REPORT ON PHASE 2

Leading Queensland Primary Schools into the Future:

Unleashing the Learner Potential to Enhance the Social, Economic, and Educational Benefits

Prepared by:

Professor Peter McIlveen

Associate Professor Joan Conway

Professor Dorothy Andrews

CONTENTS

LIST OF FIGURES

LIST OF TABLES

ACKNOWLEDGEMENTS

This report presents the results of the second phase of a research project, Leading Queensland Primary Schools into the Future, commissioned by the Queensland Association of State School Principals (QASSP) and funded by the Principals Australia Research Foundation (PARF). The aim of the project was to explore a new narrative for Queensland Primary School Principals in three phases (literature review, survey, and interviews), guided by the research questions:

- Research Question 1 – In what ways does primary schooling impact the economic and social performance of a community/nation?
- Research Question 2 – What is the contribution of school leadership to the achievement of quality primary school student outcomes, academic and social?

Twelve capabilities emerged from the literature review of Phase 1 (Conway, Bauman, & Andrews , 2022) and provided the foundation of a proposed model of School Community-Orientated Leadership Capabilities. The proposed model is depicted in Figure 1. The literature review established "that courageous (Robinson, 2020) successful school leaders, who are open to a shift of mind – a new mindset (Dweck, 2006) – inevitably motivate themselves and others to collective actions (Conway, 2008; Conway & Andrews, 2016)" (p. 2). Phase 2 of the research tested the Capabilities Model by representing each Capability in terms of indicative qualities and then subjected these proposed indicators to quantitative analysis. The present report describes the process and outcomes of Phase 2. First, we provide an overview of the findings of the literature review which informed the proposed and final Capabilities Model.

Figure 1

Twelve School Community-Oriented Leadership Capabilities

- Visionary
- Relational Collaborator
- Cultural Capacity Builder
- Creative Innovator
- Competent Carer
- Adapter
- Agile Creator
- Emotionally Intelligent Influencer
- Entrepreneur
- Equitable and Inclusive Attender
- Advocate
- Life-long Learner

The findings of the literature review were prompted by the Turner (2001) white paper that called for the urgency of a new narrative in leading Queensland primary schools into the future. A summary of key findings from the literature review (Conway, Andrews, & Bauman, 2022, p. 25) was as follows:

- ❖ Acknowledge the pivotal role of education in Australia's social and economic development –
    - o Focus on the role of educational quality
    - o Provide equitable educational opportunities for all students
    - o Understand the far-reaching implications of primary education
- ❖ Value and invest in teaching as a profession in Queensland –
    - o Strengthen the engagement and voice of the teaching profession
    - o Enable time for teacher collaboration and professional learning
    - o Invest in development of whole school wide approaches
    - o Fund technology for all primary students toward enabling opportunities in the global economy
- ❖ View the primary student as a whole person –
    - o Involve students as partners enabling voice in planning
    - o Engage students in the learning process with meaningful opportunities
    - o Ensure inclusive education for all
- ❖ Address current and emerging inequalities in education –
    - o Develop comprehensive educational policy reform
    - o Build and maintain positive community-wide relationships as partners
    - o Implement new school structures, such as community schools and resources. (p. 25)

Evolving from the analysis and synthesis of the extensive literature review, it was important to recognise the 12 School Community-Oriented Leadership Capabilities: Visionary; Relational Collaborator; Cultural Capacity Builder; Creative Innovator; Competent Carer; Adapter; Agile Creator; Emotionally Intelligent Influencer; Entrepreneur; Equitable and Inclusive Attender; Advocate; and Life-long Learner, with a capability defined as the leader's power or ability to do something. This model provided the foundation upon which the survey was developed.

PHASE 2 SURVEY METHODOLOGY

Whilst the expertise principals need for their complex work roles is not readily reduced to a mere checklist, we aimed to discern factors which are reflective of school principals' professional capabilities. The survey focused on the 12 proposed Capabilities factors and their respective (proposed) 48 indicators derived from the literature review.

PARTICIPANTS

A broad range of primary school (inclusive of P-6, P-10, and P-12) principals was invited to participate in the research. The final sample of participants retained after data screening was N = 217. Their ages ranged from 29 to 70 years (Mage = 52.04, SD = 8.00). Highest qualifications included a bachelor degree (n = 101, 46.50%), postgraduate diploma (n = 32, 14.70%), master degree (n = 78, 35.90), and doctorate (n = 6, 2.80%). Gender proportion was slightly higher for females (n = 125, 57.6%) than males (n = 92, 42.4%). The majority were working in the State sector (n = 192, 88.5%), followed by the Catholic (n = 22, 10.10%) and Independent sectors (n = 3, 1.40%). Type of schools included P to 6 (n = 198, 91.20%), P to 10 (n = 9, 4.10%), and P to 12 (n =

10, 4.60%). Their years employed as a principal ranged from one year or less than a year to 39 years (M = 13.67, SD = 9.46, Med = 13). The sizes of schools were relatively similar for those with student populations ranging from less than 110 students (n = 53, 24.40%), to 110–299 (n = 45, 20.70), 300–599 (n = 56, 25.80%), to 600–999 (n = 49, 22.60%); larger schools of more than 1000 students were in the minority (n = 14, 6.50%). Geographical locations included very remote (n = 5, 2.30%), remote (n = 24, 11.10%), outer regional (n = 59, 27.20%), inner regional (n = 54, 24.90%), and major city (n = 75, 34.60%). The schools' ISCEA ratings ranged from 88 to 1265 (M = 951.75, SD = 179.12, Med = 974), and there was no particular predominant rating indicated by mode.

The research was approved by the Human Research Ethics Committee of the University of Southern Queensland. Participants were recruited from membership of QASSP, two Queensland Catholic systems (Brisbane Catholic Education, and Toowoomba Catholic Schools), and Queensland Lutheran schools. Participation was voluntary and there were no inducements or incentives to provide data, and participants were free to withdraw at any stage.

SURVEY DESIGN

The approach taken for this survey was to empirically test the proposed 12 factors and their proposed indicators. Participants were invited to complete an online survey hosted on the University's Lime Survey platform. The survey comprised a landing page which provided information about the project, a consent page which, upon agreement, allowed participants to enter the questionnaire about the Capabilities and demographic data (i.e., gender, education level, years as a principal, age, sector, type of school, school enrolment, geographical region, regional population, and ISCEA). Participants were asked to "Read each statement and then rate your level of agreement, ranging from Strongly disagree through to Strongly agree" using a Likert-type scale ranging from 1 = Strongly Disagree, 2 = Disagree, 3 = Slightly Disagree, 4 = Undecided, 5 = Slightly Agree, 6 = Agree, 7 = Strongly Agree.

DATA ANALYSIS AND FINDINGS

Data analysis involved four phases extending from data screening to ensure the dataset was amenable to analysis, through testing the proposed model, to explore the Capabilities' relations with demographic variables.

DATA SCREENING

In the first phase the dataset was screened for missing data, distribution of scores, and outlier cases. There were no missing data points (i.e., all participants responded to all questions). There was evidence of extreme scores on some Capabilities because many participants indicated the maximum score of 7 for indicators; however, the proportion of maximal scores was not sufficient to warrant transformation of the data. Five cases were removed from the dataset because their scores were consistently extreme—high or low—beyond what would be expected. These five outlier cases were identified by inspection of plots and

Mahalanobis distance coefficients. For example, a case with scores of predominantly 1 (out of 7) for all indicators and Capabilities (i.e., exceedingly low on all) would not be expected in the present sample of participants. Whilst low scores on average are plausible, variations would be expected and, indeed, are evident in the 217 cases of data which were retained.

FACTOR ANALYSIS PAF

In the second phase of data analysis the Capabilities data were subject to exploratory Principal Axis Factoring (PAF) with oblique rotation to discern whether the proposed 12 Capabilities could be discerned from the data. Initial tests of the dataset suggested that it was amenable to factor analysis. Kaiser-Meyer-Olkin and Bartlett's Test of Sphericity coefficients indicated that the dataset was amenable to factor analysis. The 12-factor model converged; however, four factors had insufficient number of indicators to justify their retention. Therefore, a second PAF tested an 8-factor model and resulted in an acceptable number of Capabilities (i.e., 8) and with an acceptable number of representative indicators to enable further testing.

FACTOR ANALYSIS CFA

In the third phase, the 8-factor model of Capabilities extracted by PAF was subjected to Confirmatory Factor Analysis (CFA) with each proposed factor correlated with one another. Unlike PFA which allows indicators to load on more than one factor (i.e., "cross-loading"), CFA sets a strict condition of no cross-loading. Such strictness forces clear distinctions between each factor in the model to ensure they represent quite different constructs with unique indicators. Nonetheless, the factors may correlate with one another, which is to be expected given their conceptual relations with one another. CFA supported the 8-factor model. However, a better model was revealed after indicators with the weakest loadings were removed.

Phase four presents the operational definitions of the final model's Capabilities (see Table 1). The final model with its eight factors was interrogated for clarity of meaning and consequently renamed: Agility, Relational Collaboration, Advocacy, Visionary Commitment, Creative Innovation, Life-long Learning, Culture and Capacity Building, and Courageous Communication, in recognition of the new clustering of indicators which were also reduced from 48 to 30. However, one factor (Culture and Capacity Building) collected indicators that did not align with the initial description of this capability named as the Cultural Capacity Builder. These indicators were distributed to the newly named Relational Collaboration factor. The newly clustered indicators under Culture and Capacity Building were deemed to be more aligned to concepts of management and decision making, resulting in a new labelled capability, Critical Decisiveness.

A revisit of the concepts of capacity building and organisational culture development from the phase one literature review highlighted the overall importance of, "Capacity building for ongoing improvement and learning requires a focus in the areas of intellectual, organisational, and relational capital" (Conway et al., 2022, p. 114). This was drawn from the elements of collaboration, collective intelligence, independency, collaborative individualism, communication, and organisational alignment as explored in the literature review and represented in the eight capabilities. In conclusion, it was realised that the overall concept of this newly

5

refined model highlights the eight capabilities (see Table 1) of a courageous leader building capacity for the emerging "new narrative". In so doing, the new narrative embodies the emergence of a culture exemplified by the School Community-Oriented Leadership Capabilities model. Inherently, this is a state of capacity-building that continually positions the school community into the future.

Table 1

Eight Capabilities of the School Community-Oriented Principal Leadership (SCOPL) Model

Capability	Explanation
Agility	Readiness to balance the complexities of the high expectations of organisational effectiveness through continuous improvement, ongoing support, and monitoring of performance.
Relational Collaboration	Willingness to value the contribution of all through astute listening, sensitivity to differences, recognition of personal challenges, and mediation for collective intelligence.
Advocacy	Passionately promote the school in relationship with the wider community for enhanced cooperation and opportunities.
Visionary Commitment	Sharing of a preferred future through enabling the collective inspiration, articulation, mobilisation, and enactment of others.
Creative Innovation	Encouraging of a collegial disposition to original, advanced, and shared pedagogical practice.
Life-long Learning	Enthusiastically inspire self and others to aspire to a continual professional learning mindset.
Critical Decisiveness	Systematically gather and evaluate information, make decisions relative to the context, and facilitate the outcomes.
Courageous Communication	Bravely acknowledge commitment, address the adversity, and accept the vulnerability.

PRESENTATION AND DISCUSSION OF FINDINGS

This section presents the relationship between the capabilities and each of the demographic factors in two formats – the statistical analysis shown in a table and the trend shown as a graph. Following each presentation is a discussion of the analysis and findings.

Table 2

Analysis of Capabilities and Gender

		Agility	Relational Collaboration	Advocacy	Visionary Commitment	Creative Innovation	Life-long Learning	Critical Decisiveness	Courageous Communication
Male	M	6.33	6.58	6.13	6.17	6.30	6.22	5.76	6.49
	SD	0.52	0.42	0.66	0.57	0.84	0.62	0.80	0.44
Female	M	6.43	6.60	6.06	6.05	6.35	6.24	5.79	6.54
	SD	0.51	0.39	0.72	0.69	0.57	0.61	0.74	0.45

Inspection of the means and standard deviations revealed no remarkable differences between males and females. Likewise, statistical analysis revealed no statistically significant differences. Therefore, there is no evidence to suggest that males' and females' mean levels of Capabilities are dissimilar.

The trend graph as follows (Figure 1) reflects this relationship.

Figure 2

Trend Data for Capabilities Across Gender

Table 3

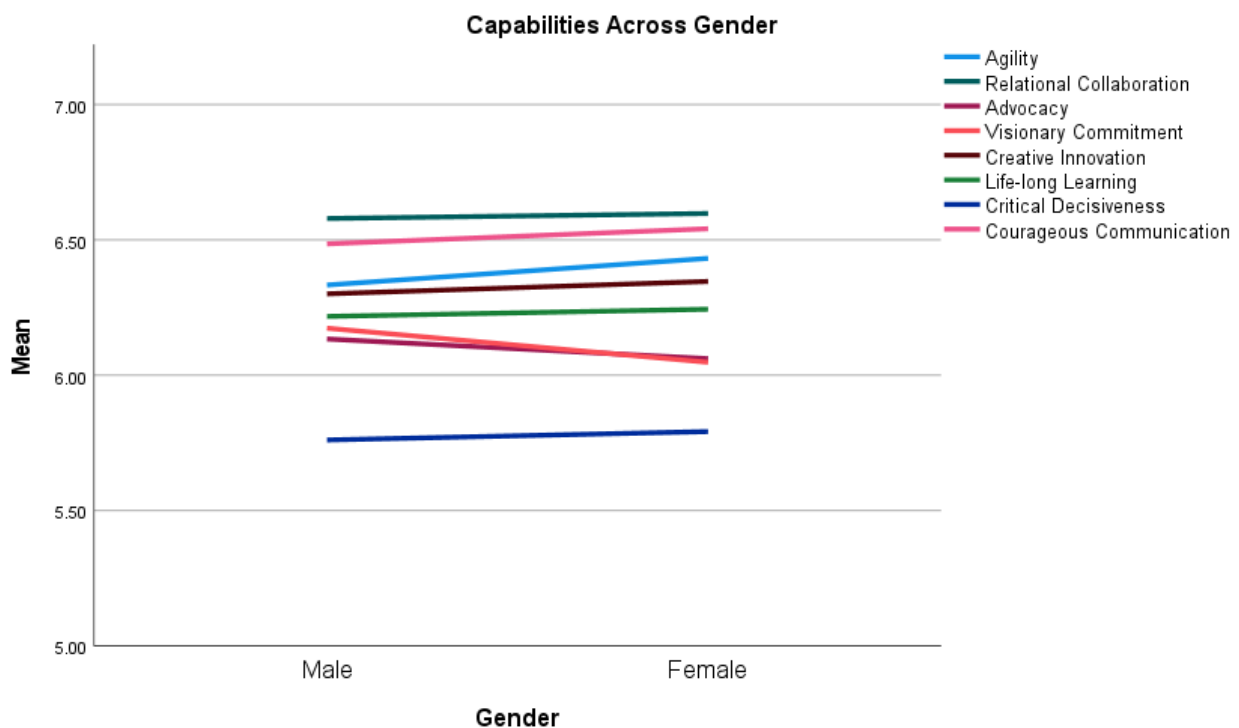*Analysis of Capabilities and Qualifications*

		Agility	Relational Collaboration	Advocacy	Visionary Commitment	Creative Innovation	Life-long Learning	Critical Decisiveness	Courageous Communication
Undergraduate	M	6.24	6.56	6.04	6.06	6.24	6.08	5.70	6.46
	SD	0.55	0.41	0.72	0.70	0.74	0.67	0.74	0.45
Postgraduate Certificate or Diploma	M	6.48	6.54	6.10	6.21	6.32	6.38	5.76	6.51
	SD	0.48	0.48	0.68	0.65	0.55	0.46	0.66	0.41
Postgraduate Master	M	6.53	6.65	6.14	6.10	6.45	6.35	5.88	6.59
	SD	0.44	0.35	0.67	0.57	0.63	0.56	0.82	0.45
Doctorate	M	6.61	6.57	6.39	6.17	6.17	6.46	5.94	6.61
	SD	0.44	0.48	0.65	0.56	1.13	0.46	1.04	0.49

Inspection of the means and standard deviations revealed differences between across qualifications. Statistical analysis revealed statistically significant differences for Agility [$F = 5.75$, df = 3, 213, $p < .05$, eta^2 = .075] and Life-long Learning [$F = 4.06$, df = 3, 213, $p < .05$, eta^2 = .054]. The effect sizes (eta^2) for these differences are "medium", respectively for Agility and Life-long Learning. Accordingly, there is evidence that the Capabilities Agility and Life-long Learning are moderately higher in participants with postgraduate qualifications. Post hoc tests were used to discern the location of differences among the groups, and Hochberg's GT2 was chosen due to differences in the number of participants in each qualification category. Post hoc tests revealed participants with an undergraduate degree only were significantly lower on the mean scores for Agility compared to others with a postgraduate master degree. There were no significant differences for Agility among those with the postgraduate qualifications. Post hoc tests revealed lower mean scores of Life-long Learning for participants with an undergraduate degree compared to those with a postgraduate master degree.

Figure 3

Trend Data for Capabilities Across Qualifications

Capabilities Across Qualifications
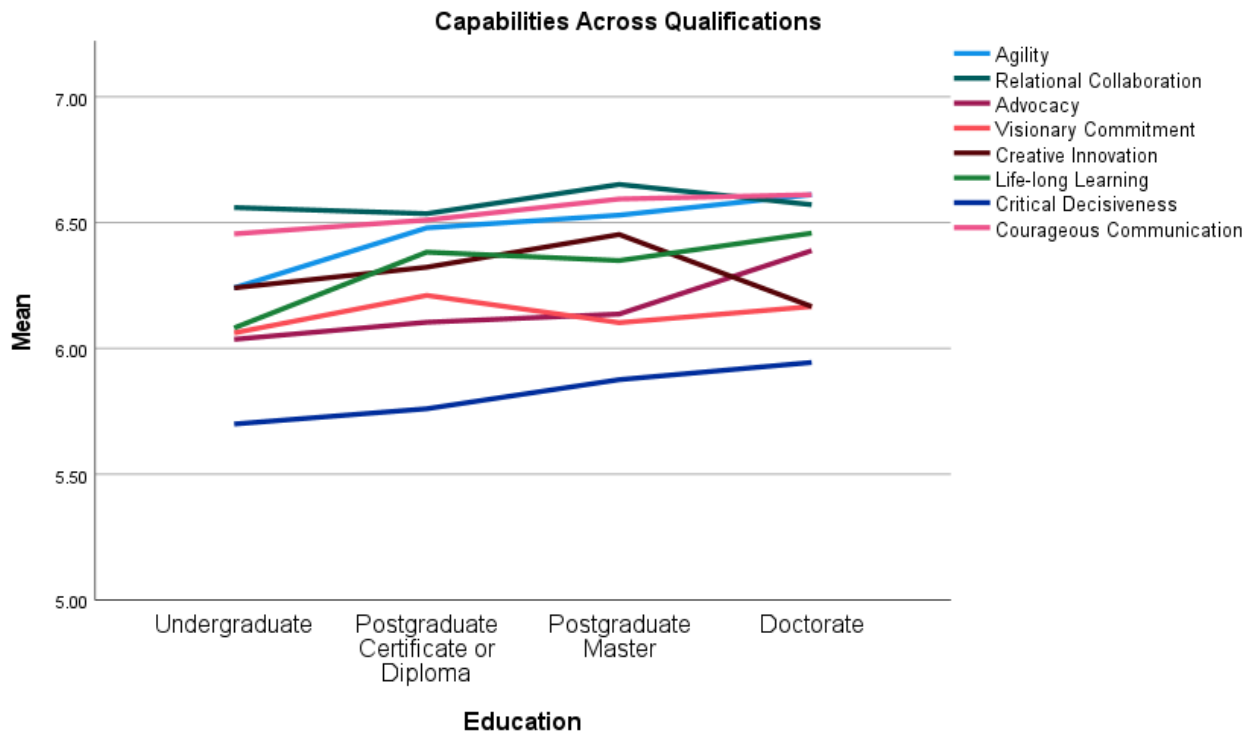
The trend in these data would indicate that the completion of postgraduate studies does enhance most capabilities. However, it is interesting to note that three capabilities (Relational Collaboration, Advocacy, and Creative Innovation) for those who have completed a Doctorate, move against the trend of the others. It would be interesting to explore this further.

Table 4

Analysis of Capabilities and Years As a Principal

		Agility	Relational Collaboration	Advocacy	Visionary Commitment	Creative Innovation	Life-long Learning	Critical Decisiveness	Courageous Communication
> 6	M	6.26	6.60	5.85	5.98	6.25	6.12	5.63	6.45
	SD	0.54	0.39	0.72	0.60	0.59	0.54	0.77	0.48
6 to 10	M	6.46	6.67	6.24	6.13	6.39	6.39	5.95	6.56
	SD	0.50	0.39	0.68	0.57	0.69	0.58	0.63	0.40
11 to 15	M	6.46	6.57	6.10	6.13	6.39	6.27	5.67	6.60
	SD	0.44	0.42	0.70	0.77	0.62	0.58	0.75	0.42
16 to 20	M	6.43	6.55	6.02	6.36	6.35	6.19	5.79	6.44
	SD	0.62	0.38	0.57	0.65	0.72	0.71	0.97	0.43
21 to 25	M	6.56	6.63	6.37	6.13	6.40	6.32	6.17	6.58
	SD	0.44	0.36	0.54	0.67	0.93	0.75	0.51	0.47
26 to 30	M	6.27	6.27	5.73	5.75	6.23	5.98	5.57	6.27
	SD	0.58	0.59	0.87	0.58	0.70	0.84	0.85	0.56
31 to 35	M	6.13	6.52	6.21	6.12	6.03	6.10	5.62	6.62
	SD	0.48	0.37	0.69	0.56	0.73	0.50	0.87	0.47
> 35	M	6.44	6.48	6.11	6.25	6.67	6.17	5.44	6.44
	SD	0.51	0.46	0.84	0.43	0.58	0.52	1.26	0.51

Inspection of the means and standard deviations revealed differences between across years working as a principal. Statistical analysis revealed statistically significant differences for Advocacy mean scores across the age categories [$F = 2.38$, $df = 7, 207$, $p = .023$, $eta^2 = .075$] with an indicative effect size of "medium" magnitude. Post hoc tests using Hochberg's GT2 discerned a difference between those participants who had been working as a principal less than six years, who had the lowest average score for Advocacy, compared to those who had been working between 21 and 25 years who had the highest average score of all. The correlation coefficients among years as a principal measured in years and the Capabilities were non-significant.

Figure 4

Trend Data for Capabilities Across Years as a Principal Categories

Capabilities Across Years as a Principal Categories
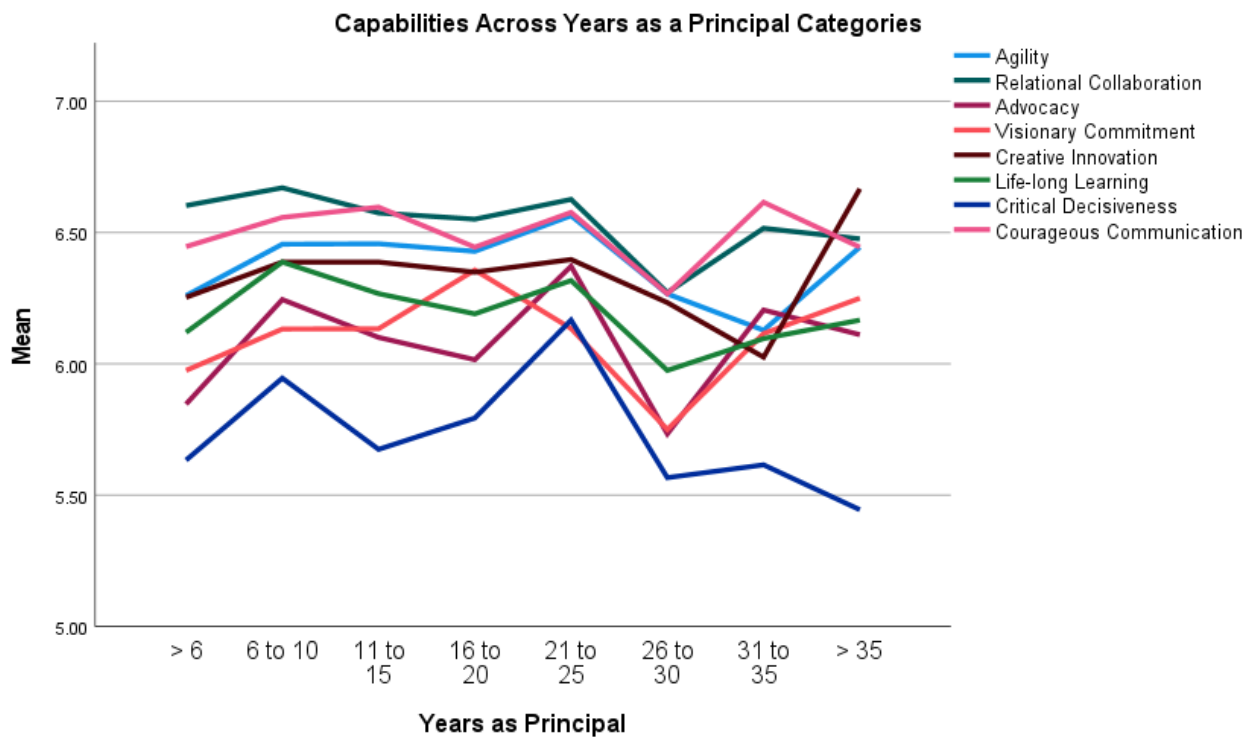
Two dominant peaks are evident in this trend data. For early career principals the trend in their 6 to 10 years as a principal shows an upward trend in all capabilities, but then the overall data wanes until another peak in all capabilities, except Visionary Commitment, at 21-25 years as a principal. Interestingly, Visionary Commitment appears to peak earlier for this group than all other capabilities. However, the following years of 26 to 30 show a downward trend in all capabilities.

Table 5

Analysis of Capabilities and Type of School

		Agility	Relational Collaboration	Advocacy	Visionary Commitment	Creative Innovation	Life-long Learning	Critical Decisiveness	Courageous Communication
P to 6	M	6.39	6.59	6.09	6.08	6.31	6.25	5.77	6.54
	SD	0.53	0.41	0.68	0.65	0.71	0.59	0.79	0.44
P to 10	M	6.48	6.68	6.48	6.58	6.52	6.14	5.85	6.44
	SD	0.47	0.28	0.56	0.47	0.53	1.02	0.38	0.58
P to 12	M	6.33	6.49	5.70	6.03	6.47	6.00	5.93	6.23
	SD	0.38	0.41	0.92	0.45	0.53	0.65	0.56	0.42

Comparing the mean scores for Capabilities across the types of schools should be done with caution because the number in P to 6 (n = 198) is vastly greater than P to 10 (n = 9) and P to 12 (n = 10). Statistical analysis did not reveal a significant difference for the mean scores across the school types.

Figure 5

Trend Data for Capabilities Across School Categories
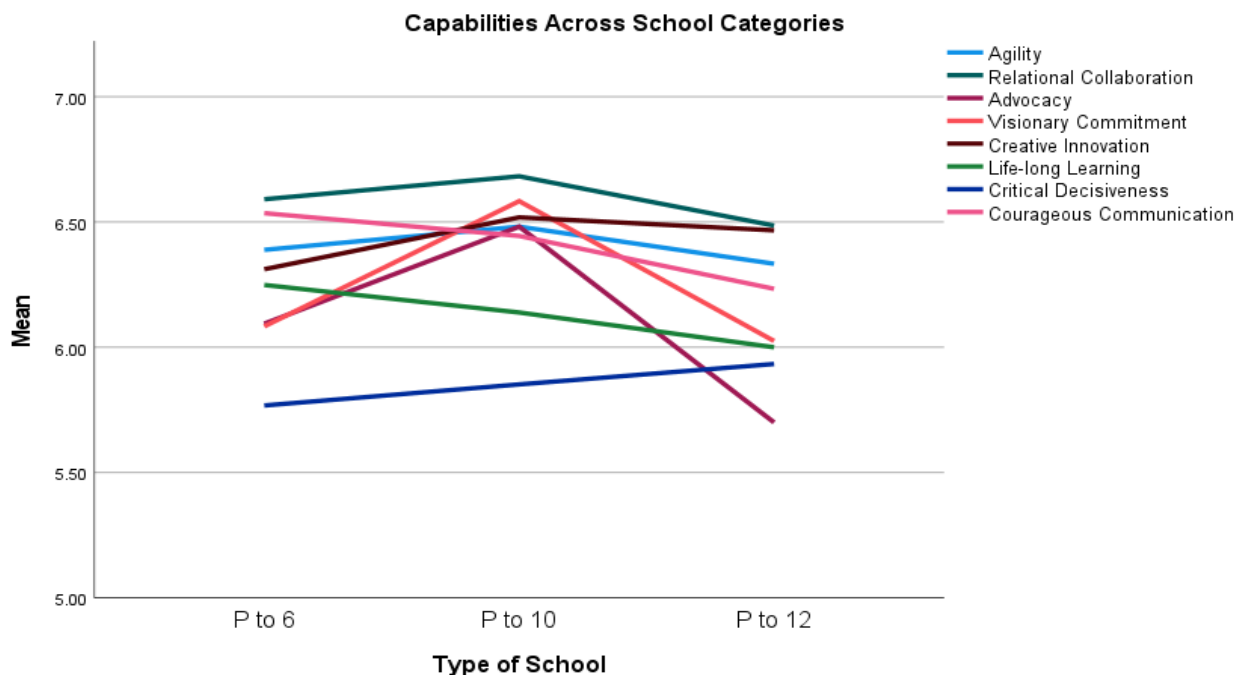
Considering the caution to be exercised with the number of participants in each of the types of school, the focus of this comment is on the P to 6 School. Therefore, the lower mean of the Critical Decisiveness capability is of some interest.

Table 6

Analysis of Capabilities and Student Population
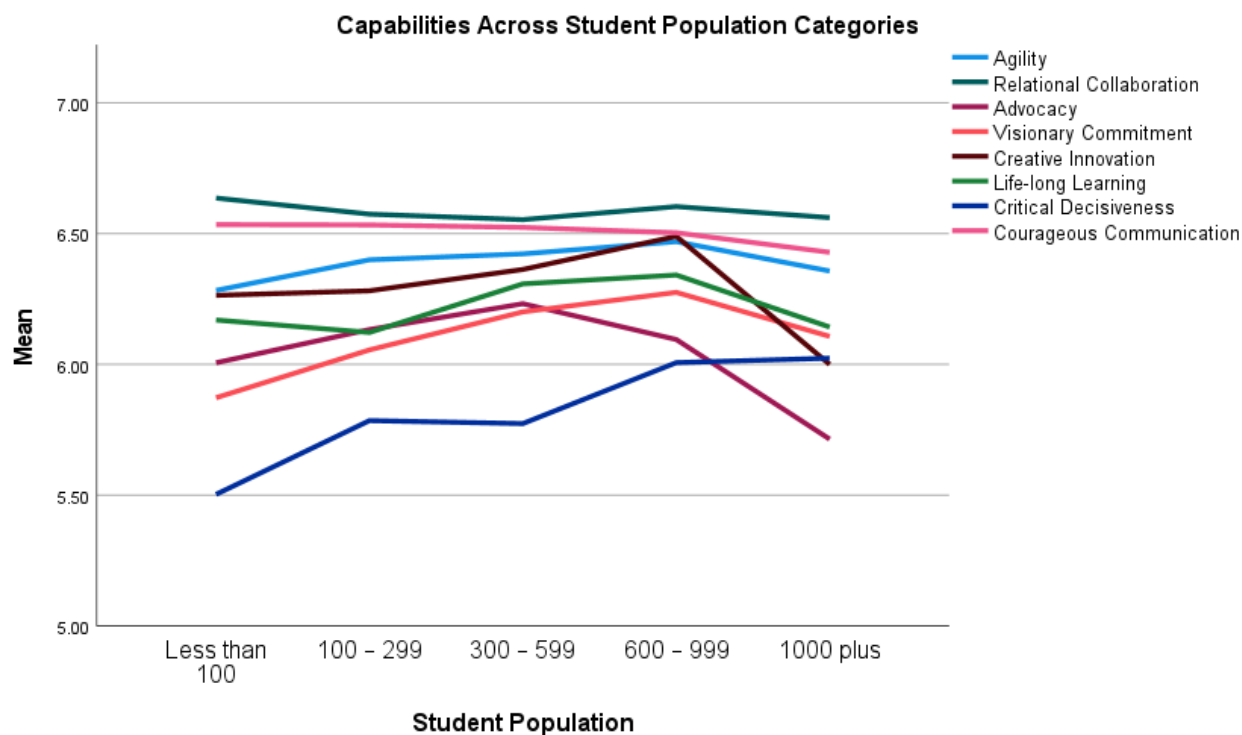
		Agility	Relational Collaboration	Advocacy	Visionary Commitment	Creative Innovation	Life-long Learning	Critical Decisiveness	Courageous Communication
< 100	M	6.28	6.64	6.01	5.87	6.26	6.17	5.50	6.53
	SD	0.58	0.42	0.81	0.77	0.55	0.59	0.90	0.48
100 – 299	M	6.40	6.57	6.13	6.06	6.28	6.12	5.79	6.53
	SD	0.52	0.37	0.65	0.58	0.65	0.74	0.74	0.47
300 – 599	M	6.42	6.55	6.23	6.20	6.36	6.31	5.77	6.52
	SD	0.51	0.45	0.65	0.65	0.69	0.55	0.80	0.43
600 – 999	M	6.47	6.60	6.10	6.28	6.49	6.34	6.01	6.50
	SD	0.47	0.39	0.66	0.50	0.69	0.55	0.57	0.44
1000 plus	M	6.36	6.56	5.71	6.11	6.00	6.14	6.02	6.43
	SD	0.42	0.34	0.65	0.51	1.12	0.63	0.44	0.42

Inspection of the means and standard deviations revealed differences among the schools based on their student populations. Statistical analysis revealed statistically significant differences for Visionary Commitment mean scores across the population categories [F = 3.09, df = 4, 212, p = .017, eta^2 = .055] and for Critical Decisiveness [F = 1.18, df = 4, 212, p = .012, eta^2 = .058], with indicative effect sizes of "medium/small" magnitude. Post hoc tests using Hochberg's GT2 discerned differences for Visionary Commitment and Critical Decisiveness for the schools with the smallest population category of < 100 and schools of 600 to 999 students.

Figure 6

Trend Data for Capabilities Across Student Population Categories

The trending capabilities of principals up to schools of 300-599 show a general trend of stability or upward movement. Whereas movement toward the larger populations shows a downward trend in all capabilities except for Critical Decisiveness.

CAPABILITIES AND GEOGRAPHICAL LOCATION

Table 7

Analysis of Capabilities and Geographical Location

		Agility	Relational Collaboration	Advocacy	Visionary Commitment	Creative Innovation	Life-long Learning	Critical Decisiveness	Courageous Communication
Remote	M	6.46	6.62	6.38	5.97	6.21	6.28	5.84	6.61
	SD	0.47	0.46	0.52	0.77	0.57	0.50	0.66	0.38
Outer Regional	M	6.38	6.69	6.15	6.12	6.37	6.17	5.76	6.58
	SD	0.55	0.35	0.82	0.68	0.70	0.71	0.77	0.48
Inner Regional	M	6.33	6.46	5.83	5.96	6.36	6.13	5.53	6.38
	SD	0.55	0.45	0.63	0.55	0.61	0.63	0.91	0.46
Major City	M	6.41	6.59	6.12	6.24	6.32	6.34	5.95	6.53
	SD	0.49	0.37	0.64	0.60	0.79	0.55	0.64	0.42

14

Inspection of the means and standard deviations revealed differences among the geographical locations. Schools initially categorized as Very Remote and Remote were combined into one category, "Remote", because the number of schools in the Very Remote category was too small (n = 5). Statistical analysis revealed statistically significant differences across the geographic categories' mean scores for Relational Collaboration [F = 3.34, df = 4, 213, p = .020, eta^2 = .045], Advocacy [F = 4.50, df = 4, 213, p = .004, eta^2 = .060], and Critical Decisiveness [F = 3.32, df = 4, 213, p = .021, eta^2 = .045], with indicative effect sizes of "medium/small" magnitude. Post hoc tests using Hochberg's GT2 discerned differences between Inner and Outer Regional for Relational Collaboration, between Inner Regional and Remote for Advocacy, and between Inner Regional and Major City for Critical Decisiveness.

Figure 7

Trend Data for Capabilities Across Geographical Location
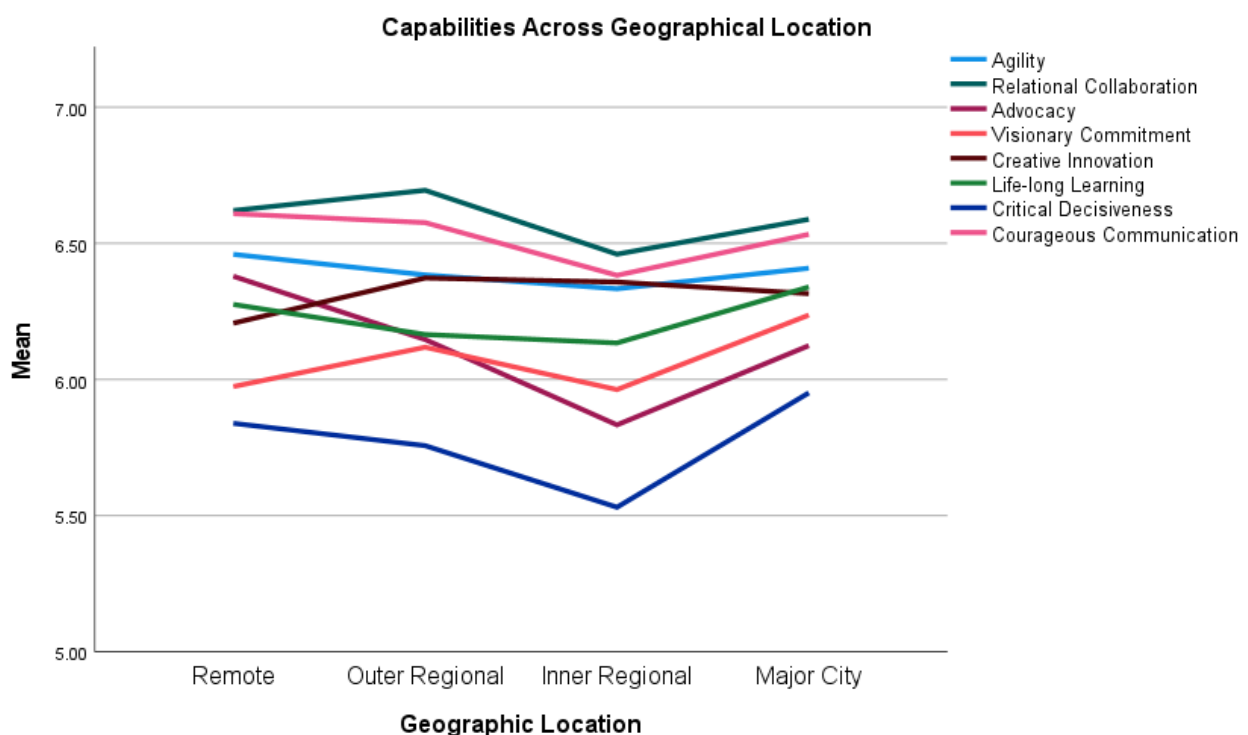
The most noticeable trend in almost all capabilities is the downward trend from the Remote and Outer Regional to the Inner Regional geographic location, then followed by an upward trend in the same capabilities in the Major City geographic location.
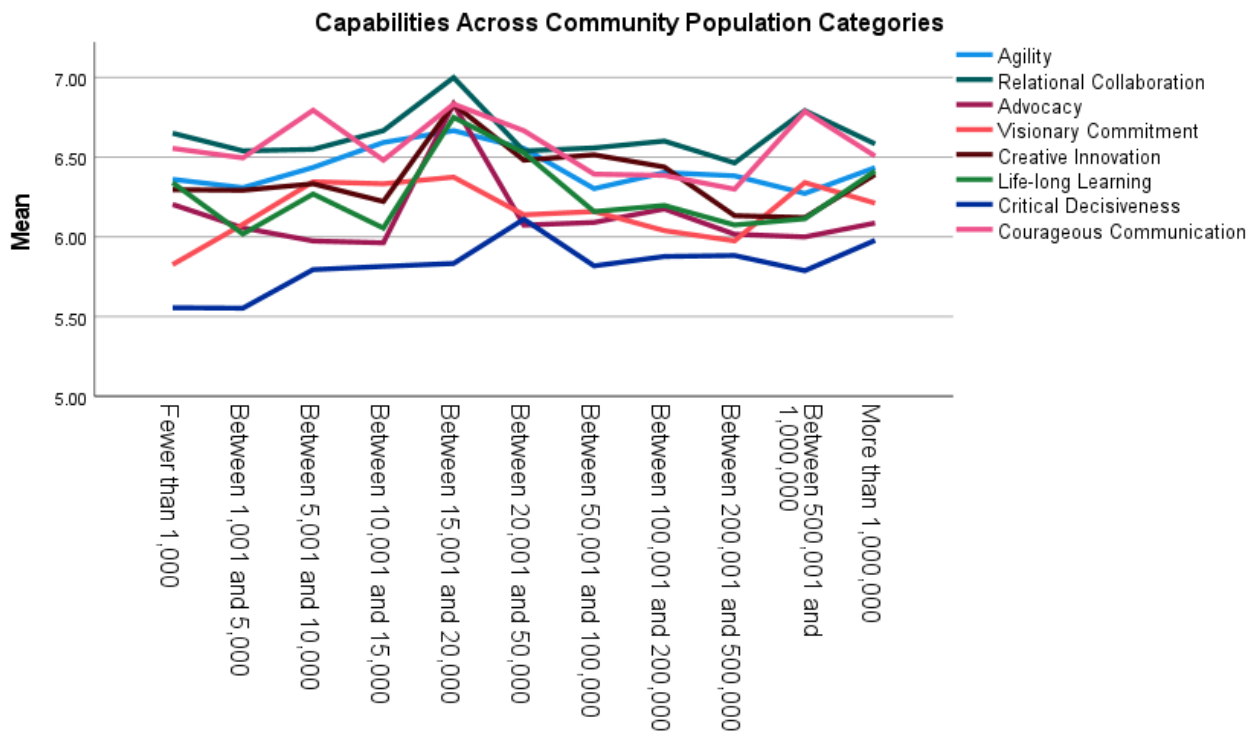
Table 8

Analysis of Capabilities and Community Population

		Agility	Relational Collaboration	Advocacy	Visionary Commitment	Creative Innovation	Life-long Learning	Critical Decisiveness	Courageous Communication
< 1,000	M	6.36	6.65	6.20	5.83	6.30	6.34	5.56	6.56
	SD	0.53	0.36	0.74	0.81	0.59	0.49	0.87	0.44
1,001 and 5,000	M	6.31	6.54	6.06	6.08	6.29	6.02	5.55	6.50
	SD	0.59	0.48	0.75	0.64	0.64	0.73	0.89	0.50
5,001 and 10,000	M	6.44	6.55	5.97	6.35	6.33	6.27	5.79	6.79
	SD	0.44	0.42	0.60	0.36	0.47	0.60	0.76	0.26
10,001 and 15,000	M	6.59	6.67	5.96	6.33	6.22	6.06	5.81	6.48
	SD	0.49	0.32	0.75	0.64	0.53	0.45	0.53	0.44
15,001 and 20,000	M	6.67	7.00	6.83	6.38	6.83	6.75	5.83	6.83
	SD	0.47	0.00	0.24	0.18	0.24	0.35	1.65	0.24
20,001 and 50,000	M	6.56	6.54	6.07	6.14	6.48	6.53	6.11	6.67
	SD	0.41	0.48	0.78	0.40	0.56	0.59	0.37	0.44
50,001 and 100,000	M	6.30	6.56	6.09	6.16	6.52	6.16	5.82	6.39
	SD	0.55	0.49	0.73	0.49	0.50	0.70	0.67	0.51
100,001 and 200,000	M	6.40	6.60	6.18	6.04	6.44	6.20	5.88	6.39
	SD	0.52	0.42	0.76	0.76	0.60	0.73	0.88	0.47
200,001 and 500,000	M	6.38	6.46	6.02	5.98	6.13	6.08	5.88	6.30
	SD	0.45	0.33	0.58	0.42	1.11	0.44	0.68	0.39
500,001 and 1,000,000	M	6.27	6.79	6.00	6.34	6.12	6.11	5.79	6.79
	SD	0.57	0.24	0.49	0.69	1.08	0.54	0.56	0.31
> 1,000,000	M	6.43	6.58	6.09	6.21	6.39	6.41	5.98	6.51
	SD	0.51	0.40	0.71	0.61	0.67	0.59	0.64	0.43

Comparing the mean scores for Capabilities across the categories of community populations should be done with caution because the numbers of schools within the categories varies widely, ranging from n = 2 in the 15,001 to 20,000 category to n = 46 in the category of more than 1,000,000. A statistically significant difference among the population categories was revealed for Courageous Communication [F = 1.94, df = 10, 206, p = .041, eta^2 = .086]. Post hoc tests were not performed because of the vastly different numbers within each category.

Figure 8

Trend Data for Capabilities Across Community Population Categories

Capabilities Across Community Population Categories

Whilst there appear to be varying trends of all capabilities across all community population categories, there is an upward trend in most capabilities toward the 15,001 and 20,000 community population category.
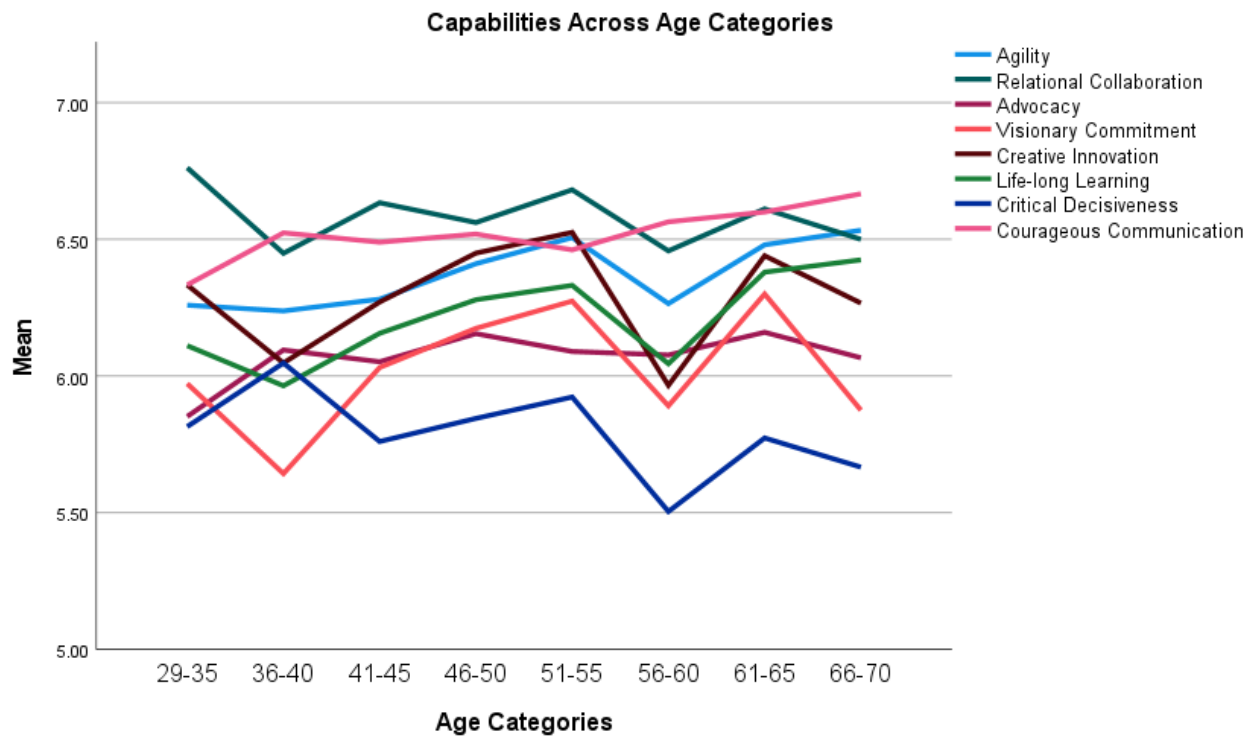
Table 9

Analysis of Capabilities and Age

		Agility	Relational Collaboration	Advocacy	Visionary Commitment	Creative Innovation	Life-long Learning	Critical Decisiveness	Courageous Communication
29-35	M	6.26	6.76	5.85	5.97	6.33	6.11	5.81	6.33
	SD	0.88	0.36	1.12	0.62	0.65	0.59	0.90	0.69
36-40	M	6.24	6.45	6.10	5.64	6.05	5.96	6.05	6.52
	SD	0.50	0.69	1.10	0.70	0.83	0.76	0.62	0.42
41-45	M	6.28	6.63	6.05	6.03	6.27	6.16	5.76	6.49
	SD	0.56	0.36	0.61	0.62	0.84	0.68	0.73	0.41
46-50	M	6.41	6.56	6.16	6.17	6.45	6.28	5.84	6.52
	SD	0.45	0.39	0.58	0.72	0.57	0.65	0.64	0.42
51-55	M	6.51	6.68	6.09	6.27	6.53	6.33	5.92	6.46
	SD	0.45	0.35	0.68	0.51	0.60	0.59	0.66	0.48
56-60	M	6.26	6.46	6.08	5.89	5.97	6.04	5.50	6.56
	SD	0.55	0.43	0.73	0.74	0.80	0.61	0.93	0.44
61-65	M	6.48	6.61	6.16	6.30	6.44	6.38	5.77	6.60
	SD	0.47	0.44	0.76	0.48	0.50	0.40	0.62	0.43
66-70	M	6.53	6.50	6.07	5.88	6.27	6.43	5.67	6.67
	SD	0.50	0.36	0.64	0.50	0.56	0.60	1.31	0.38

Inspection of the means and standard deviations revealed differences across ages. Statistical analysis revealed statistically significant differences for mean scores across the age categories for their Visionary Commitment [$F = 2.47$, $df = 7, 209$, $p = .019$, $eta^2 = .076$] and Creative Innovation [$F = 2.78$, $df = 7, 209$, $p = .009$, $eta^2 = .085$] , with indicative effect sizes of "medium" magnitude. Post hoc tests using Hochberg's GT2 discerned differences for Creative Innovation with the 56 to 60 category which had the lowest mean score and significantly lower than the 46 to 50, and 51 to 55 categories. The correlation coefficients among age measured in years and the Capabilities were non-significant.

Figure 9

Trend Data for Capabilities Across Age Categories

Whilst there is a variable trend of all capabilities in the earlier age categories, there is a noticeable upward trend from 41-55 and then a noticeable downward trend to the 56-60 age category, followed by an upward trend to the 61-65 age category.

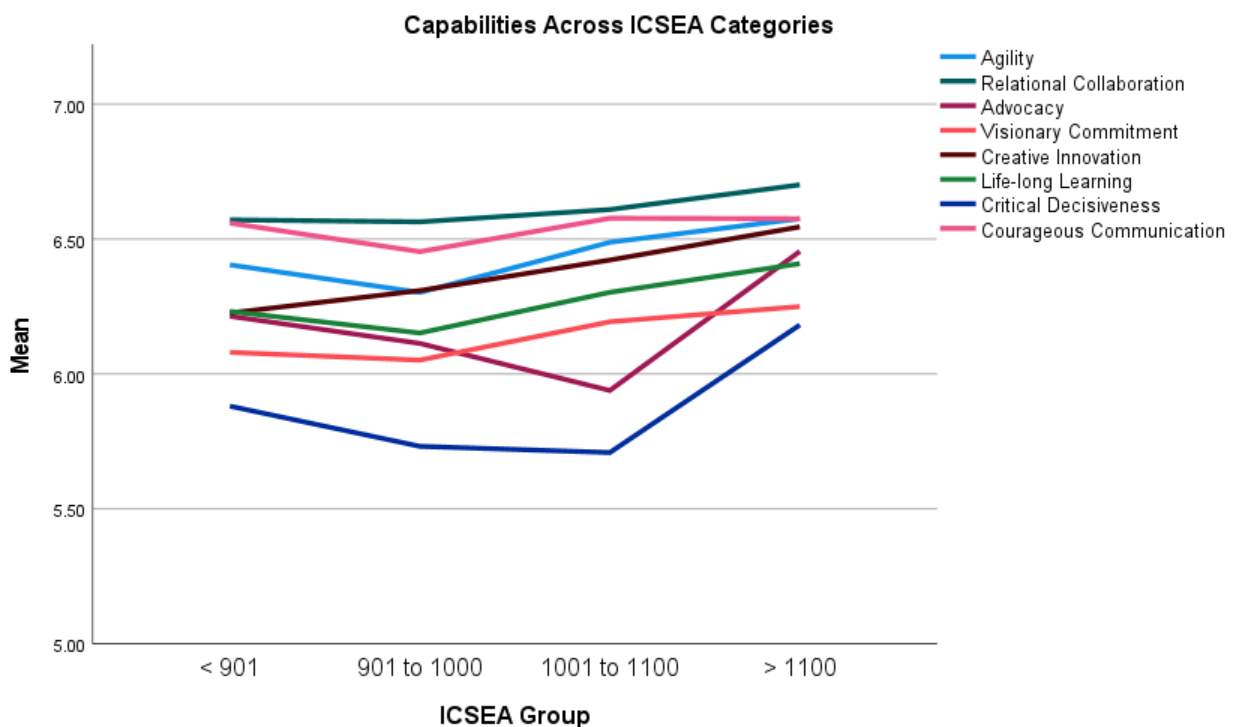## CAPABILITIES AND ICSEA

Table 10

Analysis of Capabilities and ICSEA

		Agility	Relational Collaboration	Advocacy	Visionary Commitment	Creative Innovation	Life-long Learning	Critical Decisiveness	Courageous Communication
< 901	M	6.40	6.57	6.21	6.08	6.23	6.23	5.88	6.56
	SD	0.53	0.39	0.60	0.59	0.67	0.55	0.82	0.45
901 to 1,000	M	6.30	6.56	6.11	6.05	6.31	6.15	5.73	6.45
	SD	0.54	0.42	0.66	0.70	0.58	0.63	0.77	0.46
1,001 to 1,100	M	6.49	6.61	5.94	6.19	6.42	6.30	5.71	6.58
	SD	0.45	0.40	0.79	0.59	0.76	0.60	0.74	0.42
> 1,100	M	6.58	6.70	6.45	6.25	6.55	6.41	6.18	6.58
	SD	0.50	0.38	0.58	0.52	0.60	0.52	0.78	0.45

There were no statistically significant differences in mean scores across the ICSEA categories.

Figure 10

Trend Data for Capabilities Across ICSEA Categories

Capabilities Across ICSEA Categories

All capabilities except for Advocacy and Critical Decisiveness show a slight upward trend across the ICSEA groups toward 1,001 to 1,100 after which both capabilities show a definite upward trend.

LIMITATIONS AND FUTURE RESEARCH

The size of the survey sample used in the present research is sufficient for the purposes of generating the initial model (using principal axis factoring) and testing the revised model (using confirmatory factor analysis). Nonetheless, the sample size is insufficient to perform testing across gender, to establish whether the final eight-factor model is equivalent for females and males. A larger sample with a relatively even proportion of males and females is required. The sample was in one Australian State (Queensland) with most of the responses coming from members of a professional association in the State School system. However, based on the strength of the testing of the original model and its ultimate refinement, it is now proposed that this survey be administered in other systems across Australia. Future research should also explore how the capabilities relate with other factors known to affect workplace engagement, satisfaction, and productivity.

CONCLUSION

The key outcome of this research is the establishment of an empirical model of Principal Capabilities: Agility, Relational Collaboration, Advocacy, Visionary Commitment, Creative Innovation, Life-long Learning, Critical Decisiveness, Courageous Communication. This new empirical model provides additional evidence for

the original conceptual framework of principals' capabilities. Overall, the refinement of the capabilities and the related indicators has led the researchers to reconceptualise the notion of capacity building for the School Community-Oriented Leadership Capabilities. This has given rise to a sharper definition of each of the eight capabilities, most of which remained syntactically similar in labelling, to those of the original model. Whilst the model does not deviate from being a capacity-building model, it became apparent that the indicators of one of the initial capabilities, Capacity and Culture Building, were dispersed across other capabilities and reinforced the notion of wholistic capacity building as the basis of this model. Also, what emerged was a new group of indicators of direction, authority, and management which were initially in other capabilities but clustered as a group and begged the identification of another capability. This capability has been labelled as Critical Decisiveness because of what is often required of principals in situations of complexity, and uncertainty, when a decision is demanded to systematically gather and evaluate information, make decisions relative to the context, and facilitate the outcomes.

It is anticipated that this model, underpinned by the rigour of the literature review and the survey, will be usefully implemented in varying contexts for the benefit of primary principals developing, critiquing, and living a new leadership narrative.

REFERENCES

Conway, J. M., Andrews, D., & Bauman, C. (2022). Leading Queensland primary schools into the future: Time to forge a new narrative. *The Queensland Principal,* (June), 25-27.

Conway, J., Bauman, C., & Andrews, D. (2022). *Literature review: Leading Queensland Primary Schools into the future: Unleashing the learner potential to enhance the social, economic, and educational benefits.* A research report prepared for the Queensland Association of State School Principals (QASSP) by the Leadership Research International (LRI) team at the University of Southern Queensland. USQ-LRI.

Turner, D. (2021). Reimaging education in Queensland's state primary schools: A new narrative – white paper. *Journal of Applied Research and Innovation*, *1*(3). http://www.jicr.net/images/vol1iss32021/1a_Turner_2021.pdf