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TABLE OF CONTENTS

PEER REVIEWED ARTICLES

RURAL CONNECTIONS

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Australian and International Journal of

Rural Education

Editorial: School Communities and Partnerships

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Abstract

In this issue of the *Australian and International Journal of Rural Education*, our authors explore the impact of partnerships on education in rural communities. Schools are expected to prepare students for an unknown and uncertain future. Partnerships between schools and industry, higher education providers and the wider community can achieve greater outcomes for students than schools working in isolation (Torii, 2018).

Keywords: *regional partnerships, regional communities*

Editorial

In this last issue of the *Australian and International Journal of Rural Education* for 2022, we have six research articles with authors, from Australia, China, New Zealand and the United States, who share perspectives about rural education partnerships.

Molly O' Dea and colleagues' paper discusses peer reviewed literature on industry perspectives of industry school partnerships. Literature published from around the world in English between 2001 and 2021 is included. The literature review shows a dearth of research regarding industry perspectives. The authors discuss reasons for participating and barriers to participation in industry-school partnerships. Elements of successful partnerships are identified. Recommendations from the review will inform school-agricultural partnerships with the intent of promoting careers in agriculture to students.

Jaime Manning and colleagues discuss an agricultural technology teaching resource called GPS Cows which was created through a partnership between the NSW Department of Education and CQUniversity. GPS Cows is aligned to the mandated technology curriculum in NSW, which includes the teaching of agricultural and food technologies. It is designed to engage students in activities for agriculture, food, and other technologies. The paper reviews the impact of a professional learning workshop for teachers delivering GPS Cows. The authors show that inclusion of immersive activities within professional learning provided teachers, including those teaching outside their subject specialisation, with the knowledge required to support student learning.

With fewer students commencing teacher education and an increasing number of teachers leaving the profession, attraction and retention of effective teachers has become critical around

the world. In regional locations, the problem is more significant. Tena Versland and colleagues discuss strategies to address rural teacher recruitment, such as financial incentives, field experiences and recruiting local high school students (grow your own). The paper analyses the impact of rural field experiences on the job decisions of new graduates. The authors summarise that teacher education programs should provide rich rural field opportunities for pre-service teachers.

Kerry Earl Rinehart's article focuses on rural principals and the expectations the school community has of them. The study, based in New Zealand, offers insights into the perceptions of six current principals and eight ex-principals, based on their interactions with members of the school community, which included parents and others from the local community with an interest in what happens at school. The ways that community members influence principals, and how principals respond to the sometimes-competing expectations are brought to light with some rich and detailed quotes from the research respondents. The research reported here, of course, only tells one side of a story about the relationship between principals and their school communities, and it begs the question, "what do community members themselves think?"

Cathy Stone, Sharron King and Chris Ronan discuss how partnerships between universities, regional schools and regional communities in South Australia can assist regional students make informed decisions about post-school options. University participation rates of regional students are lower than those of their metropolitan counterparts. The authors explore how visits to regional schools by universities are perceived by school staff and students. Perceptions were found to be negative and did not answer the practical questions regarding attending university in the city. The authors suggest that universities seek input from regional schools and their communities (including parents) about what they want from these outreach visits, so that they can be tailored to the needs of students.

Liuning Yang takes us to Nanjing, China, where rural-urban migrant groups' children are at risk of educational marginalisation and exclusion. Government policy, called *Tenants Have the Same Right as Householders*, aims to give rural-urban migrants equitable access to a range of services, including education for their children. The study on which the article is based reveals the combined influence of public policy and cultural capital on issues of equitable access to education for this group of people. The research suggests that policy targeted at this marginalised group will not be enough to improve educational equity. Rather, the need for a focus on equitable distribution of resources more generally is suggested as a key lever for change.

The final article in this issue is a written version of a keynote address given by the Regional Education Commissioner, Fiona Nash, who opened this year's *National Conference for Regional, Rural and Remote Education*. The keynote focuses on aspiration, access and attainment for rural, regional and remote students. Fiona shares some of the challenges and solutions she sees from her perspective. This is a timely article, as it brings to our attention the importance of "*backing ourselves*" to take hold of opportunities that those of us in regional communities have. Fiona also comments that "*keeping rural regional and remote Australia in the forefront of the minds of decision makers is absolutely vital.*"

Taken together, this interesting set of articles places schools at the nexus of community, government policy, the local community, other education providers and industry. And this is perhaps exactly where they should be. Torii (2018) argues that "*intermediaries that facilitate partnerships play an important role in the education ecosystem, and include organisations like industry associations, universities, not-for-profit organisations and government departments.*" This issue of the *Australian and International Journal of Rural Education* brings these "*intermediaries*" to the fore.

As the year draws to a close, as the Editor, I (John) want to acknowledge the outstanding and dedicated work done by members of our editorial team who volunteer so much of their time,

putting love and passion into the Journal. I also thank the newly established International Editorial Advisory Board, who have fielded many, many papers for review and have provided constructive feedback to our authors. Last year, we set out to improve the quality of the Journal and increase the readership. The achievement of Scopus listing has been an important milestone for the Journal and paves the way for better recognition of the Journal as an outlet of choice for academics and practitioners. I thank Sue Ledger for her persistence on this, and for registering the Journal with CrossRef for DOIs (Digital Object Identifiers), which now provide a unique identifier for every article we publish, and again make them more accessible. The combined impact of these initiatives has seen downloads from our website increase from about 500 files per month in 2019 to more than 2500 files per month. We are also working on a project that will see all historical articles of the Journal and its predecessor, *Education in Rural Australia*, available for download. We are looking forward to many more contributions in the coming year.

References

Torii, K. (2018). *Connecting the worlds of learning and work: Prioritising school-industry partnerships in Australia's education system*. Mitchell Institute. https://cica.org.au/wp-content/uploads/Connecting-the-Worlds-of-Learning-and-Work.pdf

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Industry Perspectives of Industry School Partnerships: What can Agriculture Learn?

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Abstract

This paper aims to identify and synthesise research related to industry perspectives of industry school partnerships (ISPs) with primary and secondary students globally. A systematic review of ISP studies published between 2001 and 2021 that included industry perspectives was undertaken in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) protocol.

This focused systematically ordered review of industry perspectives of ISPs elicited four key findings:

1. Limited research specifically focusing on industry participants' perceptions of career and knowledge sharing ISPs exist.
2. The most common reasons for participation included promoting careers and/or their industry, and enhancing community goodwill.
3. The most common barriers or challenges in participating included time, budget and process constraints, and understanding the partnership's impact.

4. Communication, trust, relationships, and setting clear goals are often important features highlighted for successful partnerships.

The recommendations from this review will be used to design, deliver and evaluate ISPs which aim to benefit agricultural industry participants. Future research will apply the findings from this review to a rural case site in Victoria, Australia, focused on agricultural ISPs aimed at increasing students' aspirations for a career in the sector. This is vital as agriculture is an important industry in this region, yet many students are unaware of the range of career opportunities available to them.

Keywords: *industry school partnership, school industry partnership, business perspectives, industry perspectives, career education, agricultural education*

Introduction

Historically, schools have sought to work with industry for various reasons including to complement curriculums, support career education, and seek monetary donations (Torii, 2018). These types of partnerships, often labelled as industry school partnerships (ISPs), have been one means to make schooling more relevant whilst providing opportunities to enrich student learning and improve career aspirations (Hughes et al., 2016; Mann et al., 2018; Shergold et al., 2020; Torii, 2018). These opportunities are especially important for rural and regional students who are often more disadvantaged than their city counterparts, having lower levels of educational and career aspirations (Parliament of Victoria, 2018; Sullivan et al., 2018). Whilst there are many definitions of ISPs, generally they can be described as mutually beneficial relationships between representatives from businesses in any industry, and a school, or group of students (Torii, 2018; Pillay et al., 2014). Partnership activities are undertaken with industry representatives from any industry and vary in length, students' demographic, and type of support, such as mentoring, workplace tours, or offering health services. Often schools look to industry for guidance or answers relating to careers, however, with the world of work rapidly changing, industry does not necessarily know what the future will look like for these students (Cassells et al., 2018; OECD, 2018; Rothman, 2019).

Industry and schools must learn and change together as priorities shift in a changing future of work (Flynn et al., 2016; OECD, 2018). This interstitial space between the changing world of work and ISPs has not been researched from the perspective of industry. The industries themselves are under change, stress and pressure. In 2022 as this article is being written, at the time of a global pandemic, we are witnessing the disastrous effects of climate change, incredible bottlenecks in supply chains throughout the world, changing demographics and huge moves in technological innovation, all impacting the world of work (Parliament of Australia, n.d.). These factors are often highlighted further in rural communities with industries based in these locations visibly impacted by these challenges and often being under-resourced in ways that exacerbate uncertainty around the future of work and the sustainability of these regions (Climate Council of Australia, 2016; Garnett, 2018; Australian Government Department of Industry, Science, Energy and Resources, 2018). The literature is limited with respect to studies in which ISPs are explored from the industry perspective, and what they can potentially find in these partnerships during these times of change.

In Australia, many students have a lack of knowledge about agriculture, and are not aware of the vast range of career options available in the industry (Primary Industries Education Foundation Australia (PIEFA), 2020). ISPs have been identified as one means to help improve students' knowledge of agriculture and associated careers (Education Council, 2019; Shergold et al., 2020). To form partnerships, industry members willing to participate must be identified. However, industry perspectives must first be understood to develop partnerships that meet all stakeholders' needs. By reviewing literature involving all industries participating in ISPs across

the globe, we seek to find recommendations to apply to agricultural ISPs. This aligns with our particular research interest in raising and expanding the career aspirations of students in agricultural industries. Hence, for the purposes of this review, ISPs are defined as: a relationship between a school(s) and an industry partner(s) centred around knowledge-sharing and career awareness. Industry partners may own, or are employed at, any private business, or work in the public sector. They have knowledge and perspectives which they can share to teach students about the industry in which they work, and associated careers.

Three questions guided this systematic review of literature reporting on industry perspectives of ISPs with primary and secondary students globally over the last twenty years from January 2001 to December 2021. Firstly, what are industry personnel perspectives of industry school partnerships? Secondly, what recommendations were made that offer ways of improving industry school partnerships for industry participants. Thirdly, how can these findings inform agricultural industry school partnerships?

The method for literature selection is provided in the following section. The results relevant to the guiding questions presented above and a discussion of implications for ISPs will follow.

Method

The Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) reporting guidelines were used to transparently select literature for analysis (Page et al., 2021). This process began by identifying and then searching reputable databases EbscoHost, Education Resources Information Centre (ERIC), ProQuest and Scopus, followed by screening these records first by title, then abstract, to remove those not meeting the inclusion or exclusion criteria. Those studies remaining were read in full to identify studies suitable for comprehensive analysis. Relevant information from these articles were then summarised in the analytic matrix presented in Table 1.

Key words and phrases included in the searches were ‘career’ and ‘industry school partnership’ to capture ISP literature. The full search terms are included in Figure 1.

The inclusion criteria adopted for selection of sources were studies:

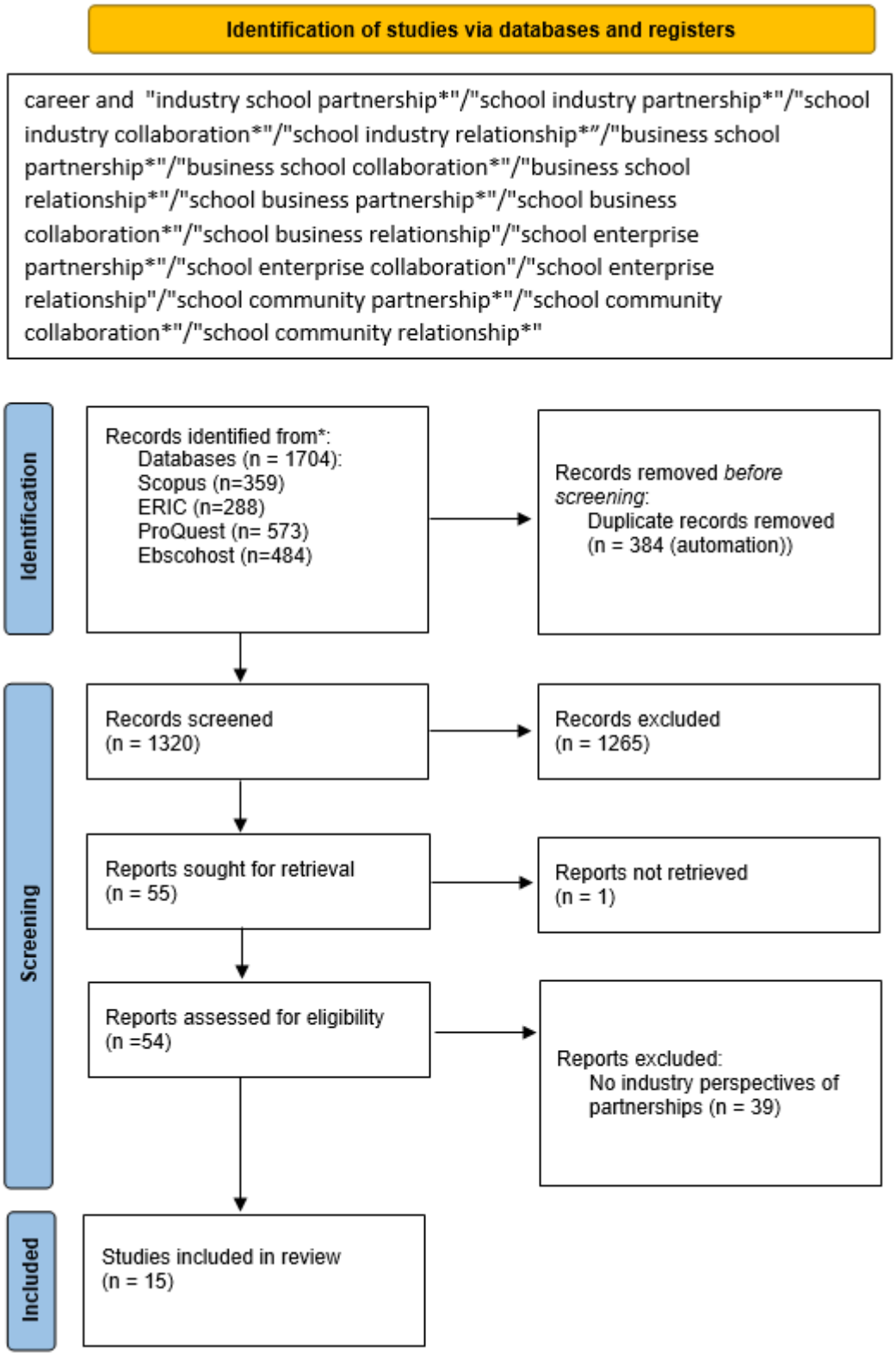
- On samples composed of industry participants partnering with primary and secondary school students, with or without inclusion of teachers and/or students in the study.
- Where knowledge sharing and career awareness is the focus of at least one activity in the partnership.
- Within the normal school setting.
- Outside of the school setting which occurred during class time.
- Peer reviewed research articles and conference proceedings published from 2001 to 2021.

The exclusion criteria adopted for the selection of sources were studies:

- Which included adult learners, university students or pre-school age students as the students participating in the partnerships.
- Focusing on ISPs where knowledge sharing and career awareness are not the primary focus.
- Where the ISP activities are:
    - Individual to each student for example: student work placements or one-on-one mentoring
    - Outside of school hours, or extracurricular
- Published in languages other than English.

Figure 1 visually represents the literature identification and screening process.

Figure 1: ***PRISMA Flow Diagram***



(Adapted from Page et al., 2021)

The literature search produced 1,704 articles for consideration. Duplicates were removed using EndNote X9, whereafter 1,320 articles remained. The titles and abstracts of these remaining studies were assessed to determine whether they could be removed based on the exclusion criteria for this review. Following this, 55 full text studies required further investigation. A further 29 studies were removed after examining the methodology due to no appropriate data having been collected from industry participants. The remaining 26 studies were assessed using the Critical Appraisal Skills Programme (CASP) checklist for qualitative research (Critical Appraisal Skills Programme 2018) which was adapted to include qualitative, quantitative, and mixed methods approaches. A further ten articles were excluded. After reading in full, details from the final 15 articles were collated into an analytic matrix to allow for evaluation. The following items were included in the analytic matrix: 1) citation; 2) location; 4) aim/purpose; 5) methodology/research design; 6) method(s); 7) data analysis strategy; 8) sample size and participants; 9) relevant findings. Some items were not specified in each article. Where this occurs, it has been noted in the matrix. The analytic matrix provides a clear, systematic summary of the relevant results from each study. This has provided a basis for critical analysis for this review.

Results

The analytic matrix is presented in Table 1, providing a summary of results related to industry perceptions of ISPs from the 15 included articles.

Table 1: ***Analytic Matrix of Results***

Citation	Location	Aim/Purpose	Methodology / Research Design	Data collection methods	Data analysis strategy	Sample size and participants	Findings (only related to industry perceptions)
Luaces et al., (2019)	USA– urban	Describes the formation of the University of Kansas Health Science Academy and outcomes of its first year of implementation.	Case study	Meeting notes and Semi-structured group interviews	Qualitative data-themes from group interviews, meeting notes, and student focus groups; and cross-case analysis and common theme development. Statistical analysis was used to draw inferences from survey data.	7 key Health system stakeholders (VP of Operations, CEO, Director of Patient- and Family-centered Services, Director of Nursing Education, Support positions' department heads, Director of Marketing and Communication Police and Public Safety).	Barriers – lack of continuous funding often mentioned. Two participants wanted to attract workforce, and one wanted formal agreements/process, targeted activities to see outcomes.
Plunkett & Dyson (2019)	Australia– regional	Data gathered aimed to gather qualitative and quantitative data around participants' change in attitude, perception, and understanding over the course of the project.	Case study incorporating a mixed methods framework	Survey and focus groups	N/A	13 organisations (university and government) involved across 6 schools. Unknown how many contributed to data sets.	Numerous barriers (time, budget, process constraints, difficult to coordinate), challenges (evidence of impact), benefits (reach students, staff reacquainted with own pathways) and aims (students understanding pathways, world of work) deduced from participants' quotes.
Bennett & Thompson (2011)	USA-metropolitan	To examine the superintendent's role in development and institutionalisation of school and business partnerships in a district without history of collaborative relationships; to assess capacity for sustainability.	Qualitative case study	Semi-structured interviews, observations, and document analysis	Neo-institutionalism theory utilised. Inductive analysis allowed themes to emerge based on lived experiences. Codes and themes used required consensus with two additional coders.	7 chamber of commerce individuals (Chamber CEO, Banking, Landscaping, Entertainment, Insurance).	Motivations to participate included students being deficient in thinking and job-seeking skills, wanted to do something about it. A participant identified promotion of business as a benefit, another saw community benefits, one liked the recognition. Partnership coordinator role was acknowledged as essential and effective.

Citation	Location	Aim/Purpose	Methodology / Research Design	Data collection methods	Data analysis strategy	Sample size and participants	Findings (only related to industry perceptions)
Malin et al., (2020)	USA	How cross-sector collaboration shaped development and implementation of district-wide high school career academies in a large urban school district.	Single case study	Semi-structured individual and focus-group interviews	Qualitative data analysed as per Bazeley and Jackson (2013).	8 business/industry partners Industry not specified.	One participant 'guessed' academies were effective. Challenges identified included: power imbalance with school, courses not up to industry standard, difficulty making changes, students learning outdated content.
Pillay et al., (2014)	Australia-Queensland	An empirical analysis of two dimensions: effectiveness and efficiency as applied to implementation of partnerships within the Gateway schools' initiatives.	Qualitative exploratory case study	Semi-structured interviews	Interviews coded into themes. Discrepancies in coding were resolved by discussion.	8 industry participants from the following industries: aviation, building and construction, manufacturing, minerals, and energy.	Barriers included time, inflexible nature of school. One happy to play a greater role with engaging schools/students, including spending time in industry. One reported unrealised outcomes, students of insufficient standard. No respondents thought the project affected school system policies after 10 years.
Carter et al., (2009)	USA-midwestern state	To examine the role that chambers of commerce and other local employer networks might play in expanding employment opportunities for youth with and without disabilities in their local communities.	Randomly assigned half of all invited organisations to receive a survey referencing youth, with the other half referencing youth with disabilities.	Survey	Descriptive statistics, independent-samples t tests, correlation analyses, open-ended section categorised by content	135 participants in total (122 chamber of commerce,13 other networks). Business sectors include service industry/retail, insurance/banking, healthcare, government, manufacturing, communication/ technology, utilities, education, home-based business, real estate, tourism.	Many already worked with schools and responses reflected a general willingness to partner with local high schools. Across every activity, average ratings were higher for the organisations whose surveys referenced youth versus youth with disabilities. Despite reporting an organisational mission that involved supporting youth and viewing activities overall as being moderately feasible, there was a low and variable involvement of chambers of commerce.

Citation	Location	Aim/Purpose	Methodology / Research Design	Data collection methods	Data analysis strategy	Sample size and participants	Findings (only related to industry perceptions)
Kakalia et al., (2019)	USA- North Hawaii	To strengthen the pipeline for students to pursue higher education and careers in health, promote physician retention in North Hawaii.	N/A	Faculty feedback by observation and discussion with uni students	N/A	N/A. All participants from the health industry.	Two participants hoped the program continues and grows, one felt their experience in program was extraordinary and one identified that they learnt from children. One thought that exposing students to the health field is great thing.
Butler & Poekert (2018)	USA- Palm Beach County	Provides information on formation of the STEM Education Council, its development, obstacles encountered, lessons learned to provide a survey of an academic-industry partnership.	N/A	N/A	N/A	N/A. No particular industry- range of business involved including local philanthropies, colleges and universities, businesses, and research institutes.	The STEM Education Council members felt they could contribute by providing funding, resources, field experiences, and opportunities to explore real-world situations.
Woodroffe et al., (2017)	Australia-regional	Explores aspects of developing and implementing career education activities/ partnerships in rural and regional Tasmania	Mixed methods using a convergent parallel design	Interviews	N/A	8 industry/community stakeholders. Participants industries not stated. From quotes, one can be identified as from agriculture industry.	Participants wanted to showcase their work environments and shared their stories and career pathways (four quotes – two from agriculture industry). One offered ongoing support, and another planned to keep the partnership going.
Hernandez-Gantes et al., (2017)	USA-metropolitan	To explore the nature of a partnership between a career academy featuring an IT curriculum and local business partners	Case study	Documents, observation, interviews. Triangulation of sources.	Interviews analysed using thematic analysis.	17 business and industry partners from IT industry.	Career specialist identified as critical element for success. Participants wanted to promote careers, feed own pipeline, invest in upcoming generation and were proud of being involved.

Citation	Location	Aim/Purpose	Methodology / Research Design	Data collection methods	Data analysis strategy	Sample size and participants	Findings (only related to industry perceptions)
Hoff (2002)	USA- metropolitan	To explore the business view of partnerships.	Exploratory survey	Survey	Descriptive statistics and cross tabulations. Open ended questions were charted for frequency.	327 businesses from the following industries: Service, finance/real estate, retail trade, technology, hospitality, manufacturing, utilities, mining, construction and wholesale trade.	37% identified success measures, but few involved in determining them. Most thought businesses should devote resources to individual schools and agreed that they needed to assist education. Formal school feedback rarely provided. Most partnerships were successful. Personnel change was a major reason for failure. Proximity to school, school need and dynamic leadership were important characteristics for selecting schools. Enhancing community goodwill was a reason for becoming involved.
Badgett (2016)	USA- a metropolitan and becoming urban area	To explore the definition, form, and scope of what effective school–business partnerships look like from the perspective of business leaders, owners, and managers in two diverse areas of Texas.	Qualitative research design	Interview	Interviews were coded with the constant comparative method.	18 business leaders. Industries not specified, but results indicate technology and electrical engineering, industrial equipment, metal fabrication, radio, service and hospitality industries.	Major themes: collaboration and common purpose (relationships, communication, trust, future of students). Minor themes (results and follow through (return on investment, integrity, responsibility).
Morris et al., (2021)	Australia	To show how a partnership between industry and the university supports improved STEM content knowledge and self-efficacy for early career teachers	Case study	Interviews and focus groups	Inductive coding. Triangulation between researchers.	4 participants from one major STEM-driven organisation.	They discussed partnerships as longitudinal relationships that would allow for diverse experiences to be offered over time and the needs to establish clear motives and goals.

Citation	Location	Aim/Purpose	Methodology / Research Design	Data collection methods	Data analysis strategy	Sample size and participants	Findings (only related to industry perceptions)
Howitt et al., (2009)	Australia	Case studies provided to demonstrate the range of relationships found between scientists and teachers.	Not clear. Evidence was gathered through a variety of methods.	Interviews, feedback sheets, online survey	N/A	Interviews with 13 teacher-scientist partnerships. Analysis of 96 feedback sheets from teachers and scientists. 194 scientist responses from online survey.	Scientists benefited from communication with teachers and peers, improved communication with students, increased job motivation and enthusiasm, partnership legitimisation and a better understanding of community's awareness and perceptions of their work (not clear if this came directly from industry).
Kirschenbaum & Reagan (2001)	USA- urban	To examine a school-university collaboration process.	N/A	Interviews	N/A	57 program directors (university staff). Participants were split into the following categories: Education, Medical, Cultural	Several participants desired objective methods of measuring outputs. Unsatisfactory collaborations were characterised by poor communication, transience of school staff, lack of shared investment in program. 67% of programs had strong commitment to collaboration and would continue if leader no longer involved, 16% would cease. One expressed frustration about: lack of time, funds, knowledge about effective collaboration.

Note: N/A = not available

Industry Perspectives of Industry School Partnerships

For this review, the authors sought to identify industry perspectives of ISPs. Where studies included data from participants other than industry, for example, teachers or students, only the industry component has been considered. The purposes, conduct and findings of the studies were coded across three themes:

1. Evaluating or describing an individual ISP or program
2. Exploring industry views of partnerships in general, not related to a specific program
3. Perspectives from industry who have participated in unrelated ISPs

Evaluating or Describing an ISP or Program. Ten studies evaluated or described a particular ISP or program (Bennett & Thompson, 2011; Butler & Poekert, 2018; Hernandez-Gantes et al., 2017; Howitt et al., 2009; Kakalia et al.,2019; Luaces et al., 2019; Malin et al., 2020; Pillay et al., 2014; Plunkett & Dyson, 2019; Woodroffe et al., 2017). In these studies, a range of partnership activities were conducted, some meeting this review's requirement for activities to have a career awareness and knowledge sharing focus, whilst others did not. The data from all industry participants are combined, and data specific to career awareness and knowledge sharing activities cannot be extracted. Hence, not all industry data are necessarily related to ISP activities focused on knowledge sharing and career awareness. These studies are summarised below.

Plunkett and Dyson (2019) collected data from 13 organisations involved in the Broadening Horizons pilot programme, an ISP program in Australia. Industry members were from universities, Government organisations, local councils, and fire and emergency service organisations. Surveys were utilised; however, industry data cannot be viewed separately as both teacher and industry partner data are combined. The authors also undertook focus groups, which provided some industry quotes related to challenges and reasons for participation. With regards to reasons for participation, one participant highlighted that student understanding of pathways, and the real world of work was their aim, whilst another saw untapped opportunities for their industry (Department of Justice) to prevent students entering the criminal justice system. One participant thought "*reacquainting themselves with their own pathways and reignite their own passions to help students experience what we are aiming to do…"* was a benefit to their staff members (Plunkett & Dyson, 2019, p. 101). Challenges reported by industry participants included: understanding if they were having an impact and wanting evidence to validate, time, budget, and process constraints.

Hernandez-Gantes et al. (2017) described an information technology (IT) career academy and industry partnership. Interviews with 17 industry participants provided several quotes highlighting reasons for participation, and the importance of the career specialist in the program's success. One participant highlighted their reasons for participation as wanting to promote careers to feed their own employee pipeline and to invest in the next generation. The authors note these reasons as being evident across all interviews. Three quotes from industry show the career specialist was a critical element for success. Two additional industry quotes state they were proud to be involved in the academy.

Another career academy, but related to the health industry, was described in Luaces et al. (2019). Data were collected from seven key health system stakeholders via group interviews, and findings emphasised university funding to run the program as a barrier. Two participants highlighted the need to attract workforce as a goal of their involvement, with one wanting formal agreements and targeted activities to see outcomes.

Malin et al. (2020) examined two of 12 career academy schools in a district in the southern United States of America in depth. Each school involved may have multiple career academies, including hospitality, marketing, business, and innovation. Eight industry partners provided interview data

highlighting power imbalances between themselves and the school, and difficulty making changes.

Howitt et al. (2009) evaluated the Australian Scientists in Schools pilot project. The objectives of this project's partnerships align with this review's focus on career awareness and knowledge sharing activities. Data were collected from 13 teacher-scientist partnership interviews, 96 teacher and scientist feedback sheets, and 194 online surveys from scientists. However, results were not detailed in the article. The authors summarised benefits to scientists from the project, including communicating and raising awareness about their work to the community and improved job enthusiasm.

Kakalia et al. (2019) described a health-related ISP in Hawaii. Some activities as part of this partnership, including the educational enrichment activities between health staff and students, met the criteria for this review. This study did not provide a clear methodology. However, they did state that "*faculty feedback by observation and discussion with students were conducted*" (Kakalia et al., 2019, p. 43), in this instance the students referenced are university students playing the industry role of an ISP. The quotes provided in the article from university students highlighted that the program was viewed favourably, with one participant highlighting that they learnt from the children, with another hoping the program continues.

Pillay et al. (2014) focused on the effectiveness and efficiency of 12 of 120 ISPs which form part of the Gateway Schools initiative in Queensland, Australia. These 12 ISPs span the building and construction, manufacturing and engineering and minerals and energy industries. Whilst not all ISP activities in this initiative met the criteria for this review, such as work placements, the group mentoring as part of a weeklong partnership activity, and workplace excursions are suitable for inclusion. Through semi-structured interviews with eight business partners, barriers including time and the inflexible nature of school-based training were highlighted along with project outcomes not being realised. One participant expressed that they were happy to play a greater role with students. Unfortunately, all participants thought there was no impact on school system policies, even after 10 years of operation.

Woodroffe et al. (2017) evaluated the Pathways to Success project in Australia which investigates a partnership model for career education. ISP activities focused on priority industry sectors identified as advanced manufacturing, food and agriculture and tourism. Eight industry partners were interviewed, with four stating that they wanted to showcase their industry and stories (including two respondents from the agricultural industry), and two respondents highlighting a desire to continue the partnerships.

Bennet and Thompson (2011) examined the superintendent's role in developing ISPs. Through this study, seven chamber of commerce members provided quotes related to their motivations to participate in these ISPs and highlighted benefits to them. The members were from the following fields: banking (three), insurance (one), landscaping (one), entertainment (one), executive (one). Two participants highlighted wanting to improve student skills as a motivation to participate. One participant wanted to promote their business, a different individual found benefits to the community as a reason to support the partnerships, and another recognised the need for continuing relationships.

Butler and Poekert (2018) described the formation of a STEM Education Council, consisting of industry members wanting to improve STEM education in the district. A method was not provided. However, a statement about what members of the STEM Education Council members felt they could contribute was provided, indicating data were collected in some way from industry participants. Possible contributions included "*field trips, and opportunities to explore real-world situations*" (Butler & Poekert, 2018, p. 213) indicating industry members were willing to participate in knowledge and career awareness type activities.

Industry Perspectives from Participants in Unrelated ISPs. Two studies gathered data from industry participants who had previously participated in a partnership activity (Hoff, 2002; Kirschenbaum & Reagan, 2001). Data collection was not defined to one partnership or program, and these studies are summarised below.

Hoff (2002) surveyed 327 businesses to explore their views on partnerships with schools. Most agreed that businesses were obligated to assist education, and that they should devote resources towards individual schools rather than at the district/state/national level. Enhancing community goodwill was a major reason for becoming involved in a partnership along with improving the skills of future employees. More than half of the respondents hoped to improve the following educational areas because of their partnership: school equipment/technology, student work ethic, academic achievement of students, student attendance/dropout rate, vocational skills of students. Fifty-six percent of respondents thought the goals of their previous partnership involvement was explicit, with most stating their partnerships were successful. Thirty-seven percent thought that measures of success for the partnership were identified, however many were not involved in determining them. These measures of success were not identified through the survey. Proximity to school, amount of interest at a school and dynamic leadership were important characteristics used for selecting schools to partner with. Formal feedback was rarely provided by the school, with informal communication more likely. Loss of key personnel was a major reason for failure or loss of momentum in the partnership.

Kirschenbaum and Reagan (2001) interviewed 57 program directors from universities to examine the school-university collaboration process. In these ISPs, the university was playing the role of industry and participants came from the educational, medical, and cultural divisions of the university. Whilst not all programs would fit this review's criteria, the following program types may meet the criteria: curricular enrichment (n=26), school-to-work (n=seven) and tutoring/mentoring (five). However, limited information is provided to understand how many programs would meet this review's criteria. Interviews highlight that 67% of programs had a strong commitment to collaboration and would continue if the program leader was no longer involved, whereas 16% of programs would cease. Unsatisfactory collaboration was associated with "*poor communication, the transience of school staff, and the lack of shared investment in the program*" (Kirschenbaum & Reagan, 2001, p. 492). Program directors expressed frustration about the "*lack of time, financial resources, and knowledge about effective collaboration with the schools*" (Kirschenbaum & Reagan, 2011, p. 492). They perceived assistance to evaluate their programs, and research about these types of collaboration as most helpful. The authors highlighted that "*they seemed to be looking for a way to streamline the collaborative process and make it work more efficiently*" (Kirschenbaum & Reagan, 2001, p. 494).

Industry Perspectives Related to Partnerships in General. Three studies gathered data from a wide range of industry participants (Badgett, 2016; Carter et al., 2009; Morris et al., 2021) and participants may or may not have participated in an ISP previously. These studies are summarised below.

Carter et al. (2009) surveyed 135 industry participants, from no specific industry, to examine industry networks' potential role in expanding employment opportunities for youth with and without disabilities. Half received a survey specifically referencing youth with disabilities, whilst the other half referenced youth. Over two thirds of the chambers of commerce surveyed indicated that their organisation sometimes or frequently worked with high schools, with responses reflecting a general willingness to partner with local high schools. Many respondents thought that their organisation could partner with a local high school to: co-sponsor a job fair, co-sponsor a job shadowing day or career exploration event, offer mock interviewing or resume writing practice, or offer job shadow experiences. Across these activities, organisations whose survey referenced youth with disabilities were less likely to participate. Only 10.7% of respondents indicated that they had participated in one of the 17 listed activities in the past year, with the

most common activities being "*meeting with schools to talk with youth about what businesses are looking for in employees (11.5%), including information about the school's vocational programs on their website/newsletters (9.9%), and co-sponsoring a "job shadowing" day or career exploration event (9.9%)*" (Carter et al., 2009, p. 152). Whilst many organisations had missions which involved supporting youth, there was often a lack of involvement during the past year for which the reasons are unclear.

Badgett (2016) interviewed 18 business leaders to explore school-business partnerships from a business perspective. The major themes from these interviews were collaboration and common purpose, including relationships, communications, trust, and the future of students. He identified results and follow through as a minor theme, including quotes about return on investment, integrity, and responsibility. The interviews highlighted that business leaders want to support schools and their leaders to improve student success. Several quotes emphasise the importance of communication, two highlight trust, two feature return on investment, and two refer to student success. One highlighted using the partnerships to find workforce, whilst institutional limitations were also noted.

Morris et al. (2021) interviewed four STEM industry professionals after a two-day professional learning event with early career teachers to explore how a partnership could support them. Industry participants and teachers discussed partnerships as longitudinal relationships that would allow for diverse experiences to be offered over time. Industry participants also highlighted the need to establish clear motives and goals.

This systematically ordered review of studies researching industry perceptions of ISPs elicited four findings, four major limitations and three recommendations. These are discussed below.

Summary

Firstly, amongst the peer-reviewed literature, limited research exists that focuses on industry participants perceptions of career and knowledge sharing ISPs. Only two studies specifically aimed to investigate industry perspectives of ISPs. The remaining 13 studies collected some data which included industry perspectives as part of a different aim and highlighted a clear gap in the literature.

Secondly, the most common reasons for participation included promoting careers and/or their industry and enhancing community goodwill. However, industry member reasons for participation were varied, some participated for personal gain, whilst others noted benefits to their community, business and/or wider industry. The range of responses indicates that there is likely no singular approach to partnership success.

Thirdly, the most common barriers or challenges in participating included time, budget, and process constraints, and understanding the partnership's impact. However, there was a range of barriers and challenges identified. In some instances, higher level executives and school coordination prevented partnerships forming, or becoming successful. This highlights the complexity and diversity of ISPs and the interrelation between different stakeholders. This resonates with Bronfenbrenner's Ecological Systems Theory (Bronfenbrenner, 1981). ISPs can be described as an ecosystem, made up of interrelated settings, each having different influences on the core partnership. Whilst the core partnership consisting of an industry partner, teacher and students may try to form an effective relationship, other external factors such as education departments, company demands, and policy may have influence on partnership success.

Finally, communication, trust, relationships, and setting clear goals are often important factors highlighted for successful partnerships. Again, different perspectives are provided by industry participants. In different partnerships, some factors were highlighted more than others and again demonstrated the diversity in ISPs and that one approach may not meet every partnership need.

Limitations

Four major limitations to the findings have been distilled from the reviewed literature. These limitations stem from (a) the lack of data collected from industry about their perspective of ISPs, (b) inability to uncouple data relating specifically to career awareness and knowledge sharing activities from other types of ISP activities excluded from this review, (c) lack of theoretical frameworks used to investigate industry perspectives of ISPs, (d) lack of geographic diversity in research settings with all studies located in the USA or Australia. These limitations highlight the elusiveness of research exploring industry perceptions of career awareness and knowledge sharing based ISPs.

The first limitation of these findings was the lack of data collected from industry about their perspective of ISPs. Only two studies specifically aimed to collect data on industry perspectives of ISPs. All other studies reviewed collected perceptions from industry with other aims, often to explore an ISP in general. This restricted the data available, as many studies collected limited information from industry participants.

The second major limitation was the inability to uncouple data relating specifically to career awareness and knowledge sharing activities from other types of ISP activities excluded from this review. As many studies explored a partnership(s) with a range of activities, not all industry participants participated in activities meeting this review's criteria. This leads to the findings distilled from this review being potentially skewed from industry perceptions of excluded partnership activities.

The third limitation was the lack of theoretical frameworks used to investigate industry perspectives of ISPs. Due to the lack of studies specifically aiming to explore industry perspectives of ISPs, where theory has been used to investigate findings, often these are not applicable. In those studies which did explore industry perspectives of ISP, theoretical frameworks were not discussed. This leads to a large literature gap which could be filled by exploring theoretical frameworks related to industry participation and perspectives of ISPs.

Recommendations

Due to most studies not solely focusing on industry perspectives, recommendations were often not applicable to this review. However, several studies identified the need for (a) further study of ISPs analysing a wider range of stakeholders; (b) enhanced understanding of the ISP process and dynamics of sustainability and program stewardship; (c) further study of ISP under different conditions, including geographical areas and school configurations.

Two studies advocated for further study of ISPs analysing a wider range of stakeholders. Bennet and Thompson (2011) recommended further research using mixed method approaches to analyse wider stakeholder responsiveness and motivation. Likewise, Badgett (2016) proposed further research to understand business leaders' perspectives in not-for-profit organisations. This aligns with the clear gap in literature exploring perspectives of industry in ISPs.

Kakalia et al. (2019) advised having a project coordinator to create sustainability for the project. Aligning with this, they suggested exploring ways to improve stewardship and sustainability of programs. Bennet and Thompson (2011) also recommended further studies to determine the effects of key participant departure, an important aspect of project sustainability.

Badgett (2016) suggested further research to understand business leaders' perspectives in other geographical locations. Similarly, Hernandez-Gantes et al. (2017) encourage further research using a multiple case study approach to explore ISPs under different conditions e.g., geographical areas or school configurations. These recommendations align with the identified lack of research into industry perspectives of ISPs.

Discussion

The literature highlights a range of industry perspectives of ISPs, demonstrating that many industry participants had positive experiences with ISPs. However, many studies indicated challenges and issues to resolve for partnership success and sustainability (Kirschenbaum & Reagan, 2001; Malin et al., 2020; Pillay et al., 2014; Plunkett & Dyson, 2019). Whilst no two partnerships were the same, and individual industry representatives often identified different desires, needs and challenges, the following recommendations can be applied and trialled with an aim to improve partnership success and/or sustainability. Whilst the authors sought to specifically apply recommendations to agricultural ISPs, the following is applicable across any industry.

A variety of challenges were noted in the literature such as time, budget constraints, inflexible nature of schools, setting clear goals, communication, respect, and trust between parties. If these challenges can be addressed at the outset, more successful partnerships may be formed. Addressing these challenges is recommended to help both schools, teachers, and industry to understand each other's objectives, abilities, and constraints, to help build a partnership which can benefit all involved.

Hernandez-Gantes et al. (2017) highlighted that a career specialist, who helped to coordinate partnerships, was critical to their success. Many other ISPs studied also indicate a separate party helped to initiate, build, and coordinate partnerships (Pillay et al., 2014; Plunkett & Dyson, 2019). A partnership coordinator may help alleviate some of the challenges listed above, whilst improving other aspects such as organisation and coordination of the partnership. Utilising partnership coordinators/brokers is not a new concept and is common amongst ISPs. For example, in Australia, numerous programs have funded partnership brokers, including the national School Business Community Partnership Brokers Program (2010-2013), and through current initiatives such as the Victorian Local Learning and Employment Networks (LLENs) and Queensland's Gateway to Industry Schools program (Dandolopartners, 2014; Queensland Government Department of Employment, Small Business and Training, 2020; Victorian Department of Education and Training, 2021). However, utilising partnership brokers also raises some concerns. Research has shown stakeholders, in some instances, did not find value in the partnership broker, or considered their role as duplication, especially where schools and industry already had formed partnerships (Dandolopartners, 2014). This is important to consider when planning future ISP programs. The challenges noted led the authors to recommend that ISP programs are designed to include a facilitation role, or other structure, which promotes strong communication and ensures value is found in all involved parties' participation. Duplication of such a role must also be considered with tasks and responsibilities clearly delineated from that of the other parties involved.

What can the Agricultural Industry Learn?

The Australian agricultural industry faces severe workforce shortages, exacerbated by COVID-19 (ABARES, 2021; Deloitte, 2014; Ernst & Young, 2020; Ricketts, 2021). Technological advances, climate change, the global pandemic and changing demographics are shifting the industry's career opportunities (International Labour Organization, 2018; World Bank, 2019; Lund, et al., 2021). Whilst new visa programs and reductions in some agricultural qualification fees have been announced by the Australian government, more is needed to spark early career aspirations in agriculture (Australian Government Department of Foreign Affairs and Trade, 2021; Bernasconi et al., 2020). Career aspirations are often formed early in childhood (Auger et al., 2005; Gore, et al., 2015). If a student is not exposed to the agricultural industry, their opportunity to form career aspirations is limited (Mann et al., 2018). Hence, ISPs pose a potentially useful approach for the agricultural industry to influence and expand the career aspirations of the next generation.

Though the findings and recommendations discussed above are applicable across all industries, an additional recommendation specific to the agricultural industry has been identified. From the studies reviewed, only one included data from a participant who could be identified as from the agricultural industry. This highlights a large gap in the peer reviewed literature and a lack of understanding of the contextual nuances relating to implementing successful ISPs with agriculture. Further research exploring agricultural industry representatives' perspectives of ISPs is therefore recommended.

The authors seek to further explore agricultural industry representatives' perspectives of ISPs and apply this review's recommendations in the rural region of Gippsland in Victoria, Australia. Career options in agriculture are plentiful, diverse and ever-evolving due to technological advances, climate change, the global pandemic and changing demographics (International Labour Organization, 2018; World Bank, 2019; Lund et al., 2021). Although, many school students do not realise the breadth of opportunities available nor are they highly regarded (PIEFA, 2020). Increasing student knowledge of agriculture and the range of associated careers available in Gippsland is intended to improve the perception of job opportunities and result in greater retention of young people in the region, post-secondary school. This forms the rationale of CQUniversity Australia's Raising Aspirations in Careers and Education in Agriculture – Gippsland (RACE Gippsland) project, funded by the Victorian Department of Education and Training (www.racegippsland.com). The recommendations discussed above, to address identified challenges, design support to assist strong communication to ensure value is found for all parties involved, and further explore agricultural industry representatives' perspectives of ISPs will be considered and applied in the design of forthcoming RACE Gippsland programs.

Conclusion

This review of peer-reviewed literature was specific to industry perceptions of ISPs. It has used a method consistent with analytic processes accepted by the social science disciplines. The finding's limitations have been acknowledged. Results confirmed that limited peer reviewed research has investigated industry perceptions of ISP where career awareness and knowledge sharing are the focus of the activities. A range of benefits, barriers and reasons for participating are highlighted across studies, with studies showing industry are willing to take part.

Whilst this review's findings can be applied across the globe, to any industry, the authors seek to apply them to agricultural ISPs. At this time where workforce shortages in agriculture are commonplace, ISPs pose a potential way to promote the industry and the wide range of careers associated. Accordingly, research into the perspectives, benefits and barriers for rural agricultural industry participants must ensue to help create purposeful ISPs as the world of work continues to rapidly change.

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Do Teacher Workshops as a Professional Development Activity Provide the Adequate Skills, Knowledge and Confidence to Deliver the GPS Cows NSW Stage 4 Technology Mandatory Module?

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Abstract

The GPS Cows Module is a co-developed, Australian resource that aims to increase the knowledge and skills of high school students in emerging agricultural technologies. It aligns with many outcomes in the New South Wales (NSW) Stage 4 Technology Mandatory Syllabus, a compulsory subject for Stage 4 students (Years 7–8), that engages students in production and design activities for agriculture, food and other technologies. GPS Cows is a complete resource that teachers can apply into their teaching program. To facilitate the knowledge, skills and confidence required to implement the module, a one-day workshop was offered to NSW teachers in 2018 and 2019. To evaluate the workshop, participants completed a survey containing open- and closed-ended questions. Additionally, classroom clickers were used throughout the workshop to gauge the development of skills, knowledge and confidence over time. Overall, the workshop was well received, with over 98% of respondents enjoying the workshop and 97% indicating that the workshop was a good use of time. Positive aspects included the activities and engagement with data analytics, the resources provided, and the clear link between agricultural technologies and the real world. Identified improvements included the time allotted for workshop activities and minor changes to the resource. In conclusion, the professional development workshops enabled teachers to successfully implement GPS Cows in their teaching program.

Keywords: *agricultural technologies, agri-tech education, digital technologies, high school teachers, professional development, teacher workshops*

Introduction

The GPS Cows Module (also referred to as GPS Cows) is a collaborative resource, developed in New South Wales (NSW), Australia, that aims to increase the "*knowledge and skills of high school students in emerging agri-tech, specifically tools and systems which provide animal location and behaviour data*" (GPS Cows, 2020). The module was co-designed by the NSW Department of Education staff and CQUniversity Australia researchers and aligns with many of the outcomes in the New South Wales (NSW) Stage 4 Technology Mandatory (Tech Mandatory) Syllabus (NSW Education Standards Authority [NESA], 2017). NESA has legislative responsibility under the NSW Education Act 1990 for developing syllabuses to be taught in NSW schools. The national Australian Curriculum is incorporated into NSW K–10 syllabuses and is represented through codes and icons within the syllabus documents. The NSW Department of Education is responsible for NSW Government schools and provides support for implementation of the NSW curriculum.

Tech Mandatory was first implemented in NSW Department of Education classrooms in 2019. The subject is compulsory for Stage 4 students (Years 7–8; 12–14 years of age) and engages students in production and design activities covering four major technology contexts: (i) agriculture and food technologies; (ii) digital technologies; (iii) engineered systems; and (iv) material technologies. Delivery of all four contexts is compulsory across Years 7–8, and at least one design project that addresses each of the aforementioned areas must be taught. GPS Cows consists of 10 weeks (25 hours) of content and was developed to provide teachers with a complete module to apply in their Tech Mandatory teaching program, specifically addressing the relevant outcomes of the agriculture and food technologies and digital technologies contexts.

Although the teaching of agriculture and food technologies is a compulsory component of the Technology Mandatory Syllabus (NESA, 2017), a lack of understanding and awareness of agricultural issues, particularly in urban areas, may impact on the quality of education students receive (Dodd, 2011). When coupled with the commonplace activity of out-of-field teaching—a solution used to address the shortage of qualified teachers in a particular subject area (Australian Mathematical Science Institute, 2017)—the quality of education may decline further. In research by Kola and Sunday (2015), teachers' qualifications and subject matter knowledge were positively correlated to student achievement. Similarly, Awal et al. (2012) found that when teachers have a limited knowledge of agriculture, students are not aware of the available job prospects in the sector. To improve teachers' understandings of agriculture, and in turn the quality of agricultural education, the supply and delivery of adequate professional development can be used as a method of increasing teacher exposure to the field (Dodd, 2011) and to build their knowledge and confidence of the subject matter. Professional development for teachers refers to continuing education activities that aim to develop an individual's skills, knowledge, expertise or confidence as a teacher (Organisation for Economic Co-operation and Development, 2009).

The aim of teacher professional development is twofold. Firstly, the program should extend the teachers' knowledge and confidence of a particular subject area. Secondly, the program should refine teaching practice to ensure that efficient student learning can occur (Ko et al., 2006). According to Loucks-Horsley et al. (1998), professional development may be achieved in five broad ways: immersion, curriculum development, curriculum implementation, examining practice, and collaborative work. Professional development by immersion occurs when teachers perform the requisite work under the guidance of a trained professional. GPS Cows is an example of this, with the use of workshops to educate teachers on how to implement the module in the classroom. Curriculum development and curriculum implementation refer to teachers developing new resources for use in the classroom (development) or applying and refining existing resources (implementation). Examining practice refers to the analysis of real classroom instruction. Finally, collaborative work refers to peer coaching and mentoring. In a study of professional development in mathematics and science teachers, Huffman et al. (2003) found that

examining practice and curriculum development were significant predictors of teachers' use of standards-based instruction. Curriculum development was also more likely to result in improved student achievement for mathematics teachers.

In research by Archibald et al. (2011), characteristics of high-quality professional development included an alignment with state assessments, standards and school goals; opportunities for active learning; a focus on core content, including strategies for implementation; opportunities for teacher collaboration; and embedded follow-up and continuous feedback. Alignment between professional development, state assessments and standards and overall school goals is important to ensure teachers receive consistent messaging. This alignment helps to build a shared vocabulary and common goals, while minimising confusion and uncertainty in what and how to teach (Archibald et al., 2011; Desimone, 2009).

Professional development with opportunities for active learning has also been shown to result in greater changes in teacher instructional practice (Desimone, 2009). Active learning generally requires more time for implementation in comparison to traditional passive learning (e.g., lectures, seminars). In addition to a focus on increasing teacher knowledge, effective professional development should model strategies for implementation into the classroom. For example, in a study of mathematics teachers in California, Cohen and Hill (2000) noted that professional development that included strategies for application resulted in positive changes to teacher practice. Comparatively, teachers who attended workshops that solely focused on knowledge exhibited little change in their teaching practices. Change can be achieved by instructional coaching of how content can be applied in the classroom and examples of how the new knowledge can be incorporated into practice (Archibald et al., 2011). Collaborative learning can also improve the quality of professional development, providing opportunities for discussion of instructional practices and delivery of feedback. Finally, the inclusion of embedded follow-up may be achieved by providing access to collaborative discussion following the implementation of new practices. Coaching is another way to provide this continuous feedback (Archibald et al., 2011).

As previously mentioned, out-of-field teaching is a common solution for addressing teacher shortage in a particular subject area (Australian Mathematical Science Institute, 2017). This may result in teachers with limited subject matter knowledge and can impact on student learning. Out-of-field teaching can also lead to teachers feeling vulnerable and "*out-of-place*" (du Plessis et al., 2014, p. 92). Professional development can ameliorate this, by empowering teachers and bolstering confidence. Focusing on Australian agriculture teachers, it is important that professional development is widely available, particularly for rurally based teachers. In particular, teachers should be given the opportunity to engage in sustained learning through extended courses and programs (Wallace & Boyland, 2007). According to the NESA (2021) website at December 2021, there were no agriculture-specific NESA-accredited courses, delivered by either NESA or by third-parties (including the NSW Department of Education), except for GPS Cows.

Of course, other organisations may deliver professional development courses that are not accredited by NESA. These courses are still considered valuable and may meet NESA's elective professional development criteria (NESA, 2021), such as those delivered by the NSW Department of Primary Industry (e.g., *AgPatch – Garden Connections* and *Climate challenge for NSW teachers*, as described by the NSW Department of Primary Industries, 2021). However, the lack of NESA-accredited courses highlights the need for high quality professional development for those teaching the agriculture and food technologies context in the Stage 4 Technology Mandatory curriculum.

The aim of this paper is to evaluate the one-day face-to-face GPS Cows professional development workshop delivered to NSW teachers in 2018–2019. The research question—Do teachers who participated in the GPS Cows professional development workshop obtain the skills, knowledge,

and confidence required to implement the module into their teaching program?—is addressed. The paper focuses on workshop evaluation only, including the best aspects of the workshop and areas needing improvement. The paper also discusses how the workshop impacts on teacher knowledge, skills and confidence in delivering curriculum outcomes. Evaluation of the GPS Cows Module, including whether it comprises the content required for students to achieve some of the learning outcomes of the NSW Stage 4 Technology Mandatory curriculum, is considered outside the scope of this paper.

Materials and Methods

One-day teacher professional development workshops were held across 16 metropolitan and rural NSW locations during 2018 and 2019. The workshops were open to all NSW secondary teachers from government, independent and Catholic schools. The aim of the workshops was to upskill teachers to support the implementation of the GPS Cows Module into their teaching program. The module was delivered by industry experts in the fields of agricultural education and new and emerging technology, specifically livestock tracking technology. A qualified teacher also co-presented during the workshop and facilitated discussions around implementation, including curriculum links and the barriers to uptake.

At workshop commencement, participants were provided with an overview of GPS Cows and background information on general technology advances in livestock production. This information enabled a baseline understanding of the challenges faced by the agricultural sector and the use of technology to address these issues. Following the general introduction, a video resource introduced participants to a case study farm and current challenges that could be addressed using livestock tracking technology. This was supplemented by a real-life, authentic livestock tracking (GPS) dataset to undertake a few of the activities that form GPS Cows, including using Microsoft Excel and Esri ArcGIS Online (a Geographic Information System software) (Esri, 2021). A summary of the workshop structure and activities is shown in Table 1.

Data Collection and Analysis

Classroom clickers were used throughout the workshop to gauge the skills, knowledge and confidence of participants whilst undertaking the workshop activities. This included questions to gauge the participants' understanding of concepts taught and the ability to complete workshop activities. Following workshop completion, participants were also emailed a survey with open- (n = 4) and close-ended (n = 21) questions, enabling them to evaluate both the workshop and the GPS Cows Module. The open-ended questions also allowed participants to provide feedback on the best aspects of the workshop and what improvements were required, with results presented as thematic analysis. Data from the clickers and survey were anonymous. Responses to each question from the clicker questions and the post-workshop survey were not compulsory and had a mean response rate of 49.6% and 94.5% respectively. All questions were approved by the CQUniversity Australia Human Research Ethics Committee (approval number 21324).

Table 1: ***Overview of the Content and Activities in the GPS Cows Professional Development Workshop***

Topic	Content and activities
GPS Cows Module	Introduction to the module and available resources Relevance to the NSW Stage 4 Technology Mandatory Syllabus Career opportunities in Agriculture
Participant background information	Clicker questions
GPS background information	History of GPS Process of GPS data transmission and communication Application of GPS
Technology advances in livestock production	Agriculture in terms of food and fibre production Comprehension of livestock tracking technology Technological advances in the livestock sector Tracking technologies such as GPS
How to collect your own animal location data	Collecting your own GPS data Case study farm and sample GPS dataset
Analysing and interpreting data in Esri ArcGIS Online	Accessing ArcGIS Online Creating your own groups and student accounts Importing and visualising data Bad data Clicker questions
Using GPS data to make key animal welfare, productivity and profitability decisions	Paddock utilisation Interpreting livestock tracking data and water visitation rates
Analysing and interpreting data Microsoft Excel	Clicker questions Importing and graphing data Correctly using formulas Utilisation of water Temperature data analysis Water visitation and temperature interactions Rainfall data analyses Water visitation and rainfall interactions
Discussion	Importance of livestock tracking technology is important for livestock production, monitoring and welfare Curriculum/Syllabus links discussion

Note: Shaded boxes indicate hands-on opportunities for participants. Non-shaded boxes indicate theoretical presentation of knowledge.

Results

Participant Information

A total of 185 participants attended the 16 workshops held across metropolitan and rural NSW locations in 2018 and 2019. The response rate from the clicker questions was 49.6%. Comparatively, the post-workshop survey had a mean response rate of 94.5%. Most participants identified as female (61.4%; n = 113) and had over 16 years of teaching experience (40.4%; n = 74). Only 2.2% of participants (n = 4) had less than one year of teaching experience. Almost half of the participants worked in schools located in towns of between 5,000 and 49,000 people (49.5%; n = 91). Of the remaining participants, there was an almost even split between those who worked in rural towns of less than 5,000 people (28.3%; n = 52) and those who worked in major or capital cities (22.3%; n = 41). Just over half of the participants currently taught agriculture (56.2%; n = 104).

Workshop Evaluation

The majority of participants indicated that they enjoyed the GPS Cows Stage 4 Technology Mandatory workshop, with 42.7% (n = 76) and 55.6% (n = 99) respectively agreeing or strongly agreeing with this sentiment (see Figure 1). A similarly high proportion of participants either agreed (42.9%; n = 75) or strongly agreed (53.7%; n = 94) that the workshop was relevant to their teaching. A combined total of 97.8% of participants (n = 174) agreed or strongly agreed that attending the workshop was a good use of time (see Figure 2). A similar proportion also stated that they would recommend the workshop to their colleagues (see Figure 3). Overall, the length of the workshop was considered appropriate (87.5%; n = 155), with only 10.2% and 2.3% stating that the workshop was too short or long, respectively.

Figure 1: ***Participants' Responses to the Survey Question that Asked About the Relevance of the GPS Cows Workshop to Their Teaching Programs***

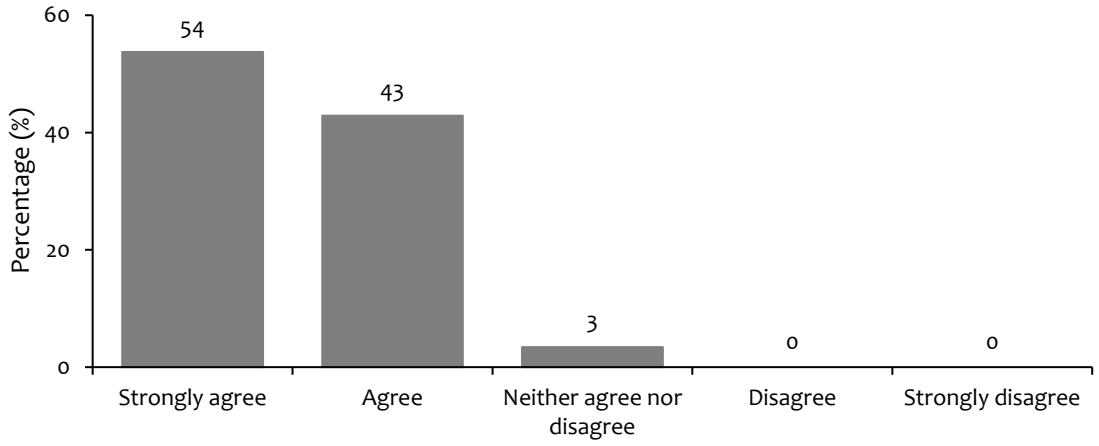


Figure 2: ***Participants' Responses About the Survey Question That Asked Whether Attending the GPS Cows Workshop was a Good use of Their Time***

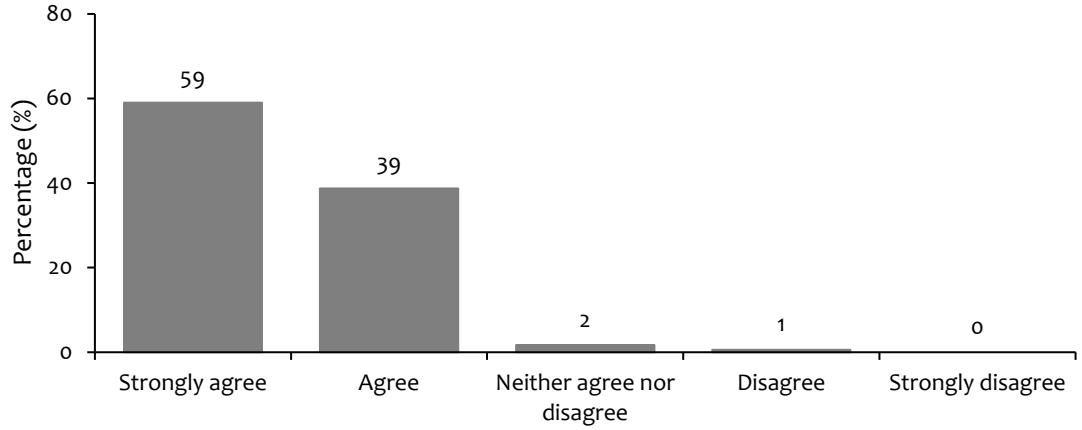
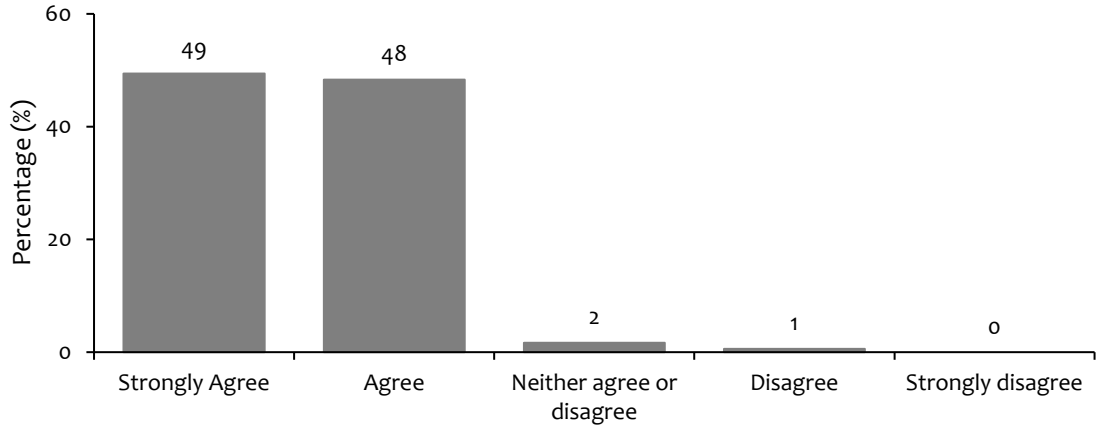


Figure 3: Participants' Responses to the Survey Question That Asked if They Would Recommend the GPS Cows Workshop to Their Colleagues



Positive Aspects of the GPS Cows Stage 4 Technology Mandatory Workshops

Most of the positive feedback from the GPS Cows workshop was in relation to the workshop activities and engagement with data analysis sections (n = 53; see Table 2), with comments such as preference for the "*active engagement with data analytics*" and "*learning and using new skills.*" One participant stated that "*being able to actually track and analyse data firsthand deepened my understanding of how to apply this technology within the classroom.*" The resources provided to participants were also highly regarded (n = 40). One participant stated that the "*amount of resources provided*" was important, with another noting that the resources were "*interactive [and] easy to use*". Similarly, *it was stated that the "in-depth booklet which gives step by step instructions was very useful and something I can more easily put into practice.*" Participants also valued the linkage to the real world and the value of technology in agriculture (n = 37). This included comments that indicated that they liked "*the practical applications and real-world data,*" "*collaborating and understanding technology advances in the agriculture industry,*" and "*[the] use of GPS in real life situations and future careers.*"

Another highly valued aspect of the workshop was the presenters themselves, with participants highlighting that the "*presenters were knowledgeable and helpful/approachable*" and the content was "*well explained and the presenters were very helpful.*" Additionally, the delivery of "*consolidating learning as we progressed through the day to ensure we understood before moving on*" was an important attribute of the presenters and contributed to the high success and

enjoyment of the workshop. The use of a small workshop size was also highly valued, including the benefits of "*connecting with other ag[riculture] teachers … [there is] not enough PD around*" and "*sharing ideas and helping each other work through the exercises.*" A summary of the positive workshop aspects identified by participants is shown in Table 2.

Table 2: ***Positive Aspects of the GPS Cows Workshop Identified by Participants***

Positive aspect*	**Count**
Workshop activities and engagement with analytics	53
Resources provided	40
Link to the real world and value of technology in agriculture	37
Presenters	35
Interesting information	14
Link to the NSW Syllabus	9
Small group/social aspect	7
All aspects	3
Other (catering etc.)	4
TOTAL	202

***** Each participant was able to identify three aspects.

Improvements Required for the GPS Cows Stage 4 Technology Mandatory Workshops

Overall, 49.7% of participants stated that they did not believe any improvements were required for the GPS Cows workshops (n = 73). Some participants stated that there was insufficient time or that they felt rushed, including that "*more time would be useful to fully investigate and understand the program*" and that "*there was a lot of content to cover in one day.*" Minor resource improvements were also suggested (n = 13), including clarity of instructions and discrepancies between the instructions provided and different software versions. Further explanation including worked examples was suggested by 13 participants, stating that "*the reasoning behind … certain calculations could have been explained better.*" Additional time to allow participants to discuss how they include GPS Cows into their teaching program would have also been well received (n = 4), as evident by comments such as "*direct links to the new syllabus outcomes so teachers can see how it all fits together with both the digital technologies and food and agriculture focus areas*" or a "*brainstorming session on how this could be practically used [in the classroom].*" A summary of the suggested improvements is presented in Table 3.

Table 3: ***Suggested Improvements for the GPS Cows Workshop***

Workshop aspects to be improved	Count
More time/felt rushed	24
Resource	13
Further explanation required including more worked examples	13
Technology issues, e.g., internet access, software requirements	9
Less background theory	5
Provide clearer connections to the NSW curriculum	4
Provide extension activities	4
Other (workshop location etc.)	2
No changes	73
TOTAL	147

Assessment of Teacher Skills and Knowledge Development Throughout the Workshop

Clickers were also used during the workshop to understand how participants skills and knowledge were improving as the workshop progressed. This was conducted through "pop-quiz" style questions where participants were asked to indicate the correct answer to various workshop activities (see Table 4). Overall, participants correctly answered the questions 84% of the time, with the number of responses per question (response rate) varying from 15.7% to 69.2%. Comprehension of livestock tracking technology was the lowest (61.5% correct; Table 4), highlighting the lack of understanding of how the tracking data from GPS can be used to calculate distance travelled. Comparatively, participants were highly competent in interpreting livestock tracking data and water visitation rates (88.3%) and understanding the interactions between water visitation and temperature interactions (90.4%), as shown in Table 4.

Table 4: ***Skills and Knowledge of Participants Based on Clicker Responses to Questions and Activities During the Workshop***

Workshop skills and knowledge	Correct response (%)	Incorrect response (%)	Response rate (%)
Comprehension of livestock tracking technology	61.5	38.5	42.2
Livestock tracking data analyses	74.8	25.2	66.4
Interpreting livestock tracking data and water visitation rates	88.3	11.7	69.2
Correctly using formulas	98.4	1.6	68.1
Utilisation of water	90.9	9.1	65.4
Temperature data analysis	90.2	9.8	27.6
Water visitation and temperature interactions	90.4	9.6	62.2
Rainfall data analyses	73.7	26.3	20.5
Water visitation and rainfall interactions	89.7	10.3	15.7

Assessment of Teacher Confidence

Clickers were also used to understand the development of teacher confidence throughout the workshop. Specifically, teachers were asked to indicate their confidence in relation to performing two workshop activities: creating groups for their students in Esri ArcGIS Online, and delivering a module activity surrounding data cleaning and the importance prior to analysing livestock tracking data. These activities required an understanding of the ArcGIS program and general concepts regarding data integrity. Overall, 79% and 96% of participants stated that they were confident to deliver the respective activities. More importantly, during the post-workshop survey, participants were asked if they were confident to use GPS Cows as part of their Tech Mandatory teaching program. A combined total of 86.4% stated that they were confident (55.7% [n = 98] agree; 30.7% [n = 54] strongly agree). Twelve percent of respondents were neutral in their confidence to apply the module (n = 21), and only 2% were not confident (n = 3).

Discussion

The results of this research show the benefits of using teacher training workshops for professional development. The presented results can be considered in two main ways: (i) an evaluation of the workshop itself as a method of improving teacher knowledge, skills and confidence to implement GPS Cows into their teaching program; and (ii) the benefits of teacher workshops as a professional development activity.

Workshop Evaluation

The GPS Cows workshop was well received by most participants, with over 98% expressing that they enjoyed the workshop. In addition, over 96% (2018) and 97% (2019) of participants felt that the workshop was relevant for their teaching and a good use of their time.

Having a strong knowledge of a particular subject area is a known factor affecting teacher skills and confidence (Bednarz et al., 2013). For example, in studies of geography educators, a lack of content knowledge (Bednarz et al., 2013) and geographical mapping skills (Anderson & Leinhardt, 2002) was reported to negatively impact teacher confidence. The GPS Cows workshop delivered a comprehensive introductory session at the commencement of the workshop, focusing on improving knowledge of agricultural technology. This information enabled a foundational understanding of the challenges faced by the agricultural sector and the use of technology to address these issues.

Activities throughout the workshop were designed to build on this foundation, allowing both theoretical and working knowledge to be a focus. Evaluation of knowledge development using pop-quiz style questions showed a strong development of knowledge throughout the workshop (see Table 4). Overall, participants had a high number of correct responses, ranging from 61.5% to 98.4% (mean 84%). In addition, there was a trend for increased numbers of correct responses over time, suggesting that participants developed their knowledge over the course of the workshop. Conversely to this however, the response rate of participants appeared to initially increase then decrease over the course of the workshop. This may suggest that only those who were confident in their answer submitted a (correct) response, while those who were possibly confused by the question chose not to respond, or that enthusiasm to respond decreased over time. Comprehension of livestock tracking technology had the lowest number of correct responses. This is not surprising given the subject matter is most likely novel to most participants. This was also the first question of the session and reflected the new subject material covered.

The use of the pop-quiz style questions throughout the workshop was also useful for indicating teacher skill development over time. For example, over 88% of participants were able to correctly interpret livestock tracking data and relate this to water use. Furthermore, over 98% of participants were able to correctly use Microsoft Excel formulas to analyse various aspects of

livestock behaviour and use this to develop behaviour alerts. Knowledge and confidence was previously identified as a significant barrier to increasing education of food and fibre concepts in teaching programs (Cosby, Manning, et al., 2019). Thus, the ability to quantitatively assess the development of this throughout the GPS Cows workshop is crucial. Of course, not all participants felt that they had developed the required skills throughout the workshop. Of note, two participants noted that "*Excel [was] a bit difficult*" and that the workshop was a "*bit heavy for non-computer tech people.*" Nevertheless, based on the results presented in Table 4, it is clear that the majority of participants were able to develop knowledge and skills throughout the workshop and that, overall, the workshop was successful in developing participant knowledge and skills for implementing the GPS Cows Module.

One vital aspect of teaching is having the confidence to effectively teach new concepts to students. Currently, lack of educator confidence is a major issue faced when incorporating agricultural content into their teaching programs (Cosby, Manning, et al., 2019). This may be in part due to increasing numbers of out-of-field teachers and a subsequent lack of subject matter knowledge. As previously mentioned, teaching out-of-field can impact educators' confidence, leaving them feeling "out-of-place" (du Plessis et al., 2014, p. 92). Out-of-field teaching can also impact teachers' identity and self-efficacy, which can in turn impact the quality of education (Hobbs, 2012). In the current research, only 56% of participants taught agriculture outside of the Tech Mandatory unit, thus highlighting the prevalence of out-of-field teaching amongst the research participants. For this reason, the development of teachers' confidence is crucial for successfully implementing the content of this workshop in the classroom. Overall, it appears that the GPS Cows workshop was successful in developing teacher confidence. This was evident by the large number of participants stating that they were confident or strongly confident to use the module as part of their Tech Mandatory teaching program.

Although the GPS Cows workshops appeared to be successful overall, the workshop participants noted some improvements that could be made (see Table 3). The most common limitation was that more time was required or that participants felt rushed. The GPS Cows workshop presents a significant amount of content to teachers in a relatively short time frame (6.5 hours, including meal breaks). In addition, the concepts and skills presented are likely to be novel for many participants. For this reason, it may be beneficial to run the workshops over two or more days, to ensure that teachers become more familiar with the content. This may be particularly beneficial for out-of-field teachers, who may not have significant experience in the subject material.

However, with limited time being previously identified as a barrier for professional development implementation by Cosby, Trotter, et al. (2019), extending the workshop duration is likely not feasible. Other limitations identified in this study were regarding the resources provided and the need for further explanation of the general concepts. For the former, comments included that "*some parts of the booklet were a little confusing first time through*" or that "*booklets were great – but some instructions need updating and checking [due to software version differences].*" This is similar to comments about the latter limitation, which noted that "*more examples*" or a "*worked example in real time, rather than a video*" would have been helpful. One participant stated that it "*[felt] like the reasoning behind why we had to select certain fields or use certain calculations could have been explained a bit better.*" This may have been impacted by the relatively short duration of the workshop and it highlights the need for comprehensive step-by-step resources, adequate workshop duration and teachers with sufficient digital literacy skills to ensure the development of background knowledge.

The Use of Workshops as a Professional Development Activity

As previously mentioned, professional development may be implemented using five broad methods: immersion, curriculum development, curriculum implementation, examining practice, and collaborative work (Loucks-Horsley et al., 1998). In the case of the GPS Cows workshops, the

professional development can be considered predominantly an immersion activity, with teachers learning new skills under the guidance of trained professionals. In addition, the module can also be considered more broadly as professional development through curriculum implementation and collaborative work.

Immersion professional development is most commonly achieved through workshops and experiences and is particularly useful for improving content-specific understandings, such as mathematics, science and language. In conjunction with learning new content, immersion professional development can also be used to highlight how the content can be taught in the classroom, including higher level thinking and the flow of instruction (Loucks-Horsley et al., 1998). In the current study, most positive feedback was in relation to the GPS Cows workshop itself and engagement with data analytics, with participants stating that they enjoyed "*learning and using new skills.*" Several participants also stated that the "*hands on learning*" was the best part of the workshop, while another two participants stated that they enjoyed engaging in the "*learning the students will be undertaking*" and that the "*workshop provided a concise overview of the program and how it could be used, as well as a practical step by step [guide for implementation]*".

This highlights the benefits of immersion workshops where teachers are introduced to the concepts they are expected to teach through hands-on-learning. In addition to workshop content, another key element of successful immersion professional development is the use of qualified and experienced facilitators (Loucks-Horsley et al., 1998). In this study, presenter quality was another commonly identified positive aspect of the workshop, with comments such as "*the presenters were knowledgeable and helpful/approachable*" and they "*consolidated learning … through[out] the day to ensure we understood before moving on.*" In research by Huffman et al. (2003), although immersion did not appear to impact teaching practice of mathematics and science teachers, the authors stated that immersion is more likely to have a "*long-term and amorphous effect,*" due to the focus on improved concept understanding. Workshops have also been identified by Easterly and Myers (2019) as having the highest value for agricultural educators and the highest level of implementation into practice.

Curriculum implementation professional development involves teachers applying and refining instructional materials for use in the classroom. This differs from curriculum development, where teachers are directly involved in the creation of instructional materials (Huffman et al., 2003). The benefits of curriculum implementation vary in the literature. In research by Cohen and Hill (2000), curriculum implementation was found to improve teachers' knowledge of mathematics. In contrast, Huffman et al. (2003) did not find a significant impact of curriculum implementation on the teachings of mathematics or science educators. Huffman et al. (2003) attributed this to a lack of ownership over the resources, resulting in teachers being less likely to implement them due to the resources not completely fitting within their current program, or because they did not have the requisite skills to implement them. In contrast, curriculum development was found to significantly impact student achievement for mathematics teachers (Huffman et al., 2003). This was particularly true for teachers with lower-achieving students due to teachers having to develop creative teaching strategies outside the traditional curriculum. Curriculum development was also found to improve teacher engagement and creativity by Mooney Simmie (2007), especially when resource development occurred in a team environment.

Although GPS Cows does not provide the opportunity for teachers to develop the resources themselves, the module can be considered a form of curriculum implementation, as teachers are supplied a complete 10-week resource that can be easily applied or adapted in the classroom to suit their teaching program. The resources provided were highly regarded by participants, particularly the volume of resources and the ease of use. This was stated by one participant: "*being provided with [the] vehicle whereby students can engage with data collection and analysis in a meaningful way.*" Other participants also commented that it was beneficial "*having the*

resources to take home and the availability of Moodle for resources" and having "*the resources [freely available] afterwards.*"

Finally, GPS Cows can be considered a form of professional development through collaborative work. Collaborative professional development refers to work conducted in study groups, peer coaching and mentoring situations (Loucks-Horsley et al., 1998). Collaborative work is considered important as it encourages teachers to try new ideas and reflect on the outcomes (Butler et al., 2004). It is also beneficial for the development of co-operative behaviours and internal accountability (Loucks-Horsley et al., 1998). For the GPS Cows workshops, seven participants identified that the small group and the social aspect were valuable. One participant stated that the "*support from fellow teachers*" was beneficial, while another enjoyed "*sharing ideas and helping each other work through exercises.*"

Again, while collaborative work was not found by Huffman et al. (2003) to significantly impact the use of standards-based instruction with mathematics and science teachers, the authors concede that collaborative work is still highly valuable, particularly when it has a specific focus or structure. Given that the GPS Cows workshop is highly structured, its collaborative aspect is likely to provide additional benefits to the professional development experiences of participants. Furthermore, following workshop completion, participants are able to collaborate further through access to a dedicated "*chat* room" on the virtual "*Statewide Staffroom*" (NSW Department of Education, 2021). In this collaborative space, teachers are able to continue to discuss how to implement GPS Cows in the classroom, and to troubleshoot any issues they are facing. This site is monitored by a NSW Department of Education staff member and, alongside GPS Cows workshop presenters, can answer any questions that arise.

Conclusion

GPS Cows is a complete resource for Tech Mandatory teachers that aligns with many of the outcomes in the NSW Stage 4 Technology Mandatory Syllabus (NESA, 2017). To facilitate the knowledge, skills and confidence required to implement the module and to encourage module uptake, a one-day workshop was provided to NSW teachers in 2018 and 2019. Data were collected during the workshop, using classroom clickers, and following workshop completion, using an online survey. Overall, the workshop was well received by participants, with over 98% of respondents enjoying the workshop, and 97% indicating that the workshop was a good use of time and they would recommend it to a friend. Positive aspects of the workshop included the workshop activities and engagement with data analytics, the resources provided, and the clear link between agricultural technologies and the real world. Identified improvements included that more time was required and that more worked examples would be helpful.

The development of skills, knowledge and confidence over time was assessed through the use of pop-quiz questions throughout the workshop, and showed an average correct response rate of 84%. The results of this work show that professional development that incorporates immersion activities, as well as curriculum implementation and collaboration, can provide teachers with the knowledge and confidence to implement resources that support student achievement of learning outcomes, even if the content is outside the discipline they are trained in. This suggests that professional development workshops are essential to increase the quality of agricultural education, an area where many teachers are teaching out of scope.

Declarations

Availability of Data and Materials

The datasets generated and/or analysed during the current study are not publicly available, due to the potential to indirectly identify individual study participants based on a combination of demographic characteristics and location data. However, select subsets of data are available from the first author on reasonable request.

Competing Interests

The authors declare that they have no competing interests.

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Choosing a Rural Teaching Position: Recognizing the Importance of Relationships and Field Experiences

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Abstract

This study reports the findings from a survey of 201 recent teacher education graduates from a university in the north-western United States of America regarding the factors that influenced their decision to take a teaching position in a rural or urban community following graduation. Results indicate that an in-depth rural practicum experience, being close to family, and the size of school influenced new graduates' decisions. Other factors such as school culture and administrative support were also found to be important to new graduates' decision making. The article will also share insights that can help to inform state and local educational agencies about strategies in attracting new graduates and in retaining new teachers in rural schools.

Keywords: *rural teacher decision making, rural field experiences*

Introduction

Attracting and retaining effective teachers is a critical and persistent challenge faced by schools across the world. Studies have documented this challenge in the United States (Biddle & Azano, 2016; Monk, 2007); Uganda (Arinaitwe & Corbett, 2022); Australia (Downes & Roberts, 2018); Canada (Gereluk et al., 2020); Brazil (Schleicher, 2011); and Togo (Behrstock-Sherratt, 2016). In today's metrocentric society, extensive resources have been devoted to addressing the needs of urban schools. However, less attention (Barley & Brigham, 2008) has been paid to strengthening the preparation, recruitment, and retention of rural teachers. This is a serious oversight in light of the fact that almost one in six of the nation's students reside in rural communities (Showalter et al., 2017) and approximately 727,000 (19%) of our nation's teachers were employed in rural locales in 2018 (National Centre for Education Statistics, 2020). Findings have demonstrated how the rural staffing challenge is "*complex and multifaceted, and conflated with a wide range of contextual variations in salaries, community amenities, geographic or professional distances, technology access,*

health disparities, and poverty rates" (Azano et al., 2019, p .1). In this current era, it is critical for us to develop a respectful and nuanced understanding of the factors that shape pre-service teachers' understandings of rural teaching as well as the factors that prepare and attract them to live and work in rural communities.

In the United States, rural school staffing challenges have been heightened in recent years due to fewer people entering the teaching profession and more people leaving the profession. For example, studies indicate that the percentage of college students majoring in education declined from 21% in 1970 to less than 5% in 2015 (Digest of Education Statistics, 2017). Adding to the gravity of the situation, research also indicates that prior to COVID-19 pandemic, 44% of new teachers left the field within the first three to five years of teaching (Ingersoll et al., 2018). And now, as a consequence of the dire effects of the global pandemic, a recent study found that approximately one-quarter of the teachers surveyed were considering leaving the teaching profession by year's end (Kaufman & Diliberti, 2021).

Part of the complexity of rural school staffing has to do with the multiple ways in which rurality is defined. In many instances, the construct of 'rural' has been defined in terms of population density and geographic distance from urban areas. For example, the U.S. Census Bureau defines "rural" as "*what is left*" (Ratcliffe et al., 2016, p.1), and the Office of Management and Budget refers to regions in terms of population density and uses the labels of Metropolitan (n>50,000), Micropolitan (10,000>n< 50,000), or 'Neither' (Office of Management and Budget, 2015). The United States National Center for Education Statistics (NCES) defines rurality by distance from large metropolitan areas (National Center for Education Statistics, 2022.). The three categories include: 'fringe' which is less than or equal to 5 miles from an urbanized area, as well as rural territory that is less than or equal to 2.5 miles from an urban cluster; 'distant' which is more than 5 miles but less than or equal to 25 miles from an urbanized area, as well as rural territory that is more than 2.5 miles but less than or equal to 10 miles from an urban cluster, and 'remote' which is more than 25 miles from an urbanized area and is also more than 10 miles from an urban cluster (National Center for Education Statistics, 2022). This system of labelling rural locales is markedly different from the Remoteness Structure classification system used in Australia. The Remoteness Structure divides the country into five classes of remoteness (major cities; inner regional; outer regional; remote; very remote) relative to calculated road distances to the nearest service centres of various population sizes (Australian Bureau of Statistics, 2018). However, rural residents and scholars have long argued that metrocentric labels such as 'other' or 'neither' may have harmful consequences, while metrics such as geography and population density are simply inadequate parameters to fully define what makes a place rural (Azano et al., 2019). Rather, across the United States, Australia, and countries around the world, rural communities and their schools define their rurality by drawing upon their "*complex and dynamic cultures shaped by distinct social, economic, political, cultural, and historical relations*" (Downey et al., 2021, p. 204).

It is within a socially constructed and locally defined context that rural school leaders find themselves working to attract, hire, and retain well-prepared teachers because the stakes are high; students who lack well-prepared teachers can experience serious negative effects in learning and overall achievement (Ronfeldt et al., 2013). Thus, in a world facing an increasing shortage of skilled teachers, it is critical for rural stakeholders to understand the factors which may influence new teachers' decisions to accept a rural teaching position.

Previous research has examined the impact of specific curricular elements of teacher preparation programs (Azano, et al. 2019) including "*the designing and implementing of content and experiences, including field experiences, in teacher preparation that aim to prepare teachers for professional and*

personal success in rural schools and communities" (Azano et al., 2019, p. 3). Other studies have examined how participation in rural field experiences impacts future choice to teach in a rural school (Sharplin, 2002) as well as how developing an understanding of "*the strengths and assets of rural communities and cultures, while also confronting stereotypes and misconceptions about rural places [can help to] disrupt deficit ideologies about rurality*" (Azano et al., 2019, p. 3).

Still others have explored pre-service teachers' personal reasons and motivations for choosing to teach in a rural school. For example, in Australia, the Independent Review of Regional, Rural and Remote Education (Halsey, 2018) investigated the persistent challenge of attracting and retaining teachers for schools located in regional, rural, and remote areas, and the consequent impact on the learning and educational outcomes of regional, rural and remote students, including aspirations and access issues. Other studies (e.g., Handal et al., 2018; Sharplin, 2002) identified several motivators for taking a rural teaching position including: job availability, staff collegiality, school and class size, previously living in the same or similar area, affordable housing, preference for rural lifestyles, family links, spouse's employment, sense of community spirit, connections with staff, students, and community, increased professional opportunities and variety of responsibilities and teaching experiences.

If rural areas are to succeed in attracting and retaining teachers, researchers must investigate not only why teachers choose rural schools, but how schools, universities, and state agencies can leverage that knowledge by creating programs, incentives, and recruitment strategies to attract and retain high quality rural educators.

Strategies Influencing Rural Teacher Recruitment

Several strategies have attempted to recruit new teachers to rural places. These strategies have been met with varied levels of success depending on the context and the conditions surrounding the implementation of each strategy (Aragon & Wixom, 2016; Latterman & Steffes, 2017;). Some of the more common strategies include Grow Your Own programs, financial incentives for new teachers, and field experiences whereby teacher preparation programs intentionally place students in rural communities and schools. These and other strategies are explained below.

Grow Your Own Programs

There has also been considerable attention around Grow Your Own programs, and though definitions of Grow Your Own may encompass a few different elements, most contain the lynchpin of local teacher recruitment. Barley and Brigham (2008) argued that to ensure student teachers understand the cultural and social norms of rural places, preparation programs should recruit future teachers from rural areas. Some Grow Your Own programs focus their recruitment efforts on high school students; and using them in paraprofessional roles where they can experience teaching and working with children as a potential occupation (Greenberg et al., 2018). Other Grow Your Own programs seek to recruit adults within the community who have taken some college courses, or who have experience working as paraprofessionals, to enter a preparation program to gain full certification as a teacher. While there are nuances to Grow Your Own programs, the overarching goal is to recruit rural people to complete a teacher education program and seek employment in rural schools close to their hometowns.

Beesley et al. (2010) found that rural principals focused on three areas for recruitment: Grow Your Own programs, federal funding opportunities, and using targeted incentives. Federal funding was

often employed in conjunction with Grow Your Own programs to create options for multiple certifications, offering access to distance learning opportunities and courses in rural areas whereby rural teachers could add endorsements and become highly qualified. Principals in the study also discussed the importance of recruiting prospective teachers from the pool of residents already living in rural communities and the intentionality of "*turning rural residents into teachers, rather than turning teachers into rural residents*" (Beesley et al., 2010, p. 8). Finally, principals sought to entice teaching applicants with other incentives such as higher pay and grant opportunities, while also promoting benefits of teaching in rural areas such as small class sizes, fewer discipline problems, and living in a non-metro location.

Personal Choices and Rural Familiarity

Rural teaching decisions are also influenced by teachers' familiarity with rural lifestyles. Handal et al. (2018) reported results from a study of 191 New South Wales rural teachers about their attitudes regarding their reasons for teaching in rural remote areas. They found that respondents reported that initial teaching decisions were based on obtaining a permanent teaching position and gaining work experience in rural schools, the desirability of living in rural settings, and the collegial culture rural schools enjoy. The study also looked at demographic variables of the respondents and found that growing up in rural areas and having family connections in those areas made it more likely that young teachers in the 18-30 age range, and especially females, would choose to pursue teaching positions in rural areas. Lyons et al. (2006) likewise agreed that availability of jobs, placement by educational authorities, and having previously lived in that or similar rural areas increased the likelihood that younger teachers would first choose rural schools. These researchers also found that younger teachers stayed longer in rural areas due to financial advantages, more so even than their older colleagues.

Family and School Factors

Ulferts (2016) surveyed teachers in the smallest public school districts in Illinois asking about recruitment, retention, and job satisfaction factors. Ulfert's survey was based on a study by Boylan et al. (1993) and their findings of four pillars (Within Classroom Activities, Whole School-Level Activities, Community Level Activities, and Family Factors) that influenced recruitment and retention of rural teachers in Australia. Similar to Davis' (2002) study in Montana's rural districts, Ulfert found that recruitment of teachers, namely their reasons for selecting rural teaching positions, were best represented by factors that aligned with the spheres describing Family Factors and Whole School Level Activities such as: 'best or only job offer', 'enjoy the rural lifestyle', 'family and or home is close by', and 'small class size'. 'Relationships with students', 'safe environment', 'small class size', and 'support from administrator' emerged as factors with the highest mean scores influencing teachers to remain teaching in rural schools. These factors best aligned with Within Classroom and Community Level Activities spheres and were most critical to teacher retention.

Field Experiences

Offering authentically rural field experiences in educator preparation programs may also hold promise for influencing new teachers' decisions about teaching in rural schools. Munsch and Boylan (2008) studied 14 preservice teachers participating in a week-long practice teaching experience in small village schools in rural Alaska. Researchers learned that a one-week program integrating course objectives from Multicultural Education and Alaska History classes into the practice of teaching in rural areas provided enough time to "*start the change process for preservice teachers unaware of the opportunities and dilemmas facing those who teach in rural, remote locations*" (Munsch & Boylan, 2008, p. 21). Cuervo and Acquaro (2018) conversely cautioned that simply providing placement

experiences in rural areas is not a guarantee to addressing issues with recruitment and retention. They also discussed the need for education preparation providers to include more rural education content in courses as a means to counteract a deficit narrative of rural living and rural schools. Finally, they encourage public policy makers to financially support rural school graduates to return to rural areas to teach as the best solution to the problem of rural recruitment and retention. White and Kline (2012) developed a framework to assist teacher educators to prepare graduates for working in rural schools and communities. Central to their framework is the need to equip new teachers with knowledge and experiences in rural teaching, rural living, the unique attributes of rural communities, and the role and responsibilities of rural teachers within the community itself. White and Kline state that "*teachers educators need to focus more on developing graduates*" to be not only classroom ready, but also "*school and community ready*" (White & Kline, 2012, p. 36).

Purpose and Research Questions

This study was conducted with graduates who completed their degrees in 2017-2020 from a Montana university teacher preparation program. Montana, the fourth largest state (land mass) in the contiguous United States, is also 48th in population density, with 42 of 56 counties having less than five people/square mile. Additionally, small rural districts make up 96% of all public school districts in the state; "*no state has a higher percentage of rural schools or small rural districts*" (Showalter et al., 2017, p. 138). In 2017, 83% of Montana's teacher vacancies were in rural schools (Montana University System Rural Educator Recruitment and Retention Task Force, 2017).

In 2020, the teacher preparation program in this study served approximately 800 undergraduate students in a Pre-school-grade 8 elementary option as well as 13 secondary (licensed grades 5-12) teaching options including: English, Mathematics, Social Studies, Science, Agriculture, Biology, Chemistry, Family and Consumer Science, History, Physics, and Technology Education. Kindergarten to Year 12 programs in Art Education, Music Education, Modern Languages, and Health Enhancement are also included in the university's teacher preparation program. Finally, the program recently developed an initial licensure option for those possessing baccalaureate degrees in areas outside of education. This option currently serves 20-24 students.

In response to the challenges staffing rural schools, the teacher preparation program has developed several opportunities for students to expose them to rural educators, rural schools, and allow them to gain authentic, clinical practice teaching in rural settings. These experiences begin early in students' education coursework by having several rural teachers and administrators act as guest speakers highlighting the benefits of working in rural areas and answering questions about rural communities and schools. One of the first clinical practice opportunities available encourages sophomore and second year students to participate in an after-school technology club/ book club in one-room, K-8 schools located less than half an hour from campus. These sessions occur in two-hour sessions for five days/ semester. The technology club/ book club experience has also been offered at a small K-12 school 250 miles from campus in a home stay format where students stay in the rural community and work with various groups of K-12 students for approximately 10 hours over two separate days. Junior or third year students have the option of participating in an intensive week-long rural practicum with K-12 rural districts 300-450 miles from campus. Twelve to fourteen students are chosen to travel as a cohort group to an area with a larger K-12 school (1000 students) or several smaller schools in proximity. Once there, they spend a week in intense planning and teaching and use nightly debrief sessions to reflect on instructional strategies, school culture, student engagement and rural community living (Versland et al., 2020). Senior or fourth year students may decide to participate in student teaching for 10-12 weeks in a rural school in the state. Rural student teachers

may apply for a rural student teaching scholarship which supports their living expenses while working in their rural community placement. Lastly, an employment event, The Rural Colloquium/ Teach Fair is held annually at the university to provide a forum for new graduates to meet employers and interview for rural teaching positions. The Rural Colloquium/ Teach Fair is also unique in that it provides teams of rural teachers and administrators to participate and lead roundtable discussions with junior and senior education students. Roundtable discussions centred on several different themes including living a rural lifestyle, the advantages of small schools and communities, information related to salary, benefits and teaching contracts, professional development and personal growth, and school culture and professional learning community.

In light of a significant need to "*explore a broad range of factors that impact teacher decision-making that culminate in work destination decisions*" (Handal et al., 2018, p. 5), the following research questions were developed to guide the data collection and analysis for this study:

1. Is there a relationship between pre-service teachers' rural program and field experiences and choosing a rural teaching position following graduation?
2. Is there a difference in reasons for selecting a position among graduates choosing to work in urban and rural communities following graduation?
3. What factors predict teaching in rural schools?

Method

This study developed an online survey to gather participants' perspectives on factors that influenced their choice of teaching position post-graduation (available on request). The qualitative section of open-ended questions allowed for greater insights into participant experiences. Participants were graduates of our teacher education program from 2017-2020.

We explored whether there were significant differences between exploratory variables (rural field experiences and reasons for selecting a position) and locale of participants' current teaching position (rural or non-rural). Acknowledging that there are numerous ways to define rurality, we defined rural communities as those consisting of 10,000 people or less that were not adjacent (defined as 15 miles or less) to metropolitan communities. Results indicated that 48% of participants were employed in rural schools and 52% were employed in non-rural schools. The main explanatory variables in this study were participation in rural field experiences and reasons for selecting a position. Participants were asked to indicate all factors that influenced their decision to accept a specific teaching position. We used a chi-square analysis, a series of t-tests, and a logistic regression to explore the data.

Data and Sample

This study used a sample consisting of graduates from the teacher education program over the past three and a half years. To recruit participants, 479 emails were sent to graduates from 2017, 2018, 2019, and the spring of 2020. Two hundred and one participants responded for a 42% response rate. Participants received a $20 gift card in appreciation for their participation.

Outcome Variable

We examined whether there were significant differences between exploratory variables (rural field experiences and reasons for selecting jobs) and whether participants taught in rural schools. To code for rurality, researchers independently coded each town named in the open-ended responses. Codes were compared, and areas of disagreement were resolved. This variable was dichotomously coded (0 did not teach in a rural school and 1 did teach in a rural school). In the sample 48% of participants were employed in rural schools whereas 52% were employed in non-rural schools.

Explanatory Variables

The main explanatory variables in this study were rural program and field experiences and reasons for selecting jobs. As referenced above, the teacher preparation program includes several program experiences and field experience partnerships between the program and rural school districts of varying size and configuration. Field experiences were coded dichotomously (1= participated in field experience and 0 did not participate in field experience).

Participants were given several reasons for selecting jobs (student teaching experience in the district, access to affordable or school subsidized housing, school class size, spouse/partner employment opportunities, salary/benefits, relocation assistance, welcome of school community, quality of professional development/earning opportunities offered, community amenities, outdoor recreation opportunities, social opportunities in the community, location-close to family, and location-close to university. Participants were asked to indicate all factors that influenced their decisions to take a job. Responses for each category were coded dichotomously coded dichotomously (1= and 0 did not participate in field experience).

Control Variables

Control variables for this study included gender, race/ethnicity, teaching major, whether the participant had children, participant age, whether the participants were from in or out of state, hometown rurality, and whether participants student taught in a rural community. These variables were chosen by the researchers based on the study site's context. Participants' gender included three categories male (23%), female (76%), and non-binary (1%). While most of the participants were White (94%), 1% was Native American, 1% was Native Hawaiian, 1% was Asian, 1% was Latino, and 2% were two or more ethnicities. Among participants 52% were elementary majors, 37% were secondary majors, 10% were K-12 teachers (art, health enhancement, languages, and music), and 2% were early childhood majors. Ten percent of the participants had children, whereas 90% did not. Among participants, 69% were from communities within the state with 31% from communities outside of the state. The average age among participants was 24.61 (*SE*=.24). Fifty seven percent of participants were from urban communities, 12% were from suburban communities, and 31% were from rural communities. Finally, 65% of participants completed their student teaching in an urban community/school/district with 35% of participants student teaching in a rural community (see Table 1).

Table 1: ***Descriptive Statistics for all Respondents***

	Frequency/Mean	Standard Error
Control Variables		
Gender		
Male	0.23	0.04
Female	0.76	0.04
Non-binary	0.01	0.01
Ethnicity		
White	0.94	0.02
American Indian	0.01	0.01
Native Hawaiian	0.01	0.01

	Frequency/Mean	Standard Error
Asian	0.01	0.01
Latino	0.01	0.01
Two or more races	0.02	0.01
Major		
Elementary	0.52	0.04
Secondary	0.37	0.04
K-12	0.10	0.03
Early Childhood	0.02	0.01
Has children?		
Yes	0.10	0.03
No	0.90	0.03
In vs. Out of State		
In-State	0.69	0.04
Out of State	0.31	0.04
Age	24.61	0.24
Hometown Rurality		
Non-rural	0.69	0.04
Rural	0.31	0.04
Student Teach Rurality		
Non-rural	0.65	0.04
Rural	0.35	0.04
Explanatory Variables		
Rural Field Experiences		
EDU Tech Club	0.12	0.03
Rural Practicum	0.10	0.03
Rural Colloquium and Teach Fair	0.29	0.04
Guest Speakers in Practicum Courses	0.37	0.04
Rural Student Teaching Scholarship	0.13	0.03
Total Rural Field Experiences		
0 Experience	0.32	0.04
1 Experience	0.43	0.04
2 Experiences	0.19	0.04
3 Experiences	0.06	0.02
4 Experiences	0.01	0.01
Reasons for Selecting Jobs		
Student teaching experience in this district	0.34	0.03

	Frequency/Mean	Standard Error
Access to affordable or school subsidized housing	0.23	0.03
School or class size	0.38	0.03
Spouse/partner employment opportunities	0.34	0.03
Salary/benefits	0.41	0.03
Relocation assistance	0.03	0.01
Welcome of school and community	0.44	0.04
Quality of professional development/learning communities offered	0.28	0.03
Community amenities (restaurants, shopping, healthcare)	0.29	0.03
Outdoor recreation opportunities	0.31	0.03
Social opportunities in community (i.e., there people my age in the community)	0.26	0.03
Location – close to family	0.41	0.03
Location – close to university town or similar size city	0.23	0.03
Dependent Variable		
Teaching in a Rural School District		
Non-rural	0.52	0.04
Rural	0.48	0.04

Analysis

We used a chi-square analysis to determine if there were differences between rural field experiences and teaching in urban or rural schools. A chi-square analysis is appropriate because the independent (field experience participation) and dependent (teaching in rural or urban school) variables are categorical (Gravetter & Wallnau, 2016).

A series of t-tests were conducted to determine if students teaching in urban/ rural schools consider the job search criteria to be important in their decision making. The explanatory variable (teaching in rural or urban school) is categorical, and the dependent variable is continuous (Gravetter & Wallnau, 2016). We conducted a Levene's test statistic for equality of variances prior to running the t-tests Leech et al., 2014). Of the thirteen t-tests conducted, the equal variance assumption was violated for (seven tests. For tests where the equal variance assumption was violated, we reported the results of the 'equal variances not assumed' t-test (Satterthwaite, 1946).

A logistic regression was conducted to explore factors that predicted teaching in a rural school. We included background characteristics (gender, ethnicity, major, whether participants had children, age, rurality of hometown, and rurality of student teaching experience). In addition to background characteristics, we incorporated exploratory factors that were significant to marginally significant in previous analyses. The definition of marginal significance (.10 or less) was based on the work of Pritschet et al. (2016). We also included exploratory factors that were marginally significant in the chi-square and t-test analyses.

Our final survey question (open-ended) asked respondents to tell us anything else that they wanted us to know about the decisions they made in choosing their first teaching position. Eighty-nine

respondents included at least one comment. Those comments were analysed through an open coding process followed by axial coding to determine relationships between open-ended comments and other survey variables. Axial coding then revealed two overarching themes: program quality and job-decisions.

Findings

Rural Field Experiences

Among participants, 12% participated in the rural technology club, 10% participated in a rural practicum experience, 37% had guest speakers in their practicum courses, 29% participated in the rural colloquium/ career fair, and 13% were awarded the rural student teaching scholarship. When exploring the relationship between these program experiences and the likelihood of teaching in a rural vs. non-rural district, having guest speakers in practicum courses was significantly related to teaching in non-rural vs. rural schools X^2 (1, *N* = 126) = 4.786 p =.029 with 45% of the students teaching in non-rural schools indicating that they had guest speakers in their practicum courses compared to 27% of participants teaching in rural schools (Table 2).

Table 2: ***Rural Field Experiences and Working in Urban vs. Rural Schools***

	Frequency Urban	**Frequency Rural**	**Model**
EDU Tech Club	0.14	0.10	X^2 (1, *N* = 126) = .396, *p* =.529
Rural Practicum	0.06	0.15	X^2 (1, *N* = 126) = 2.714, *p* =.099
Rural Colloquium and Teach Fair	0.27	0.32	X^2 (1, *N* = 126) = .293, *p* =.589
Guest Speakers in Practicum Courses	0.45	0.27	X^2 (1, *N* = 126) = 4.786 *p* =.029
Rural Student Teaching Scholarship	0.12	0.15	X^2 (1, *N* = 125) = .223, *p* =.637
Total Rural Field Experiences			X^2 (4, *N* = 126) = 1.602, p =.809
0 Experience	0.30	0.33	
1 Experience	0.42	0.43	
2 Experiences	0.21	0.17	
3 Experiences	0.06	0.05	
4 Experiences	0.00	0.02	

To illustrate, there was a marginally significant relationship between rural practicum experience and teaching in a rural district X^2 (1, *N* = 126) = 2.714, p =.099 with 15% of students who completed a rural practicum experience teaching in rural school compared to 6% of students who completed a rural practicum teaching in a non-rural school. Additionally, there were open-ended comments crediting the rural practicum experience with their decisions to teach in rural schools. Participant #22 stated "*I was happy with my choice that the rural practicum introduced me to, and where I student taught. I then stayed on and taught at the same school for 2 more years*". Participant #61 said "*When I was looking for positions, I was more open to teaching in Eastern Montana after my rural practicum experience in Northeast Montana".* There were no other significant differences in percentage of students completing the rural field experience and working in a rural vs. non-rural schools.

Reasons for Selecting a Position

For all respondents, when asked to indicate factors which have influenced their decisions about accepting a teaching position, overall, participants indicated that the welcome of the school and community (44%), location close to family (41%), salary/ benefits (41%), school or class size (38%) were the most important factors in their selection of a position. In contrast, relocation assistance (3%), location close to university community or similar size community (23%), access to affordable or school subsidized housing (23%), and social opportunities within the community (26%) were less important factors (see Table 1 above).

Interestingly, among those respondents who chose rural school teaching positions (*N*=60) the most important factors in their decisions were school or class size (50%), the welcome of school and community (48%), salary/ benefits (45%), and being close to family (35%) (see Table 3). Ten qualitative, open-ended comments reinforced these findings. Participant # 122 stated " *I coached in this little community for eight years, people knew me, and I felt I had the support of people*". Participant #112 offered "*I substitute taught in a larger school for almost a year but decided to return home and take a position near my family".* Participant #69 *said " I wanted to be close to my family to help them. I also wanted to live near the mountains… rural pay is less, but the trade-offs are worth it".*

Table 3: ***T-Tests Comparing Reasons for Selecting Jobs***

	Non-Rural		**Rural**		**Significance**
	Frequency	Standard Error	Frequency	Standard Error	
Student teaching experience in this district	0.42	0.06	0.17	0.05	$t(120.05)=3.295$, $p=.0013$
Access to affordable or school subsidized housing	0.24	0.05	0.23	0.06	$t(124)=.119$, $p=.9057$
School or class size	0.33	0.06	0.50	0.07	$t(121.07)=-1.905$, $p=.0592$
Spouse/partner employment opportunities	0.42	0.06	0.30	0.06	$t(123.94)=1.452$, $p=.1489$
Salary/benefits	0.44	0.06	0.45	0.06	$t(124)=-.1187$, $p=.9057$
Relocation assistance	0.05	0.03	0.00	0	$t(65)=1.759$, $p=.0832$
Welcome of school and community	0.53	0.06	0.48	0.07	$t(124)=.523$, $p=.6019$
Quality of professional development/learning communities offered	0.32	0.06	0.25	0.06	$t(124)=.842$, $p=.4015$
Community amenities (restaurants, shopping, healthcare)	0.35	0.06	0.25	0.06	$t(124)=1.206$, $p.=.2302$
Outdoor recreation opportunities	0.3	0.06	0.30	0.06	$t(124)=.037$, $p=.9708$
Social opportunities in community (i.e., there people my age in the community)	0.29	0.06	0.20	0.05	$t(123.91)=1.474$, $p=.2534$
Location – close to family	0.44	0.06	0.35	0.06	$t(124)=1.02$, $p=.310$
Location – close to University town or similar size city	0.29	0.06	0.12	0.04	$t(117.30)=2.446$, $p=.0159$

Factors such as location close to university town (12%), student teaching experience in the district (17%), and social opportunities within the community (20%) were of lesser importance. Conversely,

participants who chose to teach in non-rural schools were significantly more likely to indicate that student teaching experience in the district $t(120.05)=3.295$, $p=.0013$, and living close to the university town or similar size city $t(117.30)=2.446$, $p=.0159$ were important factors in their position decision.

Predictors of Teaching in Rural Schools

To explore factors related to teaching in a rural school, we conducted a logistic regression analysis. The overall model was significant c^2 (14, N = 117) = 48.25, p<.001. Among predictors, individuals who have children are more than seven times (733%) more likely (OR = 0.12, [{1.00/0.12 =8.33} - 1.00] × 100%) and participants who grew up in a rural community are almost five times (484%) (OR= [5.84- 1.00 × 100%]) to teach in a rural school than non-rural schools. Further, individuals who completed a rural practicum experience were almost six times (598%) (OR= [6.98- 1.00 × 100%]) more likely to teach in a rural school than non-rural schools. Finally, individuals who looked for positions based on school or class size were over two times (216%) (OR= [3.16- 1.00 × 100%]) more likely to teach in a rural school (see Table 4).

Table 4: ***Odds Ratios Predicting Teaching in Rural Communities***

	Odds Ratio	Significance
Gender		
Female	1.17	
Ethnicity		
Two or more races	11.50	
Major		
Secondary	0.86	
K-12	0.77	
Kids		
No	0.12	*
In vs. Out of State		
In-State	1.02	
Age	1.13	
Hometown Rurality		
Rural	5.84	**
Student Teach Rurality		
Rural	1.83	
Rural Practicum	6.98	**
Guest Speakers in Practicum Courses	0.35	
Student teaching experience in this district	0.30	*
School or class size	3.16	*
Location – close to University town or similar size city	0.74	
Log Likelihood	-56.97	
Pseudo R	0.30	
N	117	

Notes. The reference groups are 'Male', 'White', 'Elementary education majors', 'Having children', 'Out of state' and 'Non-rural'.

* $p < .05$, ** $p < .01$, *** $p < .001$

Findings from Open-Ended Comments

We included one (open-ended) survey question which gave respondents a chance to expand their thoughts about the decisions they made in choosing their first teaching position. Eighty-nine respondents included at least one comment. From those comments two main themes emerged: *Program Quality* and *Job Decisions.*

Program Quality. The program quality theme included comments that both praised and offered constructive feedback about various aspects of the teacher education program. Participants #22 and #61 singled out their rural practicum opportunities for exposing them to the benefits of teaching in rural schools. Participant #22 stated "*I'm happy that I went from practicum to student teaching to a job – all in the same school!*" Participant #61 said "*I was much more open to teaching in Eastern Montana after being in rural practicum*". Others praised the university's Rural Colloquium/Teach Fair for helping them secure employment. Participant #99 said "*I met my employer at the Teach Fair when I was a junior and we continued to visit until I was hired the next year*". Participant # 23 said "*Keep the Colloquium and Job Fair – that's how I was hired!*". Constructive feedback mostly centred on the need for greater student teaching options in rural places and more supportive structures if placements broke down. Participant #92 stated "*I student taught in another state and had some difficulty with a mentor teacher. The university didn't offer much support during that time*".

Job Decisions. The other emergent theme, *job-decisions*, entailed three sub themes: financial concerns, relationships, administrative presence and collaborative culture. Most comments (70) made up these sub-themes. Within the financial concerns sub-theme, seven respondents said that they would not be seeking teaching positions in rural areas because of low salary and benefits, and lack of employment opportunities for spouses. Participant #160 said "*Low salary and inadequate benefits pushed me out of teaching in rural areas*". Participant #58 indicated "*I would like to be rural, but my husband is a physical therapist, and we need to move to a bigger city for his work*".

The relationship sub-theme garnered 15 positive responses about why respondents chose to teach in rural settings. Eight said that teaching in a rural school enabled them to be close to family or the town where they grew up. Participant #165 stated:

> *I student taught here. My family is close, I fell in love with the school and the grade I taught and can't imagine myself anywhere else! It is a small and wonderful school with close relationships with staff, families, and students. I love it!*

Others stated that they appreciated the chance to teach in smaller places where they could build deeper relationships with students and families. "*I never expected to teach in rural Montana, but I'm loving it! The staff and community have been so supportive – it feels like home*" (Participant # 54). Finally, Participant #74's comments illustrate the relationship theme with a desire to give back to the community.

> *I grew up in this school and the amount of love and support I received from the community was overwhelming and a key part to why I am successful as an adult. I want to be a part of that and give back directly to my students and this community for all they have given to me.*

The third sub-theme, administrative presence and collaborative culture, accounted for the comments of 13 respondents. Ten of those people indicated that their school's administrator figured prominently in their decision to teach there. Participant #97 said "*ongoing communication with the principal had a huge impact on my decision*". Another participant (#168) stated "*I chose the school where I felt the most welcomed by the administrator and other teachers*". "*Leadership was a huge factor in me accepting this job*", participant #137 commented. Other respondents indicated that their school had a reputation for collaborative and creative teachers, and that collegiality would present them with the support to grow professionally. "*The quality of the teaching community was important to me*", (Participant #113). "*My decision was based on the collaborative opportunities at my school, they were most helpful to a new teacher*", said Participant #140.

Discussion

Although this research examined the contribution that rural field experiences might have on candidate decisions to teach in rural settings, both quantitative and qualitative themes echo the findings of Boylan et al. (1993) about why teachers choose to remain teaching in rural areas. Quantitative results from the current study indicate that for new teachers, decisions to take a rural teaching job are dependent on school or class size (50%), the welcome of school and community (48%), salary/ benefits (45%), and being close to family (35%). Participant #165 (comment reported above) illustrates three of the four top reasons for selecting a position in a rural school.

These results reinforce Boylan et al.'s (1993) findings that teachers choose rural teaching settings because of the promise of smaller school and class sizes that promote deeper relationships with students and teaching colleagues. Boylan et al. described this rationale as Sphere #1 , 'Within Classroom Activities'. In our study, new teachers also identified salary/ benefits and welcome of the community as reasons they chose to teach in rural settings. These reasons coincide with Sphere #4, 'Family Factors', which describe teachers' desire to live a rural lifestyle embodied by community stability, personal health and well-being, and the possibility of raising a family in a safe, family-oriented environment.

The qualitative results also reinforce that the sub-theme of *relationships* parallels Boylan et al. 's Spheres 1 and 4. Fifteen open-ended comments from study participants revealed that new teachers sought to live and work in rural areas to develop close relationships with their students and others in the community, but also chose rural settings to be close to extended family members who lived nearby. Participant #74 discussed the impact that the welcoming nature of their community had on their career goals (see quote above).

While Sphere #2, 'Whole School Level' was more associated with teachers' work dissatisfaction in Boylan et al.'s research (1993), in the current study, 13 new teachers said that positive administrative presence and collegial culture during the recruitment and hiring process influenced their decisions to choose their current rural school. However, *financial concerns,* another qualitative sub-theme, was negatively associated with participants choosing rural schools mostly due to low salary and lack of employment opportunities for spouse or partners. Boylan et al. described how these concerns were also a part of the Australian teachers' reasons for leaving rural areas as explained in their framework's Sphere #4, 'Family Factors'.

From our research, we know that some rural field experiences may have a greater influence than others in the prediction of a candidate choosing to teach in rural settings. There were no significant differences in the likelihood of teaching in a rural vs. urban school among individuals who participated in the rural technology club, who were rural student teaching scholarship recipients, nor who participated in the rural colloquium and teach fair. Having guest speakers in class was negatively associated with choosing to teach in a rural school. Although this would appear to be a non-confirmatory factor for the influence of rural guest speakers on candidates choosing teaching positions in rural schools, it is best explained by the fact that rural practicum students would not have been exposed to guest speakers advocating rural teaching opportunities. Guest speakers spoke only to sections of students who did not have rural field or practicum experience. The guest speaker variable represented the minimum level of information about rural school teaching; whereas students who participated in rural field or practicum experience engaged in learning opportunities above and beyond what they could have learned from a guest speaker.

In our study, only the rural practicum experience was predictive of an increased likelihood of teaching in a rural community. The fact that the rural practicum experience was organised in a cohort

model where 12-15 participants engaged in practice teaching in the same or nearby rural schools, allowed for nightly debrief of their full day experiences. These debrief and reflection sessions created the conditions for participants to actively develop a quasi-professional learning community, as they shared insights about students, curricular needs, and helped one another develop lessons and materials to be used the following day in their teaching practice (Versland et al., 2020). This quasi-professional learning community may have given participants a glimpse of what they hope to experience with future colleagues in rural schools. Qualitative comments also provide evidence that an intense week-long, rural practicum experience may offer university participants the chance to experience collaborative school culture, build relationships within the school community, and meaningfully interact with the school administrators and teacher colleagues. These results are not surprising and are reinforced by data from the sub-themes of *relationships*, and *administrative presence* and *collaborative culture*.

In summary, this research supports the idea that not all rural field experiences are created equal. Rather than simply trying to increase the number of rural field experiences, teacher education programs should focus on providing in-depth rural field experience opportunities which along with personal, community, and school factors promote teaching in rural schools.

Implications for Practice

From our findings, it was clear that participants who chose rural teaching positions were influenced by the following factors: school or class size that enabled relationship development, a competitive salary and benefit package, and a collaborative school culture and supportive relationships within the larger community. Thirteen participants identified their interactions with an administrator and collaborative team/ hiring committee as having a very positive impact on their job-decision. This seems to signal a candidate preference for a hiring process that includes multiple meaningful interactions between the candidate and the school administrator as well as extended opportunities for the candidates to meet potential teaching colleagues. School districts may benefit from a recruitment strategy that emphasizes multiple interactions with candidates by a recruitment team consisting of the school administrator/ principal, teacher colleagues, and possibly community mentors.

Additionally, and as prior researchers (Aragon & Wixom, 2016; Latterman & Steffes, 2017; Showalter et al., 2017) confirmed, a competitive salary and benefits package is wholly necessary to recruit new teachers to rural schools. Rural school administrators and community members must work collaboratively to influence the legislative/ financial processes that fund rural schools and support rural education. Additional policy changes that may bolster rural recruitment may include expanded loan forgiveness, stipends for teaching in remote and/ or underserved areas such as on Indian reservations, and scholarships for rural high school students to become teachers and return to their rural communities. Funding for these kinds of incentives would require state level adjustments to the overall funding structures at the legislative division.

The blend of quantitative and qualitative data suggesting that rural teaching candidates desired to be close to family presents a unique opportunity for rural school districts and university teacher preparation programs to partner in recruiting and incentivizing local high school graduates to earn teaching degrees that would provide a means to return to rural communities with a job-ready skill set.

Limitations of the Study and Further Research

This study has several limitations. First of all, the study only looked at graduates of one program within a three-year time period immediately after they graduated college. The study only explored what caused new graduates to take their first positions in rural schools; we did not ask participants how long they intended to stay in their teaching positions (both rural and non-rural). Therefore, we do not have data regarding persistence in rural teaching. Further research that looks at persistence in rural teaching among this cohort of participants would be beneficial. We acknowledge that in a world where there are multiple definitions of rurality, we chose the definition that appeared to best fit within the context of our state and where most of our graduates took positions.

One unexpected finding was the influence that school administrator interactions had on new teacher job-decisions. We know that principals can have a positive impact on the self-efficacy of teachers (Lambersky, 2016) as well as on the collective efficacy of a school (Versland et al., 2017), but there is little research on how administrators factor into retention and job-decisions of novice rural teachers. Future research, therefore, could examine the influence that novice teacher relationships and interactions with building administrators have on three-to-five year job retention rates, and novice teacher decisions to stay in their initial rural teaching positions.

Conclusion

In this study, an intensive, week-long, rural practicum did have an impact on the job-decisions of candidates choosing positions in rural settings. Other influences included: salary and benefit package, welcome of the community, the ability to work in a small community close to family, and the overall sense of a positive school culture. This research makes an argument for teacher education programs to partner with rural school districts in designing and delivering meaningful clinical field experience such as a week-long intensive practicum experience that exposes teacher candidates to the benefits of living and working in rural communities.

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Experiencing Being Judged: Making Visible School Community Expectations of Rural Principals

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Abstract

Judgements of the work of school principals may be formal through an appraisal process or informal from students, teachers, parents, and members of the community in which the school operates. This article focuses on New Zealand rural primary school principals' experiences of informal expectations—and judgements about whether they meet these expectations—from school community members. The aim of this study is to illustrate principals' work in responding to community expectations and the contextual factors of school settings, and to advocate for more overt policy and process attention to such work in the formal appraisal of principals. Using Deweyan pragmatism for a theoretical approach, research evidence was generated from semi-structured interviews with principals and ex-principals of small rural schools. Abductive analysis was used. Not only do principals' relationships with individuals and groups within their communities impact on their work and ability to succeed in their professional ambitions for school and students, but relationships between groups in the school community may also influence local judgements of that work. These relationships can be important aspects of schools' historical contexts. The time principals spend prioritising and responding to community expectations is notable and should be reflected in policy and processes of principal appraisal. Insights from this research are likely to be useful for principals and their mentors, as well as for facilitators of preparation programs and inservice professional learning for principals and aspiring principals.

Keywords: *school community, principals, preparation of principals, small schools, rural schools, New Zealand*

Introduction

One of the key assumptions framing this research is that school principals in New Zealand, as in many countries (but not all), are judged in three ways: 1) through formal regulatory appraisal processes; 2) personal reflections on their own work; and 3) and informally, and largely locally, by individuals and groups in their school community. I have written about these processes of judgement previously, using aspects of assessment to highlight the criteria or expectations on which judgements of principals' work are made and the feedback they receive (Earl Rinehart, 2019).

In this article, I focus on New Zealand rural primary school principals' experiences of informal expectations – and judgements about whether they meet these expectations – from school community members. Not addressed here are covert expectations specifically from schools'

Boards of Trustees, because these parents and community members also provide formal lines of appraisal of principals' work. I aim to illustrate principals' work in responding to community expectations and contextual factors of school settings, and I advocate for more overt policy and process attention to such work in formal appraisal of principals.

The term *school community* has positive connotations from the word *community*, suggesting a cohesive group of people, who are active and participatory in supporting their local school. Although frequently used, the term *school community* is rarely defined when mentioned in research literature or education policy. In fact, the term *school community* has several meanings: the school *as a community* (that is, the staff and students within the school as a learning community), *the community* comprising parents and families of enrolled students and school staff, or the *local community* in which the school operates. In this article, I use the term *school community* to refer to individuals and groups in the local geographical student catchment area who are interested parties in school operations. In this study, *school community* refers to the second and third options rather than the school *as* a community.

School communities are rarely homogenous, and they differ in size as well as social and economic affordances. At the local community level, it is not uncommon for schools in rural settings to have clear groups apportioned by socio-economic status, if not by values and aspirations. Individuals and groups in any community can vary in motivation of, and for, young people's schooling and expectations of levels of academic achievement (Budge, 2006). There is, then, both between and within group differences in a school community.

Communities also may vary in political and ideological standpoints. Different groups may have different views, such as landowners and farm workers, local business owners and the unemployed, and church attendees and the non-religious. Sometimes particular members of a school's community, such as landowners, can have historical connections and associated expectations of the nostalgic activities of school life and the role the school plays within the community (Wieczorek & Manard, 2018). Whether the school community meets, or not, these expectations will influence how a principal is judged by various factions, including parents.

In many education contexts, such as New Zealand, individuals and groups in the community are called on to provide official support for the school. In rural areas, the boundaries between school and the school community are often blurred. Community members, not just the parents of children at the school, are highly likely to be involved in a rural school (Dunning, 1993). Schools typically act as an employer in the area, providing work for a small number of other staff (mainly part-time), such as relief teachers, school office person/people, a groundskeeper, bus driver/s, and teacher aides. Although parents and businesses support the local school in urban settings too, in rural settings it is a small number of people who are available to volunteer for multiple roles, including fundraising and working bees and acting as audience, judges, and prize-givers. The community influences the local curriculum, school-community partnerships, and the educational aspirations of students and families.

The context in which a school principal finds her/himself is an important consideration in principals' work (Clarke & Wildy, 2004; Robinson et al., 2009; Wylie, 2012). School context includes its geographic location, its socio-economic status, demographics and culture of the local community, and its broader policy environments (Diamond & Spillane, 2016; Hallinger, 2018). There are also a wide range of school-specific factors in play (Corbett & White, 2014; Thrupp, 2012), such as responding to diversity, inequities, and the special needs of students (Dunning, 1993; Ishimaru & Galloway, 2014; Thrupp, 1999; Wieczorek & Manard, 2018). The school's unique community has arguably significant local influence on the school and on the goals and priorities of principals' work (see Alcorn, 2011; Robinson, et al., 2009). Leithwood et al. (2020) remind us of

> *the importance of leaders being responsive to context and highlighting how effective school leaders understand and respond appropriately to the different contextual demands that*

> *they face. … A growing body of research now highlights how cultural, economic and contextual factors directly influence, and to some extent restrict, leaders' actions, practices and behaviours. (p. 9)*

This acknowledgement that a school leader's actions may be restricted by aspects of a specific school setting is significant.

The school community has been recognised and promoted in principal appraisal (evaluation) (Hallinger 2018; Heck & Marcoulides 1992; Parylo et al., 2012). Relationships, networks, and partnerships are recognised in the literature and principal professional standards as very important (Leithwood et al., 2020; New Zealand Ministry of Education, 2019). For example, building relationships is the second of four domains of practice for Leithwood et al. (2020). New Zealand's *Professional Standards for Primary Principals* (New Zealand Ministry of Education, 2019) identifies one of four "*areas of practice*" as "*partnerships and networks*" (p. 42), suggesting that a greater range of relationships beyond parents and *whānau*[extended family] of current students should be considered. Each area of practice in this document has between four and eight standards. One of the partnerships and networks' standards reads: "*interact regularly with parents and the school community on student progress and other school-related matters*" (p. 42). What might be included as "*school-related matters*" is left open to interpretation.

To what extent community relations are viewed as the responsibility of principals and are used in principal appraisal varies (Parylo et al., 2012). Parylo et al. (2012) reported that evaluation in their US context had shifted from attention on management and relationships with people (staff and community members) to systems that are "*data-driven*" and "*performance-based*" (p. 224). Principals' professional learning and development also value experience in a specific school setting (e.g., Lairon & Vidales, 2003).

School communities can have high expectations of principals. Principals of rural schools in particular face pressure to meet community expectations (Ashton & Duncan, 2012; Clarke & Wildy, 2004; Wieczorek & Manard, 2018). One such expectation is for rural school principals to attend community events. With varied stakeholders involved, it means that absences will be noticed and carry the risk of social offence (Wieczorek & Manard, 2018). Status as a school principal may include expectations that they play a leadership role in the community through memberships in local clubs and organisations. Not only are rural principals expected to be visible and accessible within school boundaries, but they are also expected to be visible in the school community.

Aside from parent surveys conducted as part of school operations and/or formal principal appraisal, principals experience community expectations through interactions with community members. The nature of these interactions reflects expectations with underlying criteria, used by individuals and groups to judge the school principal. Often these criteria are unspecified and unspoken. By increasing the visibility of informal and local expectations of school communities and the influence of these expectations on principals' work, I aim to contribute to how this work is valued.

It is important that criteria used in the processes of formal appraisal of school principals' work align with principals' day-to-day priorities and tasks. Not only will this alignment increase the trustworthiness and usefulness of principal appraisal, but what is assessed can have a powerful influence on what comes to be valued and included in preparation programs. In other words, by giving due attention to principals' work in responding to and negotiating expectations from individuals and members of school communities, formal appraisal will acknowledge and promote the importance and value of this work to principals' effectiveness and success.

Research Design

Researching principals' experiences of being judged within rural school communities enabled me to closely examine the expectations and judgements perceived by rural primary school principals in the New Zealand context. Principals and ex-principals of schools in rural settings were invited to participate in this study because community expectations of school principals are concentrated and visible in the principals' work situations. The special nature of typically smaller, community-based rural schools enabled research attention to focus on the expectations placed on principals that might be more difficult to observe in the complex organisational structures of larger urban schools.

For this research I used "*contemporary pragmatism*" (Rosiek, 2013, p. 693), which acknowledges changes in qualitative inquiry methodologies since Dewey's time, but continues to emphasise pragmatist ideas in educational research. The research question was: How do rural school principals experience judgement of their work by members of the school community? Potential participants were found using purposive sampling. Principals of smaller schools (in this study defined as up to 150 students and 6-8 teaching staff) and known ex-principals of rural schools, at a convenient distance for researcher travel, were invited to participate. This research gained Institutional ethical approvals and all names of participants are pseudonyms.

Six current primary school principals were interviewed three times face-to-face, and eight ex-principals were interviewed once. The interviews were semi-structured and averaged an hour in length. Evidence was investigated using abductive analysis (Brinkmann, 2014; Earl Rinehart, 2021), which utilises (re)sources of knowledge – intellectual, experiential, theoretical, evidential, situational, procedural, and intuitive – that a researcher brings to the interpretive process. This type of analysis is an exploratory, inferential, speculative, and creative process, whereby the researcher takes time to consider research evidence up close and from a distance (Earl Rinehart, 2021, pp. 305 & 309). Thus, abductive analysis is individual to the researcher while including the following actions:

- *taking time for immersion and familiarisation with the research evidence – deliberation – and time away for defamiliarisation and ideas to surface;*
- *bringing theoretical propositions and knowledge of previous study into play;*
- *resisting the temptation of early or rushed conclusions (Dewey, 1963/2015);*
- *valuing the possibilities in intuitive nudges from broader influences in life;*
- *tracing the "logics-in-hindsight" from evidence to insight/new knowledge by backward mapping: "Where did I get that idea?" Does this idea fit the evidence? Does this idea make sense of the evidence? (Based on Earl Rinehart, 2021, pp. 303–304, 307–309)*

In line with Dewey's thinking (1938/1986), my goal was not to arrive at any fixed and universal knowledge. Rather, it was to draw out the good or desirable in the present, in order to suggest ways of refining present activity for improvement in the work situations of rural school principals —in this case, improvement for principals in their decision-making and actions, in relation to their schools' communities, and increasing the visibility and value of this work.

Expectations from School Communities

Parents and other members of the school community have expectations of principals and provide feedback through informal, local interactions and communications (questions, requests, suggestions, and information shared), whether such feedback is sought or volunteered. Such interactions may be experienced by principals as judgements on their work and on themselves as individuals.

Sometimes community members' expectations of influence were perceived as demands. One principal referred to these as "*complaints*" in terms of the "*drop everything*" and "*do something about this*" response that seemed to be required. Questions that were directed towards the individual principal, such as "*What are* you *doing about this*?" Or "*What are you* doing *about that*?", point to the speakers' perception that a principal is *the* person with individual responsibility to respond, or that observable action is needed. Examples of "*this*" or "*that*" were wide ranging (from incidents on the school bus and in the playground, to lost property) and reflected community expectations of a principal's responsibility beyond teaching and learning concerns.

Suggestions from community members were based on their expectations of the school and the school principal (e.g., to do "*more*" or to do "*differently*") to provide and/or preserve opportunities for children within broader school life. Community members, often parents, questioned ways of funding school camps and advocated for agricultural days, more physical education, and more Kapa haka [a group activity performing traditional Māori dancing and chanting]. Some suggestions resulted in changes in school policy and practice; some did not.

Members of the school community expected principals to know what is going on, be responsive in a timely manner, and resolve everything to the community's satisfaction, while explaining their decisions and keeping everyone informed. However, there was rarely consensus in community views. This guarantees some dissatisfaction.

Knowing and Responding

All principals mentioned their need to monitor the "*vibe*" or "*mood*" of parents and the school as a community and the local community's response to the school. For most, the important aspect of their response to any issue was to act promptly, "*nip [it] in the bud,*" and contain and resolve any situation as quickly as possible. This meant they had to decide on the next steps quickly, having considered many perspectives and needs. They had to be lateral thinkers. Principals understood that they were expected to handle whatever comes up and were responsible for everything. The principals in this study said that what they planned to do needed to take into consideration the inevitable "*unexpected.*"

Visibility in school and being available was important. Being away from school when an issue arose could mean an issue grew disproportionately, involving extra work. Mickey told a story of an incident that happened when she was in the city for a meeting. On returning to school, she found that a situation had arisen and had escalated in that single day. Sydney highlighted the importance of being careful in how situations were handled and being seen to take concerns seriously:

> *We're pretty careful about how these things are dealt with. Otherwise they take on a life of their own. If something is alleged to have happened at school, and we don't do quite a thorough job of it, people will say that you must be covering something up… On the few occasions where this has happened, I think the way that we've dealt with it has kept things in proportion, kept the parents happy to know that you've taken it seriously… As a principal it would be really easy to spend a lot of time out of school to attend meetings, you know here, there and everywhere. But I think it is really important to keep that in balance and be in school.*

The principals in this study felt they were expected to know everything. It is helpful when a parent or other community member is willing to share information, so that principals are alerted to something they appreciate knowing about. Sometimes these alerts come through serendipitous events. Information that could be acted on came from a variety of sources and was not always direct. One principal heard things through a friend's husband, who picked up talk

when out socialising: "*He hears things said at the pub.*" Individual principals also spoke of signs they noticed—through keeping "*eyes and ears open*"—that signalled potential issues.

Preventing "*molehills becoming mountains*" was a key task. Social media has the potential to allow principals to be alerted to concerns and for news to spread more widely and more quickly than might otherwise occur. One principal described how a community member could influence other people's perceptions of the school through Facebook conversations, whether the principal was aware of it or not. Principals had concerns about being misjudged by public opinion through news about the school presented in mainstream as well as social media. Sydney was very frank in his awareness of potential mainstream-media involvement and how that increased the importance of his decision-making and actions in response to any incident:

> *We had a couple of occasions last year where things apparently happened at school that looked really, actually quite serious. If you just read the sort of headline, you'd go, "Oh my God!" … It just happens, you know. It just happens, and boom, you have to deal with it. The big fear is of the media becoming involved and that's one that sort of hangs over you a bit too. Be prepared for that.*

Responsibility for finding out what had happened and "*fixing*" it were seen to rest with the principal. Parents expected the principal to act. Principals felt they were expected to "*be professional*" and not be offended or "*take it personally*". The principals spoke of the challenge and the importance of remaining patient, calm, and openly responsive, even when faced with angry parents, which happened at times. Ruby said:

> *I think there has been a lot of unfairness sometimes, but when people get angry – and parents are allowed to get angry to you, but you're not allowed to get angry with them. Rightly so – you're a professional, but some of it you have to take on the chin and it's hard but I … I just get myself through it and say, "Yeah, but do you care about the child? Yes, I do, so we'll do this." I don't always agree. I don't necessarily put in place everything that's demanded. But I will always have the reason why.*

Resolving situations can take a lot of work. Principals needed information and often sought guidance from reliable sources. They needed to keep up communication with key interested parties, and record the decisions and actions taken in case of further accountability requirements. As Sydney explained:

> *You stop answering the phone, you stop doing your work, you get somebody else in to look after your class and you roll with that. You write it all down, and you record it, you record the conversations you have, you summarise it in a letter to the chairman of the Board of Trustees and all that kind of thing, just so the people that need to know are in the picture and you can be seen to have done a thorough job.*

According to Doug, "*something I've learnt too, is that that's when you'll fall over, if you don't keep the communication going at each step*".

The focus on communication and relationships with people is a strategy that Wieczorek and Manard (2018, also citing Chalker, 1999; & Hurley, 1999) suggest new principals adopt to respond to the challenges of community expectations. The work involved for principals in this study, but not visible to others, was also significant in terms of their response to and, hopefully, resolution of community concerns.

Competing Expectations

It was also important for these principals to have knowledge of the relationship between different members or groups in a school community, and how different groups relate with each other. Mickey and Nate, for example, spoke of two distinct groups in their local community with different educational aspirations, and Sydney spoke of how some strain was showing in

"*established*" parent attitudes, due to a growing school roll and new parents joining the school's community. Given the competing expectations in a school community, reaching a resolution and communicating to everyone's satisfaction was not always possible. Principals responded to parental concerns in ways designed to address the needs of those involved.

The smaller the school, the greater the likelihood that feedback would reflect partiality towards particular children or interests. Nate, for example, contrasted expectations between two small schools, one with fewer than 25 students and one with 45 students.

> *I think the smaller the context the more difficult those agendas become. I can speak from my experience in a sole charge school compared with a school with 45 students in it. In the sole charge school with perhaps a dozen families, each of those families think that they should have a key role in deciding what happens in school and there I could see very strong competing agendas. At times that is difficult to manage. I think the bigger the school becomes, people are more accepting of us running the school as a whole for the betterment of everyone. There is a bit more give and take.*

Situations often involved information about the private lives of families that only the principal had access to. They described this information as privileged, because of its confidential nature. Doug pointed out that,

> *in small schools, parents do tend to be very close to the staff and to all of the children. So, if something happens, they feel the need really to be involved and informed. And sometimes you just can't—due to privacy and confidentiality issues—you can't inform people how you'd like to. And that's been a pressure in such cases, really. There's the tension that you're going to lose on one side.*

In any situation, one "*side*" might have been critical and felt the principal did not handle the situation correctly, but the principal cannot always answer critics with full disclosure. In keeping confidences, principals cannot always fully explain their decisions or defend themselves publicly in the same way that they might have done if they could use this information.

Sydney suggested there would always be people who approved and people who did not approve, whatever one did.

> *Some will be quite vocal in telling you when they're not very pleased with the way things are going. And they're usually coming at it from some angle about something. What can you do? We'll never please everyone so we just sort of manage that as best we can.*

This question of "*What can you do?*" highlighted how principals' decision-making and actions were situational and realistic. Leithwood et al. (2020) proposed that principals should always ask "*Under these conditions, what should I do*?" (p. 10). The levels of knowledge and understanding within the three words "*under these conditions*" are critical.

Alongside the need for responsiveness to multiple interests was a sense of vulnerability and a self-awareness of principals' decisions and actions influencing how they felt they were perceived. Joan spoke of a tension between expectations of members of the school community, professional expectations, and expectations of herself – between being approachable, professional, and accommodating:

> *Always in a small community, you're really vulnerable to comments that might be made about you. And you're really unable, or at least I felt unable, to defend yourself if there were negative comments … It's a narrow path between professional and approachable. And when you are in a small school, that path is very narrow because you haven't got a whole series of levels that people can go through before they can get to you ... I try to see everybody's point of view, and I end up trying to bend over backwards to accommodate the views of other people, which I think makes me look weak, at times. You know, you try so*

> *hard to do what people want, and, and keep within the bounds of what you're required to do.*

Joan felt a rural school principal needs to be fair and accommodating to as many people's views as possible, while maintaining professionalism and considerations of official requirements. Her comment revealed a strong sense of principals' work as juggling and negotiating competing views and the need to be able to persuade others and justify decisions ("*present my case well*"). This is consistent with the characterisation of principals by Wieczorek and Manard (2018), who sought a balance between professional requirements and community obligations in order to fit into the culture of the community.

Being Rural

Being a rural school principal brings pressure to meet expectations related to their skills and status as members of a rural community. A principal's work could include managing animals, fixing the heating or water system, or maintaining school property. This practical, hands-on side to rural principalship can be a critical criterion on which a principal is judged by members of a rural community.

One principal told me that, when she was a new principal in the small rural school, she had rung the neighbouring farmer to move calves from the playground back through the boundary fence into the paddock. She rang a second time and the farmer's response was not as obliging as the first time. When the calves broke through the fence a third time to graze on playground grass, this principal knew that she would have to handle it herself. She felt, firmly, the expectation that the school principal should be able to move calves from the playground.

Joan told a story of a fundraising event for the school that involved one day's work in a shearing shed. The money the farmer saved on hiring, through having members of the school community undertaking stock and shed jobs, would be donated to the school. As a result of her efforts that day, Joan felt acknowledged as a hard worker, someone who would pitch in and give anything a go, and consequently, she felt an increase in her credibility as a member of that farming community.

Dana took an alternative approach. She deliberately positioned herself as "*a townie*," someone unfamiliar with the knowledge and handling of livestock in rural areas. She understood that she was recruited as "*an outsider*," to bring knowledge of the wider world into the school and increase students' educational aspirations. When Dana was faced with organising a Calf and Pet Day, she presented a clear sense of what was the Board of Trustees' responsibility and what was her work:

> *Because I just came along, a townie – "Don't ask me to organise pet calf days. That's not my area of expertise but go ahead" – rather than me trying to do it right. They ran it because they wanted to do it.*

Members of school communities sometimes had to revise their expectations, and this included (re)learning boundaries about what a school principal will do.

Establishing Boundaries

Interactions with others begin to confirm or renegotiate existing community expectations about the role of the principal in relation to school operations and decision-making. When a principal is new to a school, professional boundaries may need to be established and reinforced. Although principals are seen to have ultimate responsibility regarding school operations (by school boards, by school community members and by the principals themselves), individuals and groups in the communities of small rural schools can feel a level of ownership – through local and multi-generational connections with the school. Patterns of interaction that predate the arrival of

the current principal possibly reflect interactions with a previous principal, and are an aspect of the historical context. Joan identified one of these instances in hindsight:

> *One day, some parents came into the school and decided that they were going to clean out the cupboards. Well actually, that wasn't their role. I should have said, "You can't do that, that's my responsibility." But I was pleasant and, I mean, they haven't thrown out anything I didn't want to throw out anyway, but it wasn't their role. It wasn't their role to come in and do that, and I should have stopped [it] – should have drawn the line there.*

Joan recognised that there was a boundary in roles that she let these "*helpful parents*" cross, with longer-term implications for her relationships with community members.

The historical context and a principal's knowledge of this context influence initial encounters and, potentially, impact on the relationships that develop and on community perceptions of success. Turner (2011) discussed how individuals seek to determine the status of others through "*cues about their relative power, authority, prestige, and claims to honor as well as memberships in differentially evaluated social categories*" (p. 332). Ruby recognised one such challenge as it was happening, perhaps because she had already heard information about the couple. Ruby saw her role was to listen calmly, be patient and to "*hear them out*":

> *I did have a husband and wife come and see me once, early on in my time here and they'd both been on the schoolboard, and I knew that they [had] caused a huge ruckus. They just wanted to put me in my place. So, I don't know, it was just all about them coming over here and asserting themselves a bit actually. So that was interesting, because I didn't really know the purpose of their visit, and I just said to them, "I can't say I agree with you"' I just kind of stood up to them nicely.*

Those parents may have been testing Ruby, as a new principal, by trying to impose their views on her or hoping she would grant them some degree of immediate influence. It does seem that, from Ruby's point of view, things worked out well as a result of this challenge being met.

Nate responded to community assumptions according to priorities that he had set for himself:

> *There are still people that assume you have got time. For instance… I had a class of kids at the pool and I had to say you know you will have to make an appointment to come and see me. I can't leave the kids at the pool… Certainly, I really protect that class time. I think that is really, really important if you are talking priorities. Spending time with guests that haven't made an appointment is not high on that list.*

Even where the principal lives – in the school-owned house or not – can meet or counter community expectations related to notions of appropriate behaviour and status. Jim, an ex-principal, talked about his time as principal living in the schoolhouse. The challenge seemed to be about his membership of the community as a man and/or as a professional.

> *When there was a group of drunken men going home from the pub, they would often stop outside my gate and toot, and try and encourage me to go outside and have a beer with them before they headed off home. It was like, "If I keep my head down for a while they will go away." But they never did, they persisted. Pulling up at the gate, drunk driving home in those days, you know. That was a test. That was a test of who I was and what I would do, and what I wouldn't do.*

Nate had originally occupied the schoolhouse when he first took up his position. A couple of years later, he had moved his family to a house close by, but out of sight of the school. This decision was not just because of parents who would phone up and ask if they could drop in and collect a child's jacket that had been left behind, requiring him to go over and unlock the school, but also because, if he saw lights on, Nate felt obliged to go back and turn them off to save electricity costs. Dana also had experience living in the schoolhouse at a previous school: "*You're*

in a fishbowl, because everyone's driving past the school. Everybody knows what you are doing, whether your curtains are pulled [past a certain hour of the morning], whether there are strange cars parked at your house."

On the other hand, Mickey had been a principal for many years and lived with her husband in the schoolhouse. Her children had gone to the school. As a family, they felt very much a part of the school community. Doug, however, maintained some distance for his personal life, by living in town and commuting to school. As Dana said, rural principals find "*there are pros and cons of both ways, living within the community and living out of it,*" in terms of the community members' expectations of the school principal.

Each of the principals in this study had drawn some boundaries around their work time. Each articulated how "*some principals*" might, but "*I don't*", "*I can't*" or "*I won't.*" Their availability on weekends might be confined to school fundraising, sports events, or festivals. For these principals, taking care to control the extent of their working week was a conscious attempt to sustain their ability to do the work expected of them over a longer term. Nate, for example, described principalship as "*a marathon, not a sprint*":

> *I set reasonably firm boundaries around my hours of work at school because I have a family and I don't want to be an absentee dad. I don't want to my kids to grow up with dad not home for dinner, with "dad is working every hour god's given." I don't think that is what it's about and if it ever came to that I think I would be failing, you know, as a person. I would have to look really carefully if I could continue to be a principal if that was the case.*

Mickey used school holidays to pursue self-funded professional learning opportunities and referred to these occasions as *her time*. She spoke of being refreshed through her attendance at such events during term breaks, which also meant she was away from the school and local community setting for a time.

Community expectations, particularly those that are unmet, or negativity towards the school can make principals' work more challenging, even untenable, impacting on retention (Hansen, 2018). It was possible to detect errors principals had made in the past, either their own stories or those known through other principals' stories. These included occasions when they were not informed or did not read situations early enough, and times when they failed to recognise when they were being positioned in certain ways, when a boundary was being crossed, or when they let key communications slide.

Principals in this study also described how dealing with feedback helped to develop their knowledge and skills over time. One principal, who could have been speaking for all, said, "*We have unusual situations – they're rare – but just a phone call or an email away from happening. I think the more times you go through it you get more confident in dealing with that.*" Consistent with the findings of other research (e.g., Budge, 2006; Preston & Barnes, 2017; Wieczorek & Manard, 2018), these principals developed their confidence, if not expertise, through dealing with issues, thus growing their ability to handle whatever might come up next.

Consistent with expectations in the *Kiwi Leadership for Principals* framework (New Zealand Ministry of Education, 2008), principals in this study understood that "*everything*" that happens to do with "*the school*" was seen as their responsibility. To a person, they also held this expectation of themselves. Expectations of a school's community, therefore, impact greatly on how principals judge themselves. Informal judgement of school principals is of their interactions and relationships, decision-making, and management of issues and concerns.

Deliberations

Through examining how community expectations are experienced by rural school principals, ideas that individuals and groups hold about what school leaders should or should not do were

made visible to the principals through questions, suggestions, and information sharing within interactions. Principals in this study continued to learn to know the school community. As Bruce (2015) wrote, "*places aren't just randomly interchanged locations in which to live and work: they are also imbued with meaning, memories, important people*" (p. 32). In rural settings and small communities, the nature of relationships with a school can be multi-generational and extend beyond family members (Wieczorek & Manard, 2018). In such contexts, relationships *between* individuals and groups in the community can influence the work of the school principal.

Although diversity in school communities is acknowledged by New Zealand education authorities, principals are expected to respond to school and community needs and develop shared understandings, if not consensus, around school policy (New Zealand Ministry of Education, 2008). How school principals read and respond to implied or explicit feedback within community members' questions, suggestions and even demands gives them valuable information. When they receive feedback, principals can ask themselves: Who are they? What groups do they belong to? How much influence do those who have this opinion hold?

It is important that principals, especially principals new to a school, notice and recognise expectations held by others of how they will conduct their work and how they are being judged. Ruby recognised an attempt at positioning her when a couple who were no longer school board members came to talk to her as the new principal, and Joan felt an act of positioning retrospectively about the helpful women who came to clear out and organise a school space. Positioning is a largely conversational phenomenon: "*The way rights and duties are taken up and laid down, ascribed and appropriated, refused and defended in the fine grain of the encounters of daily lives*" (Harré & Moghaddan, 2014, p. 132). Positioning is what happens when participants in an encounter negotiate and confirm expectations, develop a relationship, and build trust (or mistrust). Along with determinations of status (Turner, 2011), an individual principal's positioning will have an impact on what she or he may accomplish, or fail to accomplish, in their work.

Learning about the micro-educational context, the people they work with, and about themselves as a school principal, aligns with Clarke and Wildy's (2011) focal points for school leadership (also, Lovett et al., 2015). Steffens et al. (2021) advocated for leaders to not only to learn about themselves as principals, but also to learn about themselves as members of "*the collective*" (p. 1). Rural principals are members of the community in which the school operates, so they need an awareness of how they present themselves as a member of that community. For example, an act of membership positioning for some rural principals is in whether she or he elects to live in the accommodation provided, the schoolhouse. Incidents and case studies in literature (e.g., Kouse & Posner 2007; Northfield, 2014) can be seen as attempts at positioning. Episodes in a principal's autobiography could also be re-viewed as illustrations of attempts at positioning by the principal or by others.

Principals in this study spoke of experiences related to being visible, being professional, and being human. Evidence in this study affirms that principals need to be visible in, and accessable to, the school community (see Hansen, 2018; Wieczorek & Manard, 2018). Being visible enabled these principals to become known, to read/monitor the mood of the community, and develop relationships with those who might alert them to potential issues, in order to resolve arising matters quickly and carefully. They commented on the high demands of decision-making and work activity often associated with receiving information or advice and responding to inquiries from community members or groups.

These principals were sensitive to the likelihood of escalation of any concerns beyond the school gates. They were acutely aware of the need to maintain good relations with those around them and of how easily trust—and reputations—can be undermined and rumours spread. They agreed that principals need to be *alert for* and *alerted to* situations and events that could undermine community trust and confidence in the school (Ashton & Duncan, 2012). To secure credibility as

the school leader, the principal needs to meet or negotiate expectations, as the ongoing confirmation of expectations develops relationships and builds trust (Northfield, 2014). The principal's successful resolution of community, including parental, concerns – characterised by the concern being taken seriously and their response being careful, informed, and timely – can strengthen trust in relationships and give the principal more time, flexibility, and confidence, when handling inevitable future concerns.

In interactions with others who were demanding, partial, even angry, principals talked of remaining professional. The principals kept their own sense of purpose in focus (typically expressed as caring for the children in the school and their futures), sought information and advice from professional colleagues and networks, and gave due attention to communication and record keeping. Rural school principals come to know the private lives of families in privileged ways and are not always able to share what they know or defend their decisions by using this information.

Principals in this study have professional and personal boundaries for sustaining their wellbeing and role as a school principal. Reeves (2012) proposed that "*an effective leader is not simply defined by what [they do] but also by what [they choose] not to do*" (p. 240). Rural school principals juggle different regulatory, professional, and (potentially competing) community expectations and their membership of the community with personal and professional needs (Ashton & Duncan, 2012; Wieczorek & Manard, 2018). Having boundaries to their work lives and means of self-care were ways that the rural principals in this study sustained their committment and resources to be a principal. Hougaard and Carter (2022) acknowledged the emotional load of a leader's decisions and actions that impact on other people. Leithwood et al.'s (2020) list of principals' resources includes "*perceiving emotions, managing emotions, acting in emotionally appropriate ways, optimism, self-efficacy, resilience, proactivity*" (p. 15). Sustaining the resources for the work of a school principal requires time and opportunity to do so. Hougaard and Carter (2022) see it as wise for leaders to be compassionate of themselves first, in order to have courage and strength, and to fully respect themselves in a way that leads to respect from others.

Close

The importance of knowing the community, including its historical context, is highlighted in this study. Principals need to continue to learn about each community they work in, and develop the kinds of relationships that support their being informed about what is going on. The complexity of a principals' relationships with members and groups of the school community may not be as noticeable in urban settings, but nevertheless, their relationships are likely to be influential aspects in a school's public reputation and student enrolments.

Along with others (e.g., Preston & Barnes, 2017; Wieczorek & Manard, 2018), I would argue that the time principals spend in prioritising and responding to community expectations is important as a basis for their effecting change, for the reputation of the school, and for themselves as school principal. Principals' interactions help reveal, and potentially confirm or (re)negotiate, the expectations held by community members. Another aspect of this interaction is the establishment of principals' professional and personal boundaries to what they will and will not do in principalship, which can positively influence community expectations.

This study also highlights that relationships in principalship are not limited to a principal's relationships with others, but they also include relationships between individuals and groups in the community. Principals' relationships in leadership frameworks and professional standards as an aspect or criterion of quality principalship undervalue the complexity of these relationships with community members and how the school community influences the nature of principals' work. A principal's success at relationships with the school community depends on, and supports, the principal being informed about events and issues that directly and indirectly affect the

school. The significance, strengths, and nuances of local influences on principals' experiences of their work as school leaders and on the judgement of this work have to date been under researched.

Insights from this research are likely to be useful for principals themselves, coaches and mentors, and with facilitators of preparation programs and professional learning for principals. There is more work to be done to understand how the context of the specific school setting matters, and to explore the expectations, positioning, and constraints of community relationships in principals' professional work and preparation for that work. I advocate for greater research and policy consideration of the nature of a school's community, however defined. Future research needs to involve parents and the voices of community members on their expectations of school principals. School communities help shape principals' work; therefore, the nature of community, community expectations, and their influence on principals' work need to be more visible in policy, in the processes of formal principal appraisal, and in programs of preparation and support of primary principals in rural schools.

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They just give us the shiny picture, but I want to know what it's really like: Insights from regional high schools on perceptions of university outreach in South Australia

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Abstract

Across Australia, students at regional, rural and remote high schools are considerably less likely to go to university than their metropolitan counterparts. One of the ways in which universities try to help to bridge this gap is to organise visits to such schools, with the purpose of familiarising students with the idea of university and encouraging them to consider going on to university after school. These visits range in purpose, from direct marketing to a genuine effort to widen access to university more generally. The key purpose of university visits is not always made explicit to the schools or the students, leading to a mismatch between university intentions and school and student expectations. Recent research with regional high schools in South Australia, using a mixed-methods approach, reveals the impact of this mismatch, with university visits being regarded by students and schools as, at best, disappointing and, at worst, as nothing more than marketing exercises and hence to be treated with suspicion. These research findings are discussed, and recommendations made for ways in which university visits may be more effectively geared towards meeting the needs of students, schools and parents. This paper recommends that universities work more closely with regional schools, parents and communities more broadly, with a greater emphasis on providing useful, practical information about what 'going to university' entails. We argue that, through this, more regional students may consider university as a viable post-school option.

Keywords: *Higher education, regional students, widening participation, university outreach*

Introduction and Background

Australian students attending high schools outside metropolitan areas are less likely to go to university. In fact, they are less than half as likely as those within metropolitan areas (18.5% vs 39.7%) to gain an undergraduate degree or above by the time they are 35 years old (Commonwealth of Australia, 2019). This paper looks specifically at the situation in South

Australia (SA), where, similar to other Australian States, students from high schools outside the capital city metropolitan area are considerably less likely to transition from high school to university. The 2021 census data from the Australian Bureau of Statistics (ABS, 2021) show a national average of 31% for undergraduate degree attainment. The rate for non-metropolitan SA is significantly lower than this, at only 10% for most of the state outside metropolitan Adelaide (Commonwealth of Australia, 2019). Research conducted during 2021 (King et al., 2022) sought to identify some of the barriers to university that these students are facing, particularly those who are clearly academically-able and have chosen senior-level subjects that would facilitate their application for admission to university.

Within the Australian high school system, students can choose in their two senior years of high school to study certain subjects that will put them on a pathway to university admission. These subjects will enable them to achieve an Australian Tertiary Admission Rank (ATAR). A student's ATAR ranking (between 0 and 99.5) is one of a number of factors that universities consider when selecting students for admission to their degree programs. Therefore, students at all Australian high schools may choose in their two final years (Years 11 and 12) to take what is colloquially known as an 'ATAR path' or 'ATAR stream.' The following section describes the context of the geographic setting for this research: the state of South Australia.

South Australian Context

South Australia differs significantly from the eastern Australian mainland states, i.e., New South Wales (NSW), Victoria and Queensland, all of which have higher undergraduate degree attainment rates than does SA, for both metropolitan and regional students (ABS, 2016). These differences relate to geography, population spread and university locations, all impacting upon opportunities for regional students to attend university.

A very high proportion of the SA population (77%) lives in and around its capital city, Adelaide. This is considerably higher than for other Australian states (SA Government, 2021). For example, in NSW, 64% of the population lives in or around Sydney (NSW Government, 2021). All SA universities are based in metropolitan Adelaide, with very limited university access regionally. One of the SA universities operates two satellite campuses, located in the two largest regional areas of SA. Other universities have a very limited university presence in regional areas, consisting of small, specialised centres, such as medical training hubs, research centres, entrepreneurial innovation hubs and study centres. The distance between towns outside metropolitan Adelaide is also larger when compared to regional areas in the eastern Australian states. The physical distances and low populations in the regions create a dual challenge: a challenge for universities to provide a university presence and a challenge for potential students to access university from their regional communities. These factors helped to shape the focus of the research discussed in this paper.

Focus of the Research

The research project discussed in this paper sought to better understand the influences on ATAR stream students at SA high schools in regional areas of the state (i.e., outside metropolitan Adelaide) which impact their post-school choices and decisions, including whether to apply for admission to university. The broad findings from this research have been outlined and discussed elsewhere in depth (King et al., 2022). This paper focusses specifically on the findings that relate to the impact of visits to regional schools by the metropolitan-based universities in SA. The ways in which students and school staff experienced these visits are explored, as well as the extent to which they were perceived as being helpful to students' decision-making about their post-school options. To situate this research focus in context, an overview of current and relevant research literature is provided below.

Literature Review

Considerable efforts have been made in the Australian research literature over the past two decades to identify and understand more clearly the factors inhibiting students in regional areas from going to university at the same rate as their metropolitan peers. Some of the earlier research focused on the aspirations of regional versus metropolitan high school students, with various findings indicating that regional students had lower aspirations regarding university (Alloway et al., 2004; Khoo & Ainley, 2005; Kilpatrick & Abbott-Chapman, 2002). However, there has been a recent shift in this view, with research conducted within the past five years finding that regional high school students aspire to go to university at a similar rate to those at metropolitan high schools; this also appears to hold true for students from low socio-economic status (SES) backgrounds and those who are first in their families to go to university (Gore et al., 2019; Vernon et al., 2018). There is a strong link between regionality, low SES and being first in family at university (James et al., 2008; Cooper et al., 2017; McLachlan et al., 2013). Average incomes in regional areas are lower than those in metropolitan areas (ABS, 2020) and, as outlined previously, there are fewer people with university qualifications; hence higher proportions of regional populations fall into the Australian Government identified HE equity category of low SES; additionally, those in regional areas of Australia who go to university are more likely to be first in their families to do so, than are those in the capital cities.

However, while aspirations for university may not be so different, realising these aspirations is less likely. Financial issues associated with going to university, having fewer people around them with university experience and the lack of an easily accessible university campus within their locality appear as key barriers in the recent literature (O'Shea et al., 2019; Katersky Barnes et al., 2019; Vernon & Drane, 2021). Undoubtedly, the decision whether to go to university is a complex one for regional high school students (Ronan, 2020). Without concrete opportunities to comprehend, analyse and overcome the potential barriers both practical and emotional, aspirations for university are unlikely to become internalised (Vernon et al., 2018) and are more likely to remain unfulfilled. This situation is not unique to Australia. In the United Kingdom (UK), students from the highest social groupings are five to six times more likely to attend university than those from the most disadvantaged backgrounds (Higher Education Funding Council for England, 2006), while in the United States (US), despite significant widening HE participation measures, "*rates of college attainment continue to differ greatly by family income quartiles and parent educational level*" (Cahalan, 2013, p. 7).

As part of the widening higher education participation agenda within Australia, universities around the country have developed partnerships with high schools, particularly those in low SES and regional areas, using funding from the Commonwealth Government's Higher Education Participation and Partnerships Program (HEPPP). These partnerships involve the universities offering and running interventions within schools, with the aim of attracting more students from low SES backgrounds to university (Gale & Parker, 2013). Over the past decade, there has been a wealth of research literature discussing, describing and evaluating such interventions (see for example, Baker, 2021; Fleming & Grace, 2015; Hardie & McKay, 2019; Harwood et al., 2015; Kilpatrick et al., 2019). Traditionally, the purpose of university outreach visits to regional schools has been to encourage more students in regional Australia to consider university as a realistic option and to aspire to attend (Gale et al., 2010; Gale & Parker, 2013). However, with universities depending more and more on generating their own income as government funding diminishes (Ferguson, 2021; Tiffin, 2020), they are under increasing pressure to attract enrolments. There is a risk that what may be intended as outreach for widening participation more broadly can become blurred by a marketing lens (Foster et al., 2016) in response to "*the neoliberal imperative to 'sell' the institution and gain positional advantage*" (Baker, 2021, p. 1).

Recently, there has also been a focus in the research literature on the impact of outreach visits by universities to regional schools (Austin et al., 2020; Fray et al., 2019; Gore et al., 2019; Katersky Barnes et al., 2019; Kilpatrick et al., 2019), stressing the importance of tailoring such visits to local contexts and partnering not only with schools but with the community as a whole to ensure that what is provided by the university is needed and wanted by the community. This makes a great deal of sense, given the known importance of home and community encouragement and support, including from parents, wider family, teachers, friends and other community influences, in increasing the likelihood that aspirations can and will become a reality (Cardak et al., 2017; Koshy et al., 2017; National Centre for Student Equity in Higher Education, 2017). This literature is particularly relevant to the findings from the research project outlined in this paper, specifically in relation to student and school perceptions of university outreach visits and the ways these visits impacted upon them. The following sections describe and discuss this project and its findings in more detail.

Research Methods

A mixed-methods approach was taken in this study, using a mix of quantitative (through a student survey) and qualitative (through student focus groups and school staff interviews) data collection. Mixed method design has been described as combining quantitative and qualitative methods to address a research question (Mark, 2015) in which, according to Winchester and Rofe (2010), one method is used to complement the other, providing insights into a research topic from different angles and allowing deeper analysis and cross-checking of results.

The research team received ethical clearance from a SA university and received assistance from the SA Department for Education (DfE) in identifying regional high schools with cohorts of ATAR stream students with whom the research team could engage. The DfE also helped to introduce the project and the research team to the principals and/or other key members of staff at each of the contacted schools. A total of 14 regional SA high schools, all of which were state-funded public schools, agreed to participate. All 14 distributed the survey to Years 11 and 12 ATAR stream students. Nine of these 14 schools agreed to having a member of the research team conduct one-to-one or small group interviews with various members of school staff (referred to subsequently in this report as school educators), while eight of the schools agreed for a research team member to facilitate student focus group interviews with Years 11 and 12 ATAR stream students. All students in the focus groups had completed the survey. The data-gathering at these 14 schools was conducted during the first half of 2021.

Schools

The 14 schools were very diverse, ranging from high schools in larger regional areas with significant Years 11 and 12 cohorts, to what are known in SA as Area Schools, which are generally single schools in small rural communities that enrol students from ages 5 to 18. Some Years 11 and 12 cohorts at these area schools consisted of no more than 10 students, with even fewer taking an ATAR stream. Indeed, at one of the schools there were only two ATAR stream students. The 14 schools were also geographically diverse, located at varying distances from Adelaide.

To provide a clearer picture of this diversity, Table 1 shows the total number of students enrolled at each school in 2021, as well as the distance from Adelaide and from the closest university campus, either a main metropolitan university campus or one of the two regional satellite campuses mentioned previously.

Table 1: ***School Enrolment Numbers and Distances from Each School to Adelaide and Nearest University Campus (Regional or Metro)***

School	2021 enrolment	Km to Adelaide	Km to university campus
A	73	249	206
B	272	182	182
C	695	435	3
D	301	294	156
E	91	282	52
F	857	430	7
G	226	271	183
H	696	651	267
I	300	532	148
J	400	387	5
K	46	384	182
L	820	55	55
M	468	259	259
N	46	537	337

The boundaries of this study meant that data were collected at a relatively small number of schools (14) in one Australian state. Therefore, as is usual with studies that rely on significant qualitative data, any wider generalisation of the findings needs to be treated with caution. Nevertheless, the findings are interesting in terms of the perspectives found amongst the students and staff about the value and impact of university outreach visits. The consistency of these perspectives across the sample of schools indicates that further research is warranted to determine whether there may be similar findings across other schools in other states and locations. What follows is a description and discussion of the 14 participating schools.

Student Survey

All 14 schools participated in the survey which formed the quantitative component of the mixed-methods approach, providing answers to the same survey questions from 198 Years 11 and 12 students across each of these schools. The questions used a combination of multiple-choice answers and a 5-point Likert scale. They were designed to seek information about students' demographic circumstances (such as age, gender, year of school, Indigeneity, living circumstances, parents' levels of education, other family members who have been to university); also, their level of engagement with school, through questions such as "*How often might you miss a day of school for no reason or skip classes?*" To better understand their post-school intentions and aspirations for university, they were asked questions such as "*How far do you expect to go with your education?*" and "*What do you think you are most likely to do when you finish school?*" The survey also sought to discover how much they knew about the practicalities of going to university, such as costs, pathways other than ATAR and types of financial and other supports available to them, including scholarships. These types of questions included: "*If you were to go to university, how much do you think it would cost each year?*", "*How much do you know about the following ways of funding your education?*" and "*Are you aware that most SA universities offer free courses that help you get into university that do not require an ATAR?*"

Key influences on their decision-making and sources of information about university were discovered through questions such as "*How much impact do the following people/events have on your decisions about what you want to do after school?*" and "*How much have you learned from each of the following sources?*" To explore the aspirations and expectations that parents/guardians held for these students, the survey asked "*How far do you think your parents/guardian expect you to go with your education?*" Finally, their familiarity with travelling outside their regional communities to Adelaide (where SA universities are located) was explored by asking "*How many times a year have you travelled to Adelaide in the past 5 years?*" While there was opportunity in the survey for additional comments, very few students offered any. However, the answers they chose from the multiple-choice lists and their importance awarded on the Likert scale provided comprehensive data.

Student Focus Group Interviews

A total of 124 ATAR stream students (84 female/40 male) participated in the 24 focus group discussions across eight of the 14 participating schools. Seven of the focus groups consisted of Year 11 students only, 14 of Year 12 students only, while three had a combination of Years 11 and 12 together. The size of the focus groups varied between two and seven students, with the majority containing three to four students. These focus groups generated one part of the qualitative student data required for the mixed-methods approach, allowing for in-depth discussion with a small number of students in each group around similar questions raised in the student survey. Discussion focused on issues such as their immediate intentions on leaving school, how and where students found out information about university courses and requirements, who or what influenced their decisions about their futures, what may get in the way of achieving their goals, how much they knew about university, what else they wanted to know, and any other concerns they had. The focus group interviews were audio-recorded and extensive notes were made by the facilitator who was a member of the research team.

Interviews with School Educators

The additional qualitative data collected as part of the mixed-methods approach was gathered at nine of the 14 participating schools through semi-structured interviews with a total of 26 school educators. These included Year 12 coordinators or leaders, principals, deputy-principals, career advisors and Year 12 teachers. The purpose of collecting these data was to gain information about the school context in which students were forming their views and to what extent their views were consistent with those of school educators, and vice versa. Questions aimed to explore school educators' thoughts regarding how and why Years 11 and 12 students at their schools were making their post-school decisions, including decisions about whether to go to university. As with the focus group discussions, interviews were audio-recorded and notes were taken during the interviews.

Table 2 shows the number of participants in both the student focus groups and the school educator interviews at each of the schools (A–K) that participated in these types of data collection. Three schools (L–N) did not participate in either.

Table 2: ***Number of Participants in Student Focus Groups and School Educator Interviews***

School	Focus group participants	School educators interviewed
A	4	1
B	18	3
C	14	0
D	21	3
E	5	3
F	32	12
G	12	0
H	18	1
I	0	1
J	0	1
K	0	1
Totals	**124**	**26**

Data Analysis

The data collected from the student survey were collated and quantified using graphs and charts that provided an overview of the proportions and percentages of student responses to each question. While this was very useful in itself, it was complemented by the analysis of the qualitative data from the focus groups and interviews. This analysis was conducted both manually and by using NVivo 12. Consistent with Cresswell's (2012) steps for analysing and interpreting qualitative data, recordings were listened to, along with line-by-line analysis of the notes taken by the facilitators, to identify and investigate emerging themes and to "*catch the complexity*" (Cohen et al., 2011, p. 266) of student and school educator perspectives. The key themes then informed the coding process in NVivo, with further codes being added as new themes emerged. The combination of the quantification of survey responses and the deeper, qualitative analysis of the voices of students and educators provides a detailed and nuanced picture of the participants' experiences and views. This leads us to the key findings from this process of analysis.

Findings

In this paper, we focus specifically on what the data revealed about students' and school educators' experiences and views regarding the visits made by the various SA universities to their schools. We look at the impact of these visits and the extent to which they were perceived as helpful to students' decision-making about whether to consider university as a viable post-school option.

The Impact of University Visits to Schools

From the information provided in focus group discussions and school educator interviews, it appeared that all but one (School I) of the participating schools received outreach visits from one or more SA universities, roughly on an annual basis. Contrary to other research findings about the value of university outreach to schools, in terms of helping students gain a better understanding of university and what it entails (Fray et al., 2019), this study found that very few students and

staff considered these visits helpful. This was revealed in all three data sources of student survey, student focus groups and school educator interviews.

Student Survey. Survey results indicated that university visits had relatively little impact on these ATAR stream students' university aspirations, as Table 3 reveals. When asked in the survey which people have impacted on their decisions about what to do after high school, fewer than half (46%) reported any significant impact (some impact to very strong impact) from "*university students/staff visiting my school*." Interestingly, friends were ranked as having equal impact; in fact, a slightly higher proportion of students (16%) thought friends had either high or very strong impact compared to university visits (15%). This is a surprising finding, given that other research indicates university visits are more significant (Fleming & Grace, 2015; Harwood et al., 2015). In contrast, parents/guardians, other adult role models and teachers were rated as having considerably higher impact on their post-school intentions. Parents/guardians' impact was nearly twice as strong, rated by 85% of the students as having some to very strong impact, followed by other adult role models at 69%, teachers at 60% and university open days at 52%.

Table 3: ***How Much Impact do the Following People Have on Your Decision About What you Want to do After High School?***

	No Impact	Low Impact	Some impact	High impact	Very strong impact
Parents/guardians	4%	10%	32%	40%	13%
Role model/other respected adult	10%	22%	40%	26%	3%
Teachers	14%	25%	37%	20%	3%
University open days	26%	19%	32%	20%	2%
Friends	19%	35%	30%	13%	3%
University students/staff visiting my school	28%	26%	31%	13%	2%
Sisters/brothers	35%	29%	24%	11%	1%
Careers adviser	30%	21%	38%	10%	1%

Similarly, Table 3 shows that fewer than half the students reported learning even '*a bit*' from university visits about financial assistance for university (47% '*learned a bit*' through to '*learned a lot*'). Again, more had been learned from parents (64%) and teachers (62%), followed by university websites (59%). Only 18% had learned '*a fair amount*' to '*a lot*' from university visits, compared with 39% from parents and 26% from teachers.

Table 4: ***How Much Have you Learned From Each of the Following Sources About the Types of Financial Assistance Available for University (e.g., Scholarships, Grants, Subsides, Loans)?***

	Learned nothing or very little	Learned relatively little	Learned a bit	Learned a fair amount	Learned a lot
My parents	15%	21%	25%	30%	9%
Teachers	17%	22%	36%	21%	5%
University websites	19%	23%	41%	17%	1%
University staff visiting my school	28%	24%	29%	16%	2%
Other family members	21%	33%	30%	13%	4%
Social media	28%	25%	33%	11%	3%
Friends	30%	29%	33%	7%	1%
SATAC websites	31%	29%	32%	6%	2%
Online news	37%	27%	30%	6%	1%
TV, newspapers	46%	24%	22%	8%	1%

Student Focus Groups*.* As previously mentioned, given the evidence from other research about the value of university visits to regional schools, we were surprised to find the strong negative opinions expressed by students about university visits to their schools. This was widespread, occurring across all focus groups at all schools that universities visited. Comments about these visits ranged from them being simply not memorable; for example, "*I think they have [visited]*" (Year 11 student, School B), to expressions of disappointment and annoyance about what students perceived as "*marketing*," rather than informing them about the specifics of university life. Typical comments included: "*They come in and do a fun activity with us and then try to sell their uni. How stupid do they think we are? We know it is marketing*" (Year 11 student, School C), and "*They just bring a PowerPoint and talk about how great their uni is*" (Year 12 student, School D).

Across all schools, students spoke of their disappointment at the lack of the practical information they were expecting and hoping for. Instead, they felt they were just hearing that "*university is great, and you should all come, but they don't get into the deep ins and outs of what that means – it isn't very helpful*" (Year 12 student, School F). These types of encounters were experienced as being extremely frustrating:

> *When unis come to the school they don't talk about the daily life of students: how they live, eat, travel around the city. They are more focused on telling us to come to open days and how good the uni is. (Year 11 student, School F)*

Some students talked about being *forgotten* (Year 11 student, School D) by the Adelaide universities, feeling that the universities are not interested in them and do not understand the realities of their regional lives, such as, "*they don't understand that it's six hours on a straight road to get to Adelaide and we can't just drive backwards and forwards*" (Year 11 student, School D), and "*sometimes they tell us about the open days, but we could never get there so why bother telling us?*" (Year 12 student, School F). A number of students expressed a lack of trust in what they were told by universities; for example, "*they make going to uni sound easy, but we know it isn't*" (Year 11 student, School F). Where possible, students placed more faith in the knowledge of family or friends who had experience of university. In the words of one Year 12 student, "*the unis*

give us the shiny picture, but I just talk to my brother or his friends to find out what going to uni is actually like" (Year 12 student, School E).

In summary, students generally felt that university visits were not giving them what they wanted and needed on specifics, such as scholarships and grants, their availability and application requirements and procedures; how ATARs worked and whether universities took anything else into account when selecting students; a day in the life of a student, such as what lectures are like, what resources they would need, assignments and assessments; living in Adelaide, finding accommodation, getting around, finding part-time work; if and how they could change courses; course information and outlines; and possibilities for remote or online attendance. Students expressed a keen awareness of their lack of knowledge about these realities and practicalities of going to university. They often did not know what questions they should be asking, and they were frustrated that the university staff who visited did not anticipate their questions and tell them what they needed to know. To these students, this was far more important than being given *the "shiny picture*."

School Educator Interviews. Similarly, comments from the school educators were surprisingly negative. At one school, they commented that the visits happen too late, when students have already "*closed off their minds*" to the idea of university (School D). Educators at another school talked about visits being inconsistent, poor communication from the university to the school, and one-off visits being discouraging for students, with university staff doing an activity with students rather than providing practical day-to-day information to build their confidence (School F). At this school, the educators also appeared to share some of the students' perspectives about the marketing focus of university visits. They saw this as being counter-productive, alienating not only students but also parents:

> *Uni reps go on their sales rants, and the parents just switch off. Parents don't want to know uni-specific information; they want general information about the transition. (School F educator)*

Another talked about being "*sick of marketing people*" from universities, commenting that staff at their school prefer to "*leave the universities out of it*" and, instead, organise their own university information sessions, using previous high school students who are now at university and who could be much more focused on the practicalities.

Not all school educators were as negative. For example, educators at School J regarded university visits as useful in bringing the idea of university to the attention of both students and parents. However, they too indicated that they would like to see a more practical focus, with more emphasis on information from student mentors who can talk about their own experiences, and information from university staff with an understanding of the various support options, particularly sources of financial support and how these can be accessed.

The Impact of School-Organised Visits to Universities

In contrast to the largely negative perceptions of university visits to schools, the students across five of the eight schools, at which student focus groups took place, talked far more positively about visits *to* universities. These five schools each organised visits to university campuses in Adelaide, usually as an annual event for students in Years 9 or 10, prior to their selecting their subjects for Years 11/12 and deciding whether to take an ATAR stream. Due to COVID-19 restrictions, these had not taken place during 2020 or 2021; however, many of the current Years 11 and 12 students had been able to participate in them when they were in Years 9/10. Those who had done so talked of how valuable they had found these visits, not only in terms of visiting university and TAFE (Technical and Further Education) campuses (Year 12 focus group, School A), but also to have experienced taking public transport and participating in other "*city*" activities (Year 11 focus group, School E). This included eating at restaurants, as well as attending a large

sporting event – highlights for students in regions without restaurants and sporting stadiums (Year 12 focus group, School G).

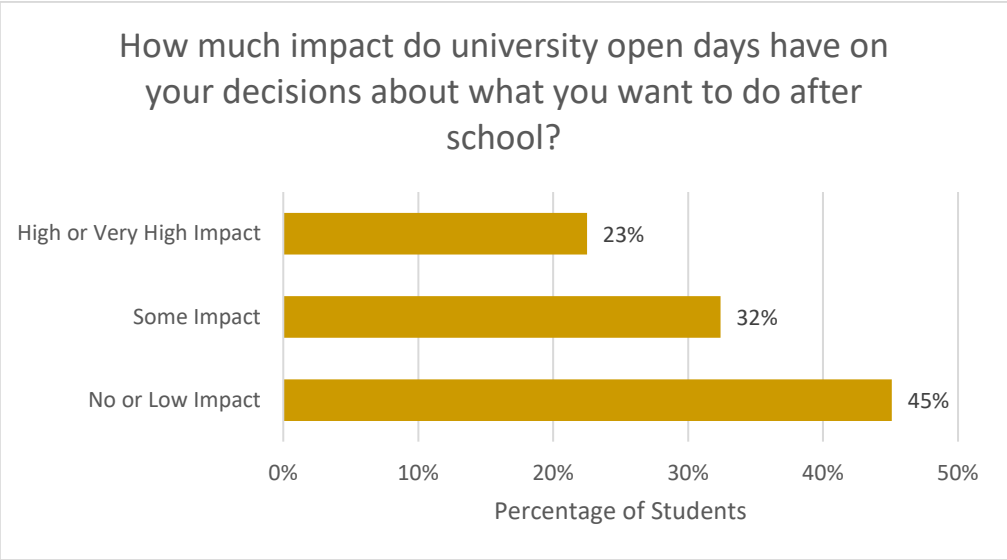
School educators and students talked of ways in which expenses for students had been deliberately kept as low as possible; for example, by the school encouraging students to stay with family or friends in Adelaide, where this was possible, and choosing low-cost accommodation options where not (Years 11 and 12 focus groups, Schools E and G). Students spoke about their enjoyment of these visits, and how much they had learnt about university and city life; they also recalled being given information about the range of programs they could study and accommodation options (Year 11 focus group, School B). Having the opportunity to visit universities in the city appeared to have significantly increased their knowledge and understanding of what university was, what it looked like and how it worked.

School educators also talked of visits to city universities as being useful and effective, boosting the confidence of students who were thinking of university and perhaps raising aspirations for university. One felt it was "*the best thing teachers could do*" (School E) to encourage students' university aspirations. Even those educators at schools that did not routinely arrange such visits spoke highly of the impact they could have; for example, on students' anxieties about moving away, with one commenting that "*students are scared to navigate the city; they won't admit it, but they are*" (School F).

Organising these types of visits could be problematic, however, due to the distances involved and the financial cost, which impacted on school and/or student/parent finances. For these reasons, only five out of the eight schools (where student focus groups were conducted) were able to arrange them. School educators at Schools I and J pointed out that there were no school financial resources allocated for taking students to Adelaide campuses, while school H had previously organised visits to Adelaide for Year 9 students but had ceased these prior to 2020 due to cost. School F educators mentioned that these visits were given priority as some of their students had never been to Adelaide and needed to feel more confident about going there for university. However, they also pointed out that organising school trips was expensive and difficult, given that "*Adelaide is six hours away.*" Without specific funding for such excursions, it appears that, unless parents are able to pay expenses, most government schools would be unable to fund the travel, accommodation and other expenses required.

At schools which did not organise such visits, students were often notified of the dates of university open days. However, it was up to individual students to make their own way there and, as a result, many would be unable to attend. Relatively few students in the focus group discussions indicated that they had attended any open days in person. However, Figure 1 shows that 55% of survey respondents rated open days (held virtually/online during 2020/2021, due to COVID-19 restrictions) as having at least some impact on their decision-making regarding post-school options, with 23% reporting high to very high impact. Although we did not collect data specifically on how many had attended a virtual open day, it is perhaps likely that more students were able to attend online than if they had been held face-to-face on campus, given the distances to universities and the costs involved.

Figure 1: ***How Much Impact do University Open Days Have on Your Decisions About What you Want to do After School?***



Other Key Impacts

As previously shown in Tables 3 and 4, parents/guardians/family had the strongest impact on student decision-making about what path to pursue after high school and they were also the most important sources of information about financial assistance available for university. Focus group discussions revealed similar views, with students indicating they received a great deal of support from within their home environment regarding their plans for university. Comments included: "*They want what's best for you and if, like, you're capable of going to uni, then they're like, 'you go to uni'*", (Year 12 student, School B). However, those whose parents had not been to university indicated that their parents did not have the knowledge or information to help them understand what university was like; nor in many cases were they able to help them financially, despite being supportive in principle.

Siblings at university, or friends' siblings at university, were regarded as trustworthy sources of information: "*If I want honest advice about uni, I am going to go to my friend's sister. She'll tell me what I need to know*" (Year 12 student, School E). Other extended family members were mentioned as having influenced students' decision to go to university and to follow particular career directions. Several mentioned aunts who had been to university and had encouraged them to aspire to go (Years 11 and 12 students, Schools B and H); one spoke of the inspiration of her late grandmother, a nurse, who had been very active and well known in the local community (Year 11 student, School B), while another spoke of his grandfather, a medical practitioner, who had influenced him greatly (Year 12 student, School B). A number of other students spoke of family members whose own careers had inspired interest in a particular career path for themselves (Years 11 and 12 students, Schools A, B and H).

School educators also believed that "*parental influence is key*" (School F) in terms of influence on students' post-school choices. They saw this influence as being potentially both positive and negative. On the one hand, parents want their children to go to university, but, as many cannot afford this, they are seen to be discouraging (School F). Some teachers mentioned trying to "*fill this gap*" (School D) by providing more encouragement for university but were aware they do not have the same level of influence. It was mentioned that the idea of sending their child to a residential college was appealing to parents, but for most they are prohibitively expensive (School D). One teacher talked about parents being "*disengaged*" from students and their futures (School D), while another said that, without supportive parents, students "*will not go to*

university" (School F). For students without university-educated parents, a number of school educators reported that it was a significant challenge to convince parents to support their children's university aspirations (Schools B, F and J). When no-one in the family had been to university before, these school educators believed a low value was placed on higher education.

Summary

Results from the student survey, student focus groups and school educator interviews revealed that university visits to schools, in their current format, were not regarded as being particularly helpful to students' decision-making about university as a viable post-school option. Students and school educators alike regarded them largely as marketing exercises for the universities, rather than of practical help to students; as such, they placed little trust in the information received. A strong desire was expressed amongst students in the focus groups to know more about the practicalities of university. Along with their concerns about understanding course requirements, assessments, and other study-related concerns, they talked of needing more information about scholarships, relocation, accommodation and living costs, getting used to living in a city, finding their way around, and knowing how and where to look for accommodation and/or part-time jobs. They were disappointed that the university visits did not seem to provide them with this type of information and were left feeling cynical and doubting that universities cared about regional students.

Students turned instead to families and teachers for information and advice. They regarded their families as the most important source for this guidance, even though they were aware that family members did not necessarily have the information they needed. Teachers were seen by students as the next most valuable source of information; however, the school educators in this study were frustrated by what they saw as the lack of practical information provided by university visits, not only about course options but also the "*ins and outs*" of scholarships, financial support, and city life. They wanted to be able to help students with the correct information, but struggled at times to find this themselves. In the words of one school educator, "*Do we just Google university grants and scholarships? Where do we find that? I am sick of looking*" (School F).

These findings reinforce the recent focus in the research literature (Austin et al., 2020; Fischer et al., 2019; Kilpatrick et al., 2019) on the importance of university outreach programs focusing more attention on partnering with parents, schools and communities, to develop more comprehensive and tailored outreach strategies that promote conversations about university within schools, homes and families, which in turn nurtures university aspirations (Vernon & Drane, 2021). This clearly requires universities to redesign and improve outreach visits to schools, making them more relevant to student needs and providing them with necessary information about university itself, including courses, pathways, accommodation options, financial support and so on. It is interesting to note that the visits to cities and university campuses that were arranged by five of the schools were regarded as helpful and informative by both students and staff. Similarly, attending university open days was rated in the survey as an important source of information by more than half the students. However, not all schools are able to offer visits to universities, nor can all students afford to go independently to university open days. Universities visiting schools is a more realistic way to bring information to all students, although both students and staff were very clear that this needs to be done in ways that are practical and relevant, and certainly not as a marketing activity.

Conclusion

With students' homes and families being the key influences on their decision-making, it is vital that not only high school students themselves, but also those close to them, are better informed about the practicalities of going to university, such as career opportunities, courses, pathways,

financial realities, accommodation and scholarships. As can be seen from the literature review, barriers to higher education for regional students are well documented, including those related to cost, family finances and the complexities involved in leaving home. Parents, families and teachers all need to be in a stronger position to guide and support student decision-making with correct information about ways to manage and alleviate such barriers. Indeed, for the students in this study, families, followed by teachers, are reported as playing the most important role in influencing and supporting them in their university aspirations. Working with these key influencers alongside students can therefore assist with the dissemination of correct information.

We therefore recommend that universities seek the input of regional schools, students, parents and other community stakeholders, where relevant, to determine how university visits to schools can be tailored more towards the needs of the local community, with the aim of demystifying university in general and ensuring that students, parents, and schools are proactively directed to accurate and easy-to-access information about costs, financial support, scholarships and other practicalities of going to university. Given the high value placed by students and educators on school visits to the city universities, we also recommend that universities work closely with schools to help make these visits a reality for more students, whether through assisting with funding directly and/or partnering with schools to advocate for dedicated DfE funding for this purpose. Additionally, we recommend the continuation of virtual/online open days for those unable to physically attend in person.

Through building partnerships between universities and communities, the aspirations of high school students, their parents and their schools are more likely to be nurtured and barriers may be identified and ameliorated, ultimately leading to a further widening of higher education participation for students at regional high schools.

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How Does Cultural Capital Influence the School Choice of Rural–Urban Migrant Families in Nanjing, China? Evidence From a Survey Study

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Abstract

Across China, the household registration (hukou) policy has restricted the school admission of rural–urban migrant children in urban areas. In 2017, the Nanjing government issued the *Tenants Have the Same Right as Householders* (THSRH) policy to allow tenants in urban areas access to public-school resources. However, what the migrant children have experienced in and after negotiating access to these schools deserves serious attention from educators, scholars and policymakers. This study surveyed 186 rural–urban migrant parents in Nanjing who chose to send their children to junior secondary schools after the implementation of the THSRH policy. The study identified that higher socioeconomic and household status of rural–urban migrants increased their choices for junior secondary schools. However, the study demonstrated that the restriction in the hukou policy is still a dominant factor influencing public-school access. The study highlighted that the interaction of the development of extracurricular abilities and investment in private supplementary tutoring are two main factors that influence the school choices of rural–urban migrant families.

Keywords: *rural–urban migration, school choice, educational equity, cultural capital, education policy*

Introduction

Since China's introduction of continual reform and openness, the economic divide between urban and rural regions has widened. This encourages individuals from rural regions to relocate to cities in search of better paying job opportunities (Wu et al., 2010, 2014). Internal migration is driven not just by a desire for better job possibilities, but also by a disparity in education between rural and urban areas (Liu, 2015; Peng, 2021; Wang, 2009). It has also been confirmed that educational disparities exist in school infrastructure construction, teacher training and distribution, and funding investment (Luo & Zhang, 2017), and these disparities were reflected in the PISA result in 2018, which revealed a 42% education disparity rate between rural and urban China. Despite the fact that migrant workers may make decisions based on assumptions rather than studies, they prefer to bring their children to cities because they believe their children will be able to access education, medical treatment, and other social welfare services (Xiong, 2017).

The growth in the number of rural–urban migrants has put a strain on the urban schooling system. The number of rural–urban migratory workers was expected to surpass 496 million by 2021, according to the National Bureau of Statistics (2021). As a result, local governments have adopted local school admission regulations that prohibit urban public schools from admitting

rural–urban migrant pupils, in accordance with central leadership directives. Two central government regulations, the Compulsory Education Law of China (CEL) and the hukou policy, limit the admittance of rural–urban migrant pupils to schools. Hukou policy refers to the Household Registration Policy; hukou means household registration in Mandarin. The CEL mandates that every child gets nine years of compulsory education, and local governments are accountable for children with hukou status who reside within their jurisdiction. People with distinct hukou status (rural or urban) have varied rights because of the differences in hukou policy, and individuals' social welfare, including education and medical treatment, is strongly related to their hukou status. As a result, migrant children in cities have to enrol in migrant-run schools or pay substantially higher school selection fees to acquire access to public-school resources (Goodburn, 2009; Tan, 2010).

In 2006, the Chinese central government revised CEL to address the growing educational needs of rural–urban migrant communities, stating that "*local government should provide migrant students with equal conditions to receive compulsory education if they live with their migrant parents*" (National People's Congress of China, 2006, p. 6). The Chinese government then published the *liangweizhu* rule, which clarified that the local district-level government is responsible for ensuring that rural–urban migrant pupils are successfully enrolled in public schools in urban regions throughout their obligatory education term. *Liangweizhu* rule literally means "*two majors*" or "*two major responsibilities*" policy. It regulates that local urban governments are the major departments to address rural–urban migrant students' compulsory education and public schools are the major schools used to accommodate rural–urban migrant students at the stages of compulsory education. Local governments at the city level then announced their localised rules in response to the policy. They did, however, impose certain limits on migrant pupils' entry to public schools, such as needing difficult documentation (Li & Tan, 2019) and mandating parents' minimum work hours or income as enrolment requirements for their children (Wang, 2009).

It is also worth noting that social marginalisation has also played a role in excluding rural–urban migrants from schooling. As a result, rural–urban migrant groups have evolved into autonomous communities that are shunned by local urban populations. *Nongmingong* (rural laborers) or "*outsiders who work in cities*" is a term given to rural–urban migrant workers that connotes low manners and a lack of hygiene. Their children are known as *nongmingong zidi* (children of rural labourers) or "*floating children*" (Mu et al., 2018), and they have been accused of discrimination in schools by instructors and urban classmates (Chen et al., 2013). Urban teachers indicated that migrant parents are "*difficult to communicate*" with, making it impossible for them to establish a healthy teacher–parent connection (Chen et al., 2013, p. 698). The marginalisation of rural–urban migrant children limits the desire of local urban schools to welcome them, and this is reflected in school admissions.

In 2017, Nanjing, which is one of the largest cities in east China (population about 10 million), implemented a new household registration policy named *Tenants Have the Same Right as Householders* (THSRH) policy (Department of Properties and Housing Arrangement, 2017). Tenants in Nanjing are individuals who do not own real estate or have an urban hukou, whereas homeowners are those who do. *Right* refers to the right of getting public services such as education and medical services. The program ensures that rural–urban migratory workers who rent houses in cities have the same access to public education, medical care, and other social welfare benefits as homeowners (Department of Properties and Housing Arrangement, 2017). The THSRH strategy aims to meet the rising educational needs of internal migrants. In terms of policy substance, this is the first time that local hukou policy has not imposed any evident limits on rural–urban migrant families' (tenants) school choices. As a result, media outlets speculated that the strategy may place migrant and urban pupils on the same starting line in terms of school choice.

Scholars have proposed that the school choice of rural–urban migrants is affected not only by the household registration policy, but also by a variety of social and cultural variables (Wei & Hou, 2010). Following the implementation of the THSRH policy, it is a timing opportunity to assess school selection procedures and emphasise the elements that impact rural–urban migrant parents' school choice. The key research questions are as follows:

1. What are the household status, socioeconomic level, and school choice of rural–urban migrant families after the implementation of THSRH policy?
2. What are the economic, social and cultural factors that influenced their school choices?

The following are some of the paper's contributions. First, this research takes place after the implementation of the THSRH policy, which had only been piloted in a few large Chinese cities. This is the first research to give a snapshot of school choice after the adoption of the policy. Second, this work aimed to identify characteristics that impacted rural–urban migrants' school admittance when the hukou policy's limitations were gradually eased. Third, the study identified several factors that had a statistically significant impact on rural–urban migrant families' school choices, including parents' investment in private supplementary tutoring for their children and the interaction effect of afterschool reading, music or art activities, and family activities. This discovery compared and contrasted the cultural influences revealed in prior research. Finally, the challenges and hardships highlighted in this research may be useful in future policy changes of the THSRH policy in Nanjing and other places where the policy is being piloted.

Literature Review

The Restrictions of Hukou Policy

Previous research on rural–urban school admissions has focused on hukou regulation limits as well as social and cultural factors. Despite the fact that policy modifications for improved participation of rural–urban migrants in urban education began with the revision of CEL in 2006, many academics still regard the process of removing the limits of the hukou policy on rural migrants as a protracted and dynamic process (Wu & Li, 2016). The question of whether hukou policy continues to influence rural–urban migrants' school choice is currently being debated.

Some academics argue that hukou policy continues to have a substantial impact on rural–urban migrants' school admissions. According to data collected by Wu and Li (2016) from 445 rural–urban migration households in Guangzhou, Dongguan and Suzhou, 49.8% of all respondents experienced difficulty enrolling their children in public schools. Wang (2009) conducted a survey of rural–urban migrants in Beijing and discovered that local governments require rural–urban migrant families to provide additional documentation to demonstrate their ability to fund their children's studies in cities. In an interview with rural–urban migrant populations in Beijing, Zhang and Luo (2016) discovered that most rural–urban migrants thought they received less policy assistance from the federal and local governments. Tan (2010) argued that the rural–urban migrant community in Beijing is still an "*invisible population*" (p. 32), because rural migrants believe their children's school entrance has not been taken into account in the education or household registration legislation. As a result, some researchers say that the hukou policy's constraints still keep rural–urban migrant pupils out of state-run schools, forcing them to choose their own schools.

Some experts feel that the influence of the hukou policy is diminishing as a result of national and local laws to accommodate rural–urban migrant pupils in the urban public education system (Liu & Jacob, 2012; Qian & Jing, 2014). Many of the migrant groups questioned by Liu and Jacob (2012) were allowed access to public schooling. Qian and Jing (2014) also asserted that families from migrant groups with better socioeconomic status had already benefitted from policy advantages. According to policy experts, the ability to regulate school admission policies has been devolved

to local governments (Liu, 2015). Consequently, local school admission policies have grown less tied to hukou policies and have become more flexible and inclusive in conjunction with local economic growth, rather than socially barring rural–urban migrant populations (Liu, 2015).

With the gradual relaxation of local household registration policies, many academics began to focus on the social and cultural resources that impact school choice. Inequalities among migrant children, according to Wei and Hou (2010), are produced "*by such factors as household financial and social status and household cultural environment*" (p. 87). They also projected that after the hukou policy no longer limited rural–urban migrants' school choices, social and cultural factors would continue to play a role in perpetuating inequities for children in rural–urban migrant communities (Wei & Hou, 2010). Although the abolition of the hukou policy's influence will take time, social and cultural issues have already begun to appear.

Social Exclusion

Current research focuses more on the social factors influencing school admission. To quantify the social elements that impacted the education of rural–urban migrants, Wu et al. (2010, 2014) created a framework of family, societal and school social capitals. Scholars have agreed that social variables, such as community social capital and family social support (Wu et al., 2014) as well as family income and parental tutoring, have a significant influence on the school admittance of rural–urban migrant pupils (Fang et al., 2017). Wu et al. asserted that rural–urban migrants lack community social capital because they are alienated from the local urban community, based on survey data from 806 respondents. Furthermore, owing to the stringent constraints imposed by the household registration policy, rural–urban migratory parents could only find low wage labour jobs that required long shifts (Goodburn, 2009), resulting in a loss of family financial resources. Working for such a long period of time limited parent–student contacts, such as engaging in family events or checking homework (Fang et al., 2017).

Although Wu et al. (2010) argued that economic and social variables may be transferred to cultural aspects to affect rural–urban migrant children's school choice, there has yet to be a measurement to comprehensively assess the impact of cultural factors. Several research have shown the influence of various cultural elements, such as extracurricular ability development (Chen et al., 2013), parents' educational level (Wang, 2009), musical instrument playing (Zhang & Luo, 2016), and private supplemental tutoring (Zhang & Bray, 2017). Although these characteristics have been discovered in past studies of the hukou policy or the social capital of rural–urban migrants, there has been less systematic study on the impact of cultural elements on rural–urban migrants' school admissions at this time.

Theoretical Framework

Scholars sought conceptual frameworks to logically explain individual–context interrelationships as a result of disparity in the education of rural–urban migration pupils (Joy et al., 2020; Mu et al., 2019). Bourdieu's notions of capital and field have been used to explain migration and education issues in a number of studies (Mu et al., 2019; Yu, 2018, 2020). Bourdieu (1978) demonstrated that the value of capital is determined by the particular field in which it is deployed, and the strategy by which actors deploy their capital is determined by the actor's position in that field. Furthermore, Bourdieu discovered that the impact of various types of capital differed for different social classes. He then devised the concept of habitus to describe people's actions in relation to the field (Bourdieu, 1986, 1990).

Capital

Capital, according to Bourdieu's theory, has a social component in addition to an economic one (Al Ariss et al., 2013; Albright et al., 2018). In terms of capital formations, Bourdieu (1986), like

Marx, defined capital as accumulated labour. Bourdieu (1986), on the other hand, described labour as including economic, social, cultural, and symbolic dimensions. The capital of a person or a social organisation determines their power. Individuals and social groupings are classified into social hierarchies, depending on the amount of capital they have (Al Ariss et al., 2013). Scholars have suggested that the individual's or a social group's strategy of capital investment, accumulation and transformation to strengthen their position in a specific field is the focus of research on Bourdieu's theory (Li, 2011; Wu et al., 2014).

In *The Forms of Capital*, Pierre Bourdieu (1986) defined three forms of individual capitals: economic, social and cultural. Economic capital refers to the command of economic resources, such as income, property, material possessions and savings (Al Ariss et al., 2013; Wu et al., 2010; 2014; Mu et al., 2019). In terms of social capital, Bourdieu (1986) defined it as "*the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance or recognition*" (p. 248). Family, socioeconomic class (e.g., school type) and group memberships (e.g., rural–urban migrant community) may all legitimate and institutionalise social capital (Bourdieu, 1986). According to the preceding discussion, rural–urban migrants face significant economic and social disadvantages. Furthermore, Bourdieu claimed that economic and social capital could not account for the disparities in schooling resource allocation across social classes. Bourdieu proposed that, in addition to economic and social capital, cultural capital or a mix of cultural resources contributes to school selection and academic achievement of individual students (Yoon, 2020).

According to Bourdieu (1986), a person's cultural capital is linked to their social status and transmitted down to their progeny. Schools, according to Bourdieu and Passeron (1977), serve as a mechanical system that reproduces the social stratification structure. As a result, since its inception, the idea of cultural capital has been swiftly associated with educational sociology and used in a variety of study topics relating to migrant schooling difficulties (Romanowski, 2003). Li (2011) conducted interviews with rural–urban migrant families in Chengdu and stated that, similar to cross-national migration, rural–urban migrants had less cultural capital than their local counterparts. According to Li (2011), the school service delivery model, particularly the school admittance policy, has generated an uneven cultural and social environment for rural–urban migrants and dominant citizens.

Cultural capital is split into three types by Bourdieu (1986): embodied cultural capital (e.g., an individual's inherent knowledge and abilities), objectified cultural capital (e.g., books, calculators), and institutionalised cultural capital (e.g., education background, occupation certification). Individuals' engagement in cultural events or activities, such as leisure reading, attending concerts or plays, is referred to as embodied cultural capital in China (Li, 2011). Scholars (e.g., Pao, 2014; Wang. 2009) prefer to quantify objectified cultural capital by how many books a person has or how much money they spend on cultural items (e.g., CDs, paintings, sculptures) or services (e.g., extracurricular tutorials, subscription fees). An individual's education degree and credentials are characterised as institutionalised cultural capital. The three types of cultural capital may be useful in analysing the results of cultural elements that impact rural–urban migrant children's school choices.

Field

According to Bourdieu, capital has no universal or final worth, but only that which is generated from social context and institutions (Bourdieu & Wacquant, 1992). Bourdieu (1986, 1990) used *field* to describe the social setting in which capital demonstrates its worth. Fields are governed by "*socially established, implicitly agreed rules of the game*" (Al Ariss et al., 2013, p. 2545). That is, all

economic, cultural, and political factors (e.g., policies, Confucian cultural traditions) cannot directly influence players (parents and their children) in the field (education or policy field), but they are reconstructed and converted to shared rules by the field agent to influence individuals' practice (Gong, 2010). Players in the field are not necessarily equal since the rules are affected by people who hold wealth and power and seek to grow their capital (Gong, 2010). Individuals must continually struggle for dominance in the field using the resources they have (Bathmaker, 2015). Furthermore, Bourdieu and Wacquant (1992) indicated that various fields (e.g., educational, legal, organisational) exist simultaneously in a social context, some of which may be nested in others (e.g., subfields of different household status in the field of rural–urban migratory communities) (Al Ariss et al., 2013). Each area or subfield has its own set of rules, which may reinforce or contradict one another, altering capital values in complicated ways (Al Ariss et al., 2013; Gong, 2010).

The adoption of various levels of policy in reference to their school entrance and school procedure has established a policy field for rural–urban migrant students and their parents (Yu, 2018, 2020). To compete for a better school place, a better schooling experience, and a better education result for their children, each rural–urban migrant family needs to deploy their various types of capital in the policy field (Bathmaker, 2015). However, as previously stated, such contests could never be fair. That is, although rural–urban migrants have a lot in common, their socioeconomic standing and the capitals they have gained are rather different (Li, 2011). Their capital discrepancies may therefore be linked to the existing admittance disparity experienced by rural–urban migrants.

The Limitations of Research on Rural–Urban Migration Using Pierre Bourdieu

The research of the aforementioned academics has four limitations. First, since the loosening of the hukou policy's limits on rural–urban migrants' school choice is a dynamic process, prior research conclusions could not be applied to the rural–urban migrant population in Nanjing after the THSRH policy was implemented. The relationship between the highlighted parameters and migrant families' school choices in Nanjing has to be examined and validated. Second, while several studies have suggested that economic and social capital factors could be transferred to cultural factors to influence rural–urban migrants' school admission decisions (Li, 2011; Wu et al., 2010, 2014), they have failed to measure the process of capital transformation and its impact on school choice decisions. Third, the majority of current research in China on the cultural capital components of rural–urban migration students uses qualitative approaches (Li, 2011; Yoon, 2020). Although this research has interpreted the difficulties of rural–urban migrant families' problems successfully using Bourdieu's cultural capital theory, it also raised questions of transferability to a broader range of rural–urban migrant populations owing to the use of a single approach. Fourth, even though some researchers discovered that rural–urban migration families lack cultural capital in their school choices, other cultural capital factors that have a substantial impact are not identified in their studies. The remainder of this paper attempts to fill these gaps, by providing a snapshot of the household status, socioeconomic status, and cultural capital of rural–urban migrant families in Nanjing, as well as identifying the cultural capital factors that influenced their school choices after the THSRH policy was implemented.

Methodology

For the study, a survey was conducted in May 2020. The study's respondents were rural–urban migrant parents without an urban hukou, whose children were enrolled in Nanjing's Year 6–8 schools. Following the THSRH policy, these parents had the opportunity to choose their children's schools. The researchers used a purposive sampling approach to recruit individuals from two major Chinese social media platforms (WeChat and Tencent QQ) (Bryman, 2016). The questionnaire was circulated, and social media advertising was posted to four social media

groups of rural–urban migrants in May 2020. The research obtained 186 valid replies after 21 days of data collecting and cleaning.

The instrument of demographic information was created using the PISA 2018 parental questionnaire (Organisation for Economic Co-operation and Development, 2017). The household and socioeconomic status instruments were adapted to reflect the Nanjing context. Questions regarding cultural capital variables were recategorised using Bourdieu's (1986) concept and Li's (2011) and Pao's (2014) interpretations of cultural capital in the Chinese context. To ensure face validity, the redesigned questionnaire was forwarded to two external experts (professors from a Chinese university whose primary research focused on rural–urban migration problems). The survey was performed online after receiving ethical clearance from the university and consent from participants. The questionnaire's reliability and validity were tested in a pilot study with 25 participants. The Cronbach's alpha coefficients of the cultural capital variables in the pilot research are all over 0.6 (embodied cultural capital factors 0.604; objectified cultural capital factors 0.738; institutionalised cultural capital factors 0.832), indicating that the data are reliable.

The study's main data analysis models were descriptive statistics and factorial variance analysis. The data analysis initially offered summary descriptive statistics on rural–urban migrant families' household status, income and socioeconomic status. The influence of each factor on school choice was then investigated using factorial variance analysis. Household status (i.e., location and living conditions), embodied cultural capitals (i.e., after-school reading, music or art activity, family activity, and homework checking), objectified cultural capitals (i.e., family investment in schooling, private supplementary tutoring, and art or music activities), and institutionalised cultural capitals (i.e., fathers' and mothers' educational levels) are among the independent factors.

Findings

School Choice

The complete descriptive data of the school choices of the questioned rural–urban migration parents are shown in Table 1. Regarding school choice, 81.5% of rural–urban migrants' children were reported to have enrolled in public schools. When choosing schools, the majority said they had various options (39.3% had the best choice of multiple choices; 29.8% did not have the best selection of multiple choices). In terms of the difficulties they described, the research questioned them in the questionnaire about how difficult it was to get school admission information and prepare essential paperwork. Only 28% found it challenging to pick schools for their children; 26.2% of those said it was fairly challenging, and just 1.8% said it was very difficult.

Compared to previous research in other cities, the results of this study demonstrated a more favourable outcome for school choice, satisfaction, and the public-school enrolment rate (Li & Tan, 2019; Wang, 2009). The enrolment rate in public schools in this research (81.5%), however, is much lower than the enrolment percentage announced by the Nanjing government in 2020 (99.5%) (Government of Jiangsu Province, 2021). It is expected that Nanjing will continue to have a large "*invisible population*" (Tan, 2010, p. 32), defined as the population that is disenfranchised and unable to request aid in accessing public education resources.

Table 1: ***Descriptive Statistics of School Choice and Satisfaction***

School Choice	*N*	%
Public schools	137	81.50%
Private schools	31	18.50%
Choices Available		
I have several choices, and this school is my best choice.	66	39.30%
I have several choices, but this is not my best choice.	50	29.80%
I got only one choice, but I feel overall satisfied with the school.	45	26.80%
Not satisfied with the school, but this is the only choice.	7	4.20%
Difficulty in School Choice		
It was very easy	27	16.10%
Slightly easy	94	56.00%
Slightly difficult	44	26.20%
It was very difficult	3	1.80%

Economic Capital: Income and Household Location

Table 2 presents the household location and status of rural–urban migrant families in Nanjing. Participants were asked about their household location and their current living situation. More than half (56.5%) of the surveyed respondents lived in metropolitan areas of Nanjing.

Table 2: ***Descriptive Statistics of Respondents' Households***

Household location	*N*	%
City	47	28.00%
City boundaries (areas close to the city centre, but with lower property prices)	95	56.50%
Towns	25	14.90%
No location provided	1	0.60%

In terms of income, Table 3 indicates the family income of the rural–urban migrant participants of Nanjing. Income is presented in yuan, the basic unit of Chinese currency. ¥32,400 is the annual subsistence allowance of a household in Nanjing in 2020; ¥48,400 is the minimum yearly wage standard of Nanjing; ¥64,560 is the average annual income of Nanjing. Although 7.7% of the rural–urban migrant families still had a household income lower than the subsistence allowance, the findings of this study indicated an increase in income compared with the findings of a previous study (Fang et al., 2017). However, the findings showed that 60.1% of rural–urban migrant families in Nanjing had a lower-than-average household income. The disadvantage in family income further reflects on the school choice process. This finding is consistent with Wu and Li's (2016) survey results, which showed that 47.04% of the participating rural–urban migrants in two major cities reported that education expense was the major issue they faced in their school choice.

Household income is an essential factor of socioeconomic status. Some rural–urban migrants owned properties, had a higher income and had already accessed urban public education resources. By contrast, public-school access to those of low socioeconomic status was still restricted. In sum, it could be concluded that the socioeconomic status of rural–urban migrants has increased compared with previous studies. However, the effect of the increase in

socioeconomic status on school choice is limited because the gap in socioeconomic status between rural–urban migrants and urban residents still exists.

Table 3: ***Descriptive Statistics of Family Income***

Family income	***N***	**%**
Less than ¥32,400	13	7.70%
¥32,401 to ¥48,480	50	29.80%
¥48,481 to ¥64,560	38	22.60%
More than ¥64,560	67	39.90%

Two variance analyses were undertaken to examine the effect of household location and family income on the school choice of rural–urban migrant families. There was no significant effect of family income ($F(3, 167) = 0.62$, $p = 0.918 > .05$) and household location ($F(3, 166) = 0.836$, $p = 0.435 > .05$). The result suggested that the income level and household location of rural–urban migrant families did not statistically influence the school choice of rural migrants. There is debate among scholars about how income influences school choice. Most scholars believe low income directly restricts rural–urban migrant families' school choices (Li, 2011; Qian & Jing, 2014). However, Wu et al. (2010) suggested that financial factors cannot directly impact school choice and academic outcomes, but they could be translated into the next generation's human, social and cultural capital. The finding of the current study is consistent with Wu et al.'s (2010) finding that family income has no statistically significant influence on school choice decisions.

Analysis of Cultural Capital Factors

Embodied cultural capital is measured by rural–urban migrant children's frequency of participating in music, art or family activities and the time spent doing homework or reading after school. Table 4 presents the effect of the significant indicators of families' embodied cultural capital on school choice. The only statistically significant factor is the interaction of after-school reading, music and art activities, and family activity. It yielded an F ratio of $F(2, 78)=4.33$, $p=0.016 < .05$, showing its significant influence on rural–urban migrants' school choice. In terms of individual effects, the factors did not show statistical significance ($p > .05$) and all the interaction effects, including the factor of homework checking, did not report statistical significance either.

The results show that embodied cultural capital factors, especially those in relation to extracurricular development, contributed to the school choice of rural–urban migrant families. This is generally consistent with findings from Liu and Jacob (2012) that the current stage of addressing the education equity of rural–urban migrant students is "*from access to quality*" (p. 177). That is, more emphasis should be put on increasing the quality of education for rural–urban migrant students. Results of this study support the claim by providing evidence of the correlation between school access and extracurricular development. In sum, the development of embodied cultural capital hugely contributed to the choice of public schools.

Table 4. ***Factorial variance analysis of embodied cultural capital***

Source	*df*	Mean Square	*F*	*Sig*
Corrected Model	88	0.182	1.548	0.025
Intercept	1	85.126	722.471	0
A	3	0.135	1.143	0.337
M	3	0.146	1.24	0.301
Fam	3	0.143	1.217	0.309
H	3	0.125	1.057	0.372
A × M	6	0.145	1.231	0.300
A × Fam	8	0.113	0.960	0.473
A × H	9	0.161	1.363	0.220
M× Fam	6	0.149	1.268	0.282
Fam × H	6	0.181	1.534	0.178
M × H	8	0.132	1.123	0.357
A × M × Fam **	2	0.51	4.331*	0.016*
A × M × H	5	0.142	1.202	0.316
A × Fam × H	3	0.038	0.321	0.810
M × Fam × H	6	0.179	1.522	0.182
A × M × Fam × H	1	0.132	1.116	0.294
Total	167			
Error	78	0.118		
Corrected Total	166			

R Squared = .636 (Adjusted R Squared = .225)
< .10; *p < .05; **p < .01
A: After-school Reading; M: Music or art activity; Fam: Family activity; H: Homework checking

The measurement of objectified cultural capital includes the amount of parents' investment in schooling, private supplementary tutoring and the development of art or music abilities. Table 5 shows the result of the factorial analysis of variance on the effect of migrant parents' objectified cultural capital factors on their school choices. Only the effect of parents' investment in private supplementary tutoring was statistically significant at the .05 significance level. The effect for private supplementary tutoring yielded an F ratio of $F(3, 134) = 3.10$, $p < .05$, indicating a significant difference between parents who pay more for children's private supplementary tutoring. Considering the sample size, the effects for money paid for art and music activities ($.05 < p = 0.08 < .10$) and the interaction between private supplementary tutoring and art and music activities ($.05 < p = 0.08 < .10$) may still show relevance to the school choices of rural–urban migrants.

Table 5*: Factorial Variance Analysis of Objectified Cultural Capital*

Source	*df*	Mean Square	*F*	*Sig*
Corrected Model	32	0.268	2.149	0.001
Intercept	1	76.685	615.894	0
Schooling	3	0.069	0.557	0.644
PST **	3	0.386	3.099*	0.029*
AMT*	3	0.281	2.257#	0.085#
Schooling * PST	7	0.175	1.408	0.207
Schooling * AMT	7	0.174	1.399	0.211
PST * AMT *	6	0.238	1.913#	0.083#
Schooling * AMT * PST	3	0.255	2.05	0.11
Error	134	0.125		
Total	167			
Corrected Total	166			

a R Squared = .339 (Adjusted R Squared = .181)
#p < .10; *p < .05; **p < .01
PST: Private supplementary tutoring; AMT: Art and Music training

The results show that migrant families' objectified cultural capital development strongly correlated with the choice of public schools. Scholars claim that migrant students' lack of academic competitiveness is one of the restrictions on the school choices of rural–urban migrant students, as local urban schools prefer students with better educational outcomes (Chen et al., 2013). Zhang and Bray (2017) claimed that the development of private supplementary tutoring has set up bias against those who have lower socioeconomic status. Results of this study align with Zhang and Bray's statement that the lack of private supplementary tutoring may increase the disadvantage in migrant students' academic competitiveness, which further damages the public-school admission of rural–urban migrant students.

In addition, the development of art or music activities had possibly become a hidden criterion for schools to select students. Zhang and Luo (2016) claimed that those abilities, including playing musical instruments, extracurricular reading, and sports training, in which rural–urban migrants are falling far behind, did not show up in curriculum teaching, but had become a "*hidden curriculum*" (p. 15) closely linked to school admission. Those ability developments need much more investment than curricular learning, and this is far above the budget of most rural–urban migrant children (Zhang & Luo, 2016). In sum, rural–urban migrant parents' investment in private supplementary tutoring and music or art ability development is the core objectified cultural capital factor that influences rural–urban migrants' school choices.

As the parents' role is of "*social agent*" for their children (Li, 2011, p.25), and cultural capital is passed down from parents to children, the institutionalised cultural capital of rural–urban migrant families is measured by parents' education levels. A factorial variance analysis was undertaken to examine the effect of parents' education level on their school choices. Neither the influence of the fathers' education levels ($p = 0.519 > 0.05$), nor the mothers' education levels ($p = 0.390 > 0.05$), nor the interaction effect of the fathers' and mothers' education levels, showed statistical relevance in the survey data. Education level is a crucial indicator of institutionalised cultural capital. Although several previous studies (Mu et al., 2018; Wang, 2009) suggested that parents' education levels impact school choice, the results of this study could not

support the effect of institutionalised cultural capital on the school choice of rural–urban migrant families.

Discussion

Drawing on the empirical findings of this study, the household registration policy is still the dominant factor that influences the school selection decisions of the rural–urban migrant community. Therefore, it could be a long process to remove the household registration restrictions for the school enrolment of migrant students. Despite the limitations of the household registration policy, it is positive that rural–urban migrant families had more options for selecting schools than in previous studies. As noted, rural–urban migrants often had to enrol in quasi-state (migrant-run) schools (Yu, 2021). The current study outlined empirical evidence that more choices are available, especially in some public schools they had been dreaming of. However, it would also be problematic to state that the school choice situation has improved for those in very disadvantaged social groups. Still, few rural–urban migrant families face difficulties accessing public schools or feel challenged when making school selections.

Also, it is critical that the characteristics of these rural–urban migrants changes along with the social and economic development; that is, the terminology of rural–urban migrants now also includes the second generation of rural–urban migrants, as well as university graduates who remain in host cities (Gao, 2021). The complexity of the characteristics of rural–urban migrants added difficulties in seeking policy solutions, especially those that are one-size-fits-all. The distinction of social status has raised the need for urgent research to clarify the sub-groups of rural–urban migrants and for targeted policymaking to address the schooling difficulties of those varied subgroups.

The results have outlined an interesting fact that the distinction of school choice decisions was identified as highly correlated to the factors which are beyond the school gate: private supplementary tutoring or extra-curriculum activities and ability development. The results indicated that those parents tended to focus more on the children's development of extracurricular abilities after school, which shows that disadvantaged socioeconomic status led to lower academic success and impacted seriously on future enrolments. This study also suggests that the embodied cultural capital factors, emphasising time spent on after-school extracurricular activities, interacted together rather than operating individually to influence school choice. Activities showing higher distinction of tastes (e.g., musical instrument playing) distinguished the community and impacted school choice.

Conclusion

This study reveals the dual influence of public policy and cultural capital on rural–urban migrant communities. In particular, the distinction of cultural capital of rural–urban migrant families is fixed and amplified by the public policy legalisation, thereby creating new inequalities of school admission within this social group. The lack of educational resources, especially high-quality educational resources, in cities directly leads to the government's inability to reasonably allocate educational resources. Local governments choose to treat educational resources as a "*privilege*" to "*reward*" outsiders who contribute to the city's economy. This ongoing practice goes against the original intention of educational equity.

This study suggests that public policy tools should be shifted from limiting the school admission of rural–urban migration children to building educational infrastructure and improving the quality of education. At the national level, the construction of the education system should not only consider the city, but also consider the balanced development between regions and between urban and rural areas to promote the popularisation of quality education resources.

Extra-curricular study and ability development are especially detected as important cultural capital factors that influence school choices. Eventually, the solution of achieving educational equity is not only to help rural–urban migrant students to access the free public-school system, but also, more importantly, to balance the unequal distribution of education resources among schools. According to Ma et al. (2018), the Chinese central government has continuously emphasised migrant students' equal rights to compulsory education. In 2021, the Chinese central government initiated several new policy adjustments towards this goal. For example, it has trialled policies in Beijing which no longer allow extra-curricular activities as public admission criteria (National People's Congress of China, 2021). In addition, in the Chinese long-term Fourteenth Five-Year Plan, the Ministry of Education has set a goal of "*promoting equal access and opportunities for rural–urban migrant students*."

Although few are following local policies addressing this issue so far, it is believed that there will be some local policy adjustments in the coming year. According to Zhang and Luo (2016), local governments' approaches determine whether a beneficial policy for rural–urban migrants will be successfully and effectively implemented. Thus, future study is needed to examine the school admission policy adjustments made by local governments.

While this study has discussed the effectiveness of the THSRH policy and examined the economic and cultural factors that influence rural–urban migrants' school choices in Nanjing, this study has several limitations. First, as the study was conducted online only in 2020 throughout the period of the COVID-19 pandemic, the study may thus have lost some potential participants who had no access to the internet. These potential participants may have a lower economic and cultural situation, which may influence the accuracy of the measurement of rural–urban migrant families' socioeconomic status. Second, given the features of the research design and the rather small sample size, the findings of this study cannot be generalised to all rural–urban migrants in China. The approaches that local governments undertake to address inequities vary and may need separate examination.

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Keynote Address to the National Conference on Regional, Rural and Remote Education, Barossa Valley, 13 October 2022.

Fiona Nash
Regional Education Commissioner

Introduction and Acknowledgements

Can I firstly just acknowledge the Traditional Owners of the land on which we meet and pay my respects to Elders past, present and emerging and extend my respect to any First Nations people in the room here with us today.

I want to acknowledge all of you for being here. I particularly want to acknowledge the team from the Department of Education. I am very fortunate in my role to be able to work with some wonderful people in the Department of Education. It is just terrific to be here with the team today.

Good morning and what a wonderful couple of days are coming up. And from my perspective as Regional Education Commissioner it is really important that these types of events can happen, particularly as regional people and organisations are not very good at blowing their own trumpet. Regional people tend to just get on and do something and once they have done something fantastic, they just think 'it's done' and not tell anybody about it. But we really need to tell the story because so many of the decision makers and the people that are making those policies and setting ideas for regional Australia don't actually come from regional Australia, so we need to make sure that they hear.

I was delighted at the end of last year, there was a recommendation from the Review done by Dennis Napthine to put a Regional Education Commissioner in place[1]. I was very privileged and humbled when I was placed in the role. The role is very much to finally have an individual in that role of Commissioner that could put a national focus on rural and regional and remote education.

From the end of last year, it's been a pretty hectic time. It has been a completely new role, it was starting from scratch. In the first six months I really focused on meeting with stakeholders. It was so important to me—even though I have a background in the regions—it was important to me to make sure that what I was seeing as the challenges, and what I thought were those challenges out there in the regions, was actually the case. I think it's well over 200 stakeholders, individuals and groups that I have met and what it has done is given me a tremendous picture of what the priorities are. It's like a jigsaw puzzle, all these pieces, we put them together and you get this clarity around the picture of what's needed. My role—while it came as a recommendation from the Napthine Review—encompasses the whole education journey for children from early

[1] The Napthine Report, https://www.education.gov.au/download/4663/national-regional-rural-and-remote-tertiary-education-strategy-final-report/6981/document/pdf/en builds on the recommendations for a commissioner of Rural Education presented in Halsey's *Independent Review of Rural, Regional and Remote Education*, https://www.education.gov.au/download/4132/independent-review-regional-rural-and-remote-education-final-report/6116/document/pdf/en

childhood through to schools, to vocational education and training to higher education and universities, so there's a whole thread through. And I also have an eye to the regional workforce because I don't think you can look at all those things and not take the regional workforce into account as well and the importance of that. My vision is pretty simple really, that anybody within rural and regional and remote Australia, no matter where they live, can have access to the education opportunities they need to reach their full potential whatever that potential might be for them. I do want to touch on the importance of rural and regional, and remote Australia in general because I don't think we do it any were near enough, the more we do it I think the more decision makers will take note of the importance of rural and regional and remote Australia as a whole. Around a third of the population lives outside the metropolitan cities, the rural and regional and remote areas provide two-thirds of Australia's export income—not to discount the importance of the social fabric of regional Australia. I have yet to come across anybody in any government who says we want people to move people from regional Australia into the metro cities because we need the balance in the social fabric. That's why it is so important that the opportunities are there, particularly in education, for people in rural and regional and remote areas.

Aspiration, Access and Attainment

Aspiration, access, and attainment are words we use a lot in relation to regional education. They are words but it's about people—about those people living in the rural regional and remote areas that need access to that education. What I find is so interesting when you look at aspiration particularly, is that so many people—and it's not just young people, its people right across our regions—say somebody has it but they are not really aspiring, they don't really have any aspiration. That is true in a lot of cases, but what is also true is that many of our young people have the aspiration but don't have the self-belief to do something. They don't feel they are good enough to be able to go on to VET or be able to go on to tertiary education, and in some instances not being able to go to Year 12 because they just don't believe they can. There is a real responsibility for community to be at the centre. Our regional communities play a role in looking at what they can do to encourage and inspire young people to look to the future, to see what they can do and to back themselves in to be able to do that. There are all sorts of barriers we see with aspiration, access, and attainment. We aren't looking at it like 'do they want to go somewhere?; access, 'can they get there?'; attainment, 'how will they go when they finally get there?' But the barriers around cost, tyranny of distance, don't sit with people in metropolitan areas. I remember many years ago I was really coming up against the barrier of cost for regional people and it was particularly to do with universities at that point, and I will never forget this—it nearly made me cry—I was talking with a young student from out western New South Wales, and he said 'Fiona, I really want to go to university but I haven't told mum and dad because I know they can't afford it'.

I just thought there is such a responsibility for this nation to make sure that those young people don't ever have to say that; that they don't ever have to think 'I can't even tell my parents I want to go to university'. Again, back to the community, that ability to wrap ourselves around those young people as communities—and we do it so well in regional communities—that's the one thing we do particularly better than metropolitan areas, and it's that sense of community. The ability to be able to use that strength and power, a sense of community, to improve the outcomes of lives, of people in those communities. Access is more difficult for people in rural and regional areas and given the ability to get to school—it brought home to me already, what so many remote families are doing to educate their children because they simply don't have access to a school. It's just not there. And what they do, these families at home, at the same time those regions are making a massive contribution to the nation's economy. This is really important and

it's these sorts of stories right across the country that are feeding into the incredible jigsaw that I am managing to put together to get a very clear picture.

With attainment, I think it's very much an issue of pressure for so many of our young people. If you look at say a university degree, they have got the issue of cost, of actually getting to university, the cost while they are there, the cost of doing a placement, they might have a casual job somewhere that they have given up to go on paid placement for a particular course, and all of those things when you look at it comparatively as a uni student, when you can go home every day when mum is doing the washing and dad is doing the cooking or vice versa, or they are both doing everything in this day and age, but it is so much easier and there isn't that pressure and the social dislocation of having to leave home and be away that can really put pressure on that attainment. Interestingly Year 12 completion rates are much worse in the regions than they are in the cities. It's around 79% in the cities, those students who go through and complete Year 12, its around 70% in inner regional, 72% in outer regional, and only about 65% out in remote areas. So, even just finishing year 12 and attaining that year 12 certificate is a challenge for many of our young people.

Challenges

There are so many comparators between rural and regional that are worse than they are in the city, and I will run through a few of the challenges, but what I want to do this morning is focus on what the solutions are, how to make things better. We are all aware of the challenges that sit out there but it's still very important that we look at things like 'one size fits all policy' doesn't work. It doesn't work for metropolitan versus rural and regional and remote Australia, and it doesn't work between regional, rural and remote, because they are all so very different. When we are looking at decision makers and again looking at policy for regional and remote Australia, it's really important we keep making the point that we have to have flexibility and you can't put something in the metro and plonk it over the regions and think it's going to work, 'cause it's just not. Those challenges we are seeing, it's not just about aspiration, access, and attainment, we are talking about regional outcomes—it's around those issues of cost and distance, and time and place and the social dislocation and all those things.

Governments, I believe, have a social responsibility to make sure there is the provision of good education right across regional Australia. The form that takes might differ from place to place, but it is absolutely a responsibility of government, it is a social good. I was very interested to read Minister Jason Clare (Minister for Education) in his maiden speech, he said your post code shouldn't determine your educational opportunities. And that is so true, and I was really encouraged to read that, and also to listen as many of you would be aware that he has made a lot of comments around the importance of equity and boy do those things fit with our regional people—absolutely. The issue of making sure you have equity, that we have decision makers who are really focussed on rural regional and remote Australia is really important but, we have to tell the story, we have to tell it collectively, we have to tell it together.

There are a whole range of challenges across the sector—I'm not going into them in great detail—when we look at schools, we have issues around getting enough teachers in our schools, we have issues around having enough support services for students, we have issues around even being able to access school depending on where you live, we have issues - you might not think about very much—even about subject availability in senior schools in regional areas, that pathway through to VET or higher ed, and that's really important that we focus on those things because otherwise they are starting behind, and why should they have any less opportunity than somebody sitting in a city school. Why should they have any less? Particularly, in this day-and-age when we have so much more flexibility with delivery, we can do things online. It's not always optimum, but my goodness it's a whole lot better than nothing. Covid has really taught us that

we can do things differently and the sky doesn't fall in. That, I think gives a lot of courage and ability to be able to plan for the future in a flexible way and so do things differently.

Around VET we have of course issues with access to courses that people want within reasonable proximity, without having to travel. Around higher ed we have the issues I mentioned before, just the mere fact that students have no choice. No choice but to leave home and relocate to go and do a university degree. Less than half of the people in rural and regional and remote areas are likely to get a degree by the age of 35 than people in the cities, and that's not good enough. Degrees aren't the be all and end all. There is a whole range of different opportunities in education across the regions, but it is just one example, and they are far less likely to complete their degree. Those sorts of things, we need to make sure that those outcomes are improved. If it was simple, we wouldn't be sitting here having this conversation, if it was easy, it would already have been done by now. There is no silver bullet, but what it is going to take is a lot of collective will, to keep the focus on the challenges and at the same time provide the solutions.

Solutions

Those solutions are many and I really see them often as I am travelling around, they are out there in the communities. You all know your various sectors, your communities better than anybody else. Why wouldn't decision makers go to you for solutions to the challenges? I don't think there is anybody that doesn't want to improve the outcomes. How we get there is going to be so important. I think that ability to recognise those challenges that are there and the decision makers and have a collective view from the community and from government to industry to look at what can be done to make it better. One of the key things, and I have said this for a very long time, is to be positive and talk up rural and regional and remote Australia. It's a fantastic place to live. You can't be anywhere better in this country than to live in a regional community in my opinion. So often the media will say 'this is doom and gloom and it's all terrible'. You never see the front page of the paper say, 'fantastic outcomes happening in Gawler the other day'. Wasn't this an amazing positive story, which is why we have to work doubly hard to get the good stories out there because media isn't as keen to put a good story in the news as they are about ones that might grab more of a headline. Even as people in our communities we have a real responsibility to talk ourselves up to make sure that people recognise all of the great things that happen in those communities.

The focus for the conference about community being the centre of everything is really aligned to one of the key things I have been thinking about and working on. In terms of improving access, aspiration, and attainment, in terms of improving education outcomes in the regions, we often talk about attracting people to the regions, whether it's from cities or other regions or international. We often talk about retaining people out in regional areas, and that's absolutely good, but what I don't think we talk enough about is the home grown, how we home grow the strengthening of our communities through not only young people coming through our education systems but people in those communities at any age who might be looking to further their education. And as I look around the country there are some good examples, but it's pretty ad hoc, so for me it's about how do we better link at a regional level, how do we better link industry back into education pathways and from a really early age. There is no point in giving advice to year 11 and 12 people about 'this might be your opportunity', they should be thinking about it when they are this high [much younger], that's when they need to know what their opportunities are because they can't be what they can't see. And they need to have that connectivity into industry in the community people to be able to go 'this is what my future pathway might look like'. They might be 7, 8 ,9, 10, 12, 13, 14, 15, 16 it doesn't matter but they can see it and they can see opportunities that hopefully they can see a lot of different opportunities that they can make a choice about. By bringing Industry more closely in at a regional level to the schools, to the universities, the RUCs, the councils, to the work with community groups, to be able to strengthen

the opportunities for those students in those communities though, that is something that needs some very serious consideration. Because it's about people; people connecting people, and in my mind, I can see the ability for this to work because communities know the people in their communities and the strength from that I think will be quite extraordinary. It will be something I will be continuing to pursue as commissioner.

The other thing I don't think we talk enough about as one of the solutions, is the pathway home. A lot of you people do choose to move away because they do want to move away for a while, they might go to university somewhere else and do something else—it should be all about choice—but what we are not doing well enough is keeping them connected to their community that they leave. And if they have a pathway home, they stay connected. I remember going to a tiny community in Victoria many years ago, cutting a long story short, three couples there in their thirties, had all gone to Melbourne, they had all come home and they had stayed connected by playing sport at home every now and again, they would go play netball and they had this because they wanted to stay connected to their community. So, I think how we create the pathway home around rural, regional and remote students who leave, will be a very important thing.

Decision Makers

Keeping rural regional and remote Australia in the forefront of the minds of decision makers is absolutely vital, and we are really fortunate to have people in departments who listen, who actually understand how important it is that rural, regional and remote policy deliberation is a priority. It's up to us to make sure the decision makers know that, because those programs and that funding is so important. Money doesn't fix anything, but what you do with money does. Just simply getting a bucket of dollars won't do anything, but how those dollars are used and how those dollars are implemented will make such a difference and it says to those rural and regional and remote communities 'we think you are worth investing in'. What that does to the confidence in those communities, is really quite extraordinary.

Regional, Rural and Remote Education Workforce

Finally, I think the importance of the people that work here in the education sector—all of you in this room and people out there in our rural and regional and remote communities who are every day working to make things better for regional education, be it a university, be it a Regional University Centre (RUC) be it an industry group on the ground, whatever it is—the focus is to try and make it better and we really have to value that. It is so important that we do, because we need people like you out on the ground doing the job that we can do to make things better, it is as simple as that. I really commend all of you for what you're doing and what you have done.

Conclusions

A couple of little stories to finish on. Change is driven by people and people in regional, rural and remote Australia are extraordinary. Just one story. It's actually the RUC story, which I think is amazing. What is it now? 2700 students at RUCs. I can remember standing in the street in Cooma with Duncan Taylor when the Cooma Regional Study Hub was an idea. It was nothing more than an idea. And look at it now. It was an idea that someone in a regional community went 'I know this will work' so we have to keep backing ourselves when we have ideas. We don't always get things right. So many times, I put my hand up to say 'I don't know what to do about this' but I know somebody who will and that is really valuable, being able to test ideas—and there is never a stupid idea—and there is never any failure in not succeeding. There is only failure in not trying in the first place. It's about having a red-hot crack. I just want to finish with a story. I'm a bit of a golf nut. I play so badly. But I watch a lot of golf. There is a young fellah at the moment called Tom Kim who has just started on the PGA tour in the States, and he is 20 years old, and he has

already won twice, the first person to win twice since Tiger Woods. Actually, he is only the second person to win twice before 21. The point I want to make is that the interviewer was talking to one of his high-flying colleagues and said, 'why is Tom doing so well?' This guy is so positive, unbelievably positive, upbeat, he is positive all the time, this fellah said, 'Tom has got no scar tissue'. There was nothing holding him back because he was so young and he could just be positive and it just made me think as people in rural and regional and remote Australia who are trying to make things better in education we just have to be positive, don't think about blaming, don't think about things we can't do, don't think about the challenges that are there, just turn up every day and be positive. Put every idea forward you think is going to make a difference because at the end of every single day and the beginning of every day when you go to work, you are making people's lives in rural, regional and remote Australia better. That is a fantastic thing. Thank you very much for having me here this morning and I am delighted to officially open the Conference.