Sector		
11-15 yrs	17.65%	76% of the sample has worked in the HE sector for more than 20 years. 6% have worked in the sector for 16-20years and 18% have worked in the sector for 11-15 years. No strategy-level leaders in the universities have had less than 10 years experience in the sector.
16-20 yrs	5.88%	
Over 20 yrs	76.47%	
Years Service in Current Position		
1-5 yrs	70.59%	The majority of the sample (71%) have been in their positions for less than 5 years. 29% have been in their positions for 6-10years
6-10 yrs	29.41%	
Self-rated Influence on University's Strategy		
Very High	58.82%	Approximately 76% of the sample has a high to very high influence on strategy in their organisations. Strategy-level leaders are typified as having a medium to very High impact on strategy. The whole sample therefore includes all respondents as strategy-level leaders.
High	17.65%	
Medium	23.53%	
Low	0.00%	
None	0.00%	
Strategy Formulation in regional Universities		
"Top/Down?"	23.53%	24% of the sample indicates that strategy is primarily top/down.
Team effort?	17.65%	18% of the sample believe that strategy formulation is a team effort
Same understanding re strategy	47.06%	47% of the sample believes that the main actors involved in developing strategy, understand it within the same paradigm.
Conflict re strategy between main actors	41.18%	41% of the sample indicates that there is conflict between the main actors related to the formulation of strategy.
No clear strategy	17.65%	18% of the sample does not believe there is proper strategy formulation taking place in their organisation.

Source: van der Laan, developed for this study

The descriptive statistics illustrate that the senior leaders in regional Queensland universities (and likely more broadly) are generally those who;

a) Are predominantly male,
b) Are predominantly Australian,
c) Are mostly over 55 years of age,
d) Have worked in the HE sector for more than 20 years,
e) Have been in their current position for less than 5 years, and
f) Have a medium to mostly high influence of the strategy of their university.

It is inferred from these statistics that senior leaders in regional universities are likely to be male career academics that are recently upwardly mobile in terms of their seniority in the leadership. The seniority of their role is likely to be the product of more than 20 years' experience in the HE sector and established career pathways. Clearly there are exceptions to this profile (eg. currently two of the four Vice-Chancellors are females). However, the question is raised as to whether the traditional university career pathways, leadership profiles, relevant experience and other demographic profiles (age, gender and nationality) sufficiently match the high levels of flux and demands for rapid HE reform that typifies the industry.

The descriptive statistics further briefly explore perceptions as to how strategy is understood and formulated in regional Queensland universities. From this data it is inferred that regional university leaders (or universities) are divided in how they understand and formulate strategy in their institutions. Almost a fifth of the sample indicates that there is no clear strategy in their institution. This may equate to one or possibly two of the universities in the sample. Similarly almost 18% of the sample believe that strategy is a 'team effort' that is inclusive of broader participation. Just under half of the sample believe that the main actors formulating strategy are 'on the same page' as to their understanding of what strategy is. In contrast, just over 40% of the sample indicates that there is disagreement between main actors as to the formulation of strategy. 24% of the sample confirm that strategy in their university is primarily 'top / down'. This illustrates a traditional mode and understanding more aligned to 'strategic planning paradigms' than more contemporary participatory models.

Given the descriptors above it is deduced that regional universities predominantly continue to function within the traditional processes and paradigms typifying much of the sector (Christensen & Eyring, 2011). In particular, there seems to be an association between the more traditional views of strategy, how it is formulated and the paradigms of strategy that were dominant in the latter part of the 1900's. Indeed, it could be argued that the high level of disagreement as to what strategy is, is representative of the dissonance between the contemporary paradigms of strategy as those most dominant up until recently. It remains a concern that a fifth of the sample confirm that there is no strategy in their organisation and that only a fifth confirms that it is participatory. The latter is in strong contrast with the necessary collaborative and participatory underpinnings of sound strategy (Bodwell & Chermack, 2010). Perhaps more perplexing is the possible disconnect between modern demands for 'conceptual era' skills (EFMD, 2012; Hamel, 2009), the need for universities to structurally adapt to their rapidly changing environment / increased competition and, regional universities' seemingly continued reliance on traditional HE paradigms associated with traditional academic careerism and the adoption of evidenced ineffective strategy paradigms.

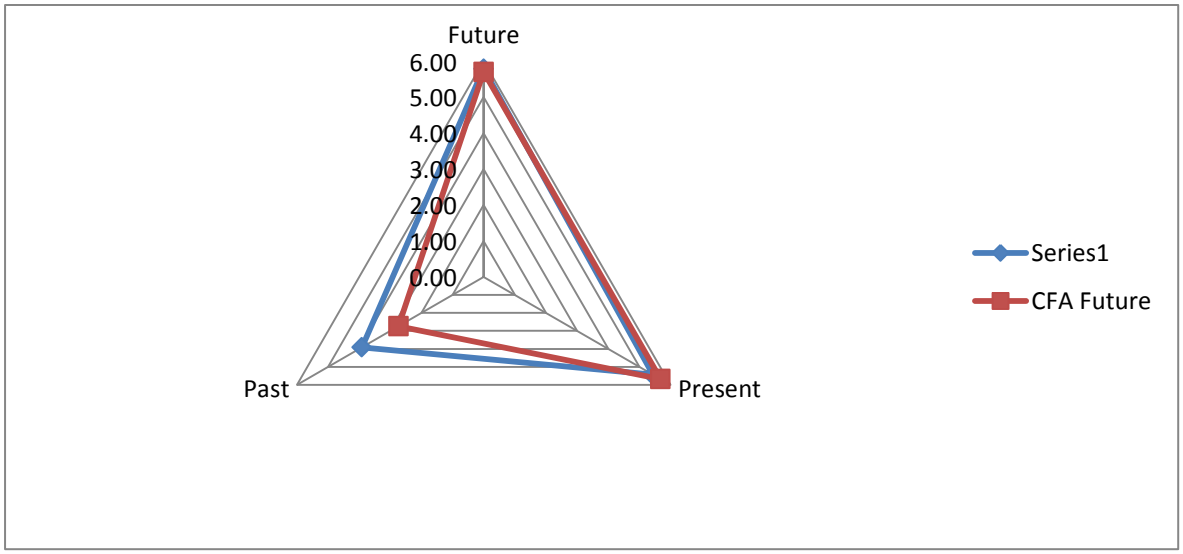
Scoring of Leaders' Foresight Competence and Strategic Thinking

The data analysis included scoring in the aggregate, leader cognitions in terms of the TimeStyles Inventory, Foresight Styles Analysis and Decision Styles Inventory. These have previously been operationalized into the constructs of foresight competence and strategic thinking and empirically validated (van der Laan, 2010). The sections below report the scores and discuss their implications as to the constructs. The measures are scored based on the averaged mean for the sample and include both the scores of the original measures and those refined by their Confirmatory Factor Analysis (van der Laan, 2010).

Leaders' Orientation to Time

The sample illustrates a predominant orientation to the future and present. The sample's future thinking refers to a pattern of thinking that involves the individual's ability to creatively imagine an infinite set of future alternatives. This includes the ability to imagine oneself in the future (episodic memory) and the ability to hypothesis future events constructed from one's general knowledge of the world (semantic memory). Manifestations: a) creative, innovative, b) perception of new opportunities, c) open to new experiences, d) openness to change, e) speed of decision making, f) hopeful and optimistic. Figure 1 illustrates the mean scores of the sample in their orientation to time.

Figure 1: Leaders' orientation to time (sample mean scores)



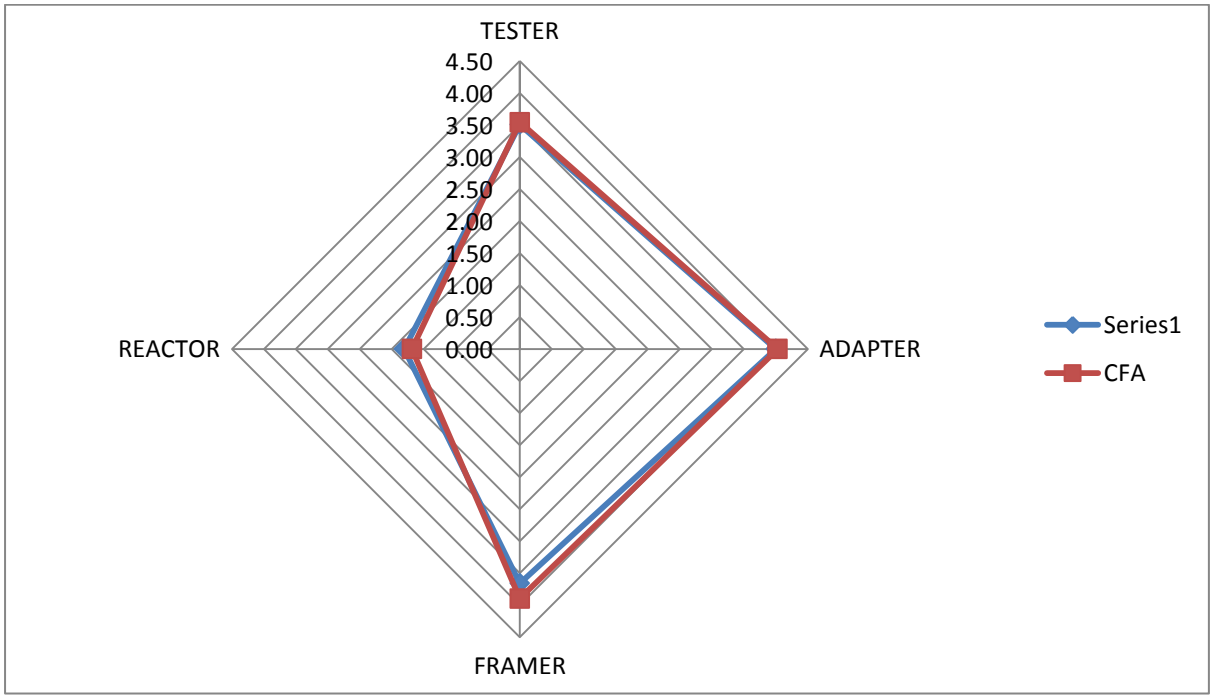
The sample's present thinking refers to the person's conscious mind to organize one's own actions as well as manipulate the environment. They integrate past and future thinking in order to execute the necessary behaviours that ensure immediate and long-term survival. This manifests as a) an ability to organise, structure one's environment and activities, b) a tendency to adopt and maintain pre-defined social protocols, c) a decision making based on pragmatism, and d) a desire for stability and harmony. The sample's low score in relation to past thinking reflects on their ability to access past semantic and episodic memory and the ability to reconstruct, analyse and critically evaluate the information related to its relevance in solving current and future contingencies. Manifestations: a) extent of engagement in retrospection, reflection, contemplation and information gathering, b) slow decision making and re-evaluation of decisions made, c) extent to which individuals are sensitive to environmental stimuli and d) extent of caution, sceptical and cynical. A level of response bias is

apparent especially as related to the low scoring of the past thinking. This is to be triangulated through an analysis of the interviews

Leaders' Foresight styles

Respondents predominantly adopted an Adapter Foresight Style relying on a Framer Style and less so a Tester Style. Respondents' utilisation of the predominantly Adapter Style illustrates that they prefer to adjust to new situations as the future is perceived to demand it. They balance multiple challenges and choices and help others adapt. The Adapter style allows for being flexible but emphasises activating action. They prefer being change-orientated influencers rather than interrogators and formulators of possible futures. Figure 2 illustrates the sample mean scores and the predominant foresight style adopted by the university leaders.

Figure 2: Leaders' dominant foresight styles (sample mean)



Respondents secondary reliance on the Framer Style suggests that after primarily being adaptive to their environment, they interrogate the future and become more future time orientated. They are interested in long-term issues that define the future that includes envisioning a 'bigger picture' future. Respondents are almost as likely to adopt the secondary reliance on a Tester Style as opposed to a Framer Style after switching from their predominant Adapter Style. This suggests that respondents are almost as likely to adopt new trends, embrace diffusion of innovation and experiment with new trends when they arise. These respondents will be inclined to be opportunistic if their approach to adjustment to environmental change is perceived to be inadequate.

Respondents are unlikely to adopt a Reactor Style. This suggests that they will prefer to relay on the Adapter, Tester and Framer Styles and are unlikely to adopt a Reactor Style. This suggests that the respondents would not be inclined to preserve their own position, mitigate and resists change. Response bias may be apparent. Respondents may have assumed that questions related to prospecting the future, specifically those related to the Framer Style, would be more appropriate. While this is certainly related to the characteristics of an effective strategy-level leader, it is the

ability to switch between styles according to the circumstances that may describe foresight competency better. This observation will be triangulated with qualitative data analysis.

Leaders' Strategic Thinking

Table 3 indicates the scoring of the decision style preference as per Rowe and Boulgarides' model (1994). Table 4 illustrates the sample mean score for the styles of strategic thinking employed by the sample.

Table 4: Rowe and Boulgarides' scoring guidelines (1994)

Style	Intensity			
	Least preferred	Back-up	Dominant	Very Dominant
Directive	<68	68-82	83-90	>90
Analytic	<83	83-97	98-104	>104
Conceptual	<73	73-87	88-94	>94
Behavioural	<48	48-62	63-70	>70
Boulgarides & Rowe 1992				

Table 5: Leaders strategic thinking propensities (sample mean)

DECISION STYLE INVENTORY ANALYSIS - FORESIGHT AND STRATEGIC THINKING IN REGIONAL UNIVERSITIES N=17, SUM TOTAL MEAN OF 20 ITEM INVENTORY		
Directive	80.5625	back-up
Analytic	81.375	least preferred
Conceptual	79.3125	back-up
Behavioural	58.75	back-up

The sample mean indicates the pre-dominant pre-disposition of the sample to complexity / structure and values in terms of task and people orientations. The sample is pre-disposed to structure and task orientation. These are descriptors of managers as opposed to leaders (Zaleznick, 1970). Decision Styles are used interchangeably according to the context and is much as aligned with the contingency model of leadership. The sample mean indicates no dominant style. However, it does indicate a very strong score for a Directive style which borders on dominant. The sample thereafter uses the back-up styles of behavioural and conceptual styles as the context dictates. The least preferred style is the Analytic Style. The sample therefore illustrates a preferred orientation to 'action' and 'structure'. The sample shows lower tolerance for ambiguity but is able to act independently and adopt the Conceptual Style.

The respondents illustrate a slightly higher propensity toward a need for power. It also illustrates needs for achievement and need for affiliation. The sample does not illustrate a high need for challenge. The sample's focus is generally on technical decision-making using little information and few alternatives. Speed and satisfactory solutions are typically important and there is a general preference for structure and specific information. The orientation of control is short range and results orientated but also dominate others. This general orientation is closely supported by the backup styles of Behavioural and Conceptual where the sample illustrates concern for the organisation, uses meetings to communicate, utilises low data input and avoid conflict. The sample further tends, if the context dictates, to adopt a style that uses data from multiple sources and considers many alternatives. This style engages cognitive complexity and is more future-orientated. It initiates new ideas and is achievement orientated. Their least preferred style is Analytical. The sample rarely uses this style unless under stress.

The index illustrates clearly that the sample does not fit neatly into one category but rather illustrates a greater flexibility. The sample means indicates that the respondents were largely orientated toward management within a structured environment and would, if needed engage with an equal back-up intensity, cognitively complex problems typical of certain dimensions of strategic thinking in leadership. The sample does not illustrate high levels of orientation to the analytical dimensions of strategic thinking and shows a secondary orientation to the creative (futures-orientated) dimension of strategic thinking. As such, it can be asserted that the sample illustrates a lower orientation toward strategic thinking as a dominant approach. Rather, when required to do so by the situation, the sample favours a conceptual style but avoids analytical complexity and ambiguity.

Discussion

The analysis of the data illustrates high levels of foresight competence from the mean result of the full sample. Strategy-level leaders in the sample generally, exhibit high-level capabilities to engage longer-term outlooks, exhibit providence and holistic thinking, and are able to envision alternative futures. However, in an analysis of their ST, the data illustrates a paradoxical output. It was evident from the statistical analysis, that a general tendency to favour a more directive style of decision making exists. This is associated with adopting the descriptors of management functions as opposed to the descriptors associated with leadership and its associated imperative of ST. Both the analytical and conceptual dimensions of ST feature as the least preferred and back-up approaches of the leaders respectively. This suggests that despite the obvious individual capabilities, there is an inclination by the leaders to favour a management disposition.

Prior research suggests that high foresight competence results in effective ST task fulfilment. However, recent research using the same model and instruments detected a similar negative correlation related to the indicators of ST. In the previous research, a negative 0.35 correlation was associated with the conceptual (creative) elements of ST, whereas this sample marginally favours the conceptual element but exhibits a negative correlation to the analytic element. In both cases, the ST profile is negatively moderated despite high levels of foresight competence.

This study suggests that other factors may negatively moderate the ability of strategy-level leaders to conduct effective ST despite their relatively high antecedent foresight competence. Previous

studies found that K12 to undergraduate education moderated individual's preference to adopt a predominantly analytic propensity in ST. However, despite these demographic indicators associated with strategic leadership theory, it is proposed that environmental factors may also negatively influence leaders' ST. These may include:

- conservative councils that constrain ST and thus innovation,
- low management capacity of middle management requiring more directive approaches,
- dysfunctional or traditional strategy practices,
- regulatory constraints and overly demanding regulatory accountability,
- bureaucratically dominant institutions (evidenced to suppress innovation)

Due to the high proportion of the sample related to the total population, the results have high face validity and reliability that supports generalizability. This must however be qualified due to the size of the population and requires further studies to confirm the extent to which the finding can be generalised, not only in Queensland regional universities but regional universities in Australia and New Zealand more generally. The research can easily be replicated and scaled up nationally and internationally. Limitations of the research include being unable to control for response bias associated with the constructs and measures. The study is also further limited by the rapidly changing research context and leadership changes. The mixed methods methodology of the study will triangulate the quantitative results while also illustrating underlying causality related to the leaders' assumptions and understanding of the concepts.

Conclusions

As stated above, post-normal times demand post-normal leadership and strategy. The paper asks, within the context of the social and economic importance of regional universities, whether they are in "good hands". This question is based on the research question which interrogates how and to what extent senior leaders' foresight and strategic thinking in regional universities adequately supports the need to actively engage the future and develop effective strategies. Also, that these capabilities are highly associated with leadership excellence.

In a sector and time of extraordinary flux, the need for sound higher education strategies is arguably at its highest. It can reasonably be deduced that the results of this study give a valid insight as to how leadership teams are coping with the rapid change and drivers of the future. It also provides and insight as to how pro-active the leaders are within a sector which is largely understood to be on a trajectory that challenges many long held assumptions. Especially within a deregulated industry, previously held assumptions related to universities' missions, service and funding models are indeed being challenged especially in the midst of increasing privatisation and online learning trends. The strategic response to these environmental changes may see some universities prosper and others face irrelevance as effective strategy is empirically associated with organisational success (Finkelstein & Hambrick, 1996) and leadership enables effective strategy.

The results of the study illustrates that while the sample generally indicates sound capacity in Queensland regional universities, they are largely still embedded in a paradigm of managerialism and traditional practices. Indeed, the results primarily illustrate a 'safe' and responsive approach rather than one driven by innovation enabling more agile and resilient institutions. As one

respondent stated, the biggest challenge facing regional university leaders is how to be strategic. This was associated with the urgent need to create "a new epoch. Like moving from one century to another. You can't just move in the same paradigm; you've got to be able to break out and change what is a prevailing traditional way of thinking."

It is therefore generally concluded that Queensland regional universities, and likely many Australasian universities, are in safe hands with leaders that exhibit high foresight capabilities. The data evidences an awareness of the need for developing adaptable resilient open systems. However, the results do not evidence that these capabilities are apparent in the strategic thinking and strategies of the institutions. There is a disconnect. Indeed, the data indicates that there is either no clear strategy (18%) or the strategy that does exist is mostly "top-down" (27%) and a source of conflict amongst the main players (41%). Only 17% of strategy formulation is a team effort and within contemporary strategy literature these indicators do not illustrate the foundations of good strategy practice. As such the universities are likely in safe hands but not strategically good hands.

Given the results of this study, it is important to raise the future research question as to whether the results of this research would be similar in other regional universities both in Australia and abroad. Given the importance of regions internationally, evidence of the representativeness of these results in other universities would potentially be of great value. In the researcher's opinion this is highly likely in Australasia based on the deduction that the majority of leaders have followed the same formative career paths and educational profiles while operating in highly dependent government funding dispensations and policies.

This study makes three contributions to the literature. It is the first empirical test in relation to the measurement of these concepts and Higher Education sector. A literature review confirms that this is a unique contribution in Australia and possibly internationally. The study also builds on previous studies that confirm and evidence the theoretical model. It makes a contribution by testing the model and locating it in a different sector and demographic. The study also tests the differentiation of foresight competence and ST as proposed in previous studies.

The study also contributes to practice. Leaders are able to assess the profiles of their leadership teams and formulate interventions that may shift their leadership emphasis according to their organisational maturity stage, strategic phase and environmental positioning. These findings also provide sufficient evidence to raise future research questions.

Of high practical value is that this research may inform future recruitment criteria and the development of strategic foresight core-competences in universities. This, in turn would promote contemporary strategy practice and would likely enable the translation of the leaders' foresight capabilities into valuable strategy practice.

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