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Graduate Teacher Preparation for Rural Schools In Victoria and Queensland

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Abstract: Graduate teachers' preparedness for working in rural settings are mediated by the development of pedagogical expertise, professional engagement with parents and the community, and broader notions of preparation to teach in rural contexts. The Studying the Effectiveness of Teacher Education (SETE) project is a four-year longitudinal study tracking teacher education graduates in Queensland and Victoria to investigate the effectiveness of their programs in equipping them to meet the learning needs of students in a diverse range of school settings. A sub-set of the SETE data was examined to explore graduate teacher preparation for rural schools, specifically the authors analysed 1,539 point-in-time survey responses (April 2013) and findings from a case study exploring two teachers' transitions from teacher education into teaching positions at a rural primary school in Victoria. The case study is read iteratively with survey analysis to grapple with the issues associated with graduate teacher preparation for rural schools.

Keywords

Teacher education, rural education, rural workforce development

Introduction

Studying the Effectiveness of Teacher Education (SETE) is examining graduate teachers' preparedness for and effectiveness working in diverse school settings. The SETE project asks: how well equipped are 2010 and 2011 teacher education graduates to meet the requirements of the settings in which they are employed; what characteristics of initial teacher education programs are most effective in preparing graduate teachers for these settings; and how does teacher education impact on employment trajectories. A sub-set of the SETE data was examined to explore graduate teacher preparation for rural schools. Specifically this paper focuses on two components of the broader SETE project: the Graduate Teacher Survey (Round 3, April 2013) and a case study involving two graduate teachers working in a Victorian rural government school. How graduate teachers' working in rural schools self-report their development of pedagogical expertise and their professional engagement with parents and the community is discussed and connections are made between these competencies and broader notions of preparation to teach in rural schools. An iterative, mixed-method approach to data collection was employed with findings able to be read across the qualitative and quantitative datasets.

While there are a number of classification systems used to define 'rural', 'rurality' in this context is understood as both a quantitative measure of geographic distance from urban

centres (Australian Bureau of Statistics (ABS), 2012) and as a cultural construct concerned with community demographics and the interaction between residents (Reid, Green, Cooper, Hastings, Lock & White, 2010). Rural areas are those where physical road distance results in pronounced restricted access to the full range of goods and services and social interaction. Using the ABS quantitative measure, one third of the Australian population can be classified as living outside major urban areas (Charters, Vitartas & Waterman, 2011).

Background

Rural depopulation and decline motivates concerns about rural renewal in many affluent western countries and has stimulated a search for solutions to the ongoing problems of population imbalance and the dissolution of country towns (see McManus, Walmsley, Argent, Baum, Bourke, Martin, Pritchard, & Sorensen, 2012 for a full discussion of this phenomenon). In Australia, the migration of youth to major cities poses a significant concern (Australian Bureau of Statistics, 2009). Supply and demand projections for a range of professionals, including teachers, suggest a national shortfall for rural schools and communities (Rowe, Corcoran & Faggian, 2013).

Michael Corbett (2011) identifies educational practices as a contributor to youth exodus from rural communities in Nova Scotia, arguing that standardised curriculum and testing regimes contribute to disengagement on one hand and, on the other, gift academically successful students with cultural capital, termed 'educational mobility capital', which in effect disconnects students from their communities as they seek employment and educational opportunities that are not as well articulated or accessible in small towns. The same patterns appear evident in Australia where coupled with a national aging population, youth migration results in increased uncertainty about the future of the agriculture and fishing industry results in resilient rural communities reinventing themselves (McManus et al., 2012).

Ironically the backdrop to these trends is an understanding that productive and resilient rural communities are vital for Australia's social welfare and economic future (Regional Australia Institute, 2012), with the economic and social performance of non-metropolitan communities framed as important to the wealth and competitiveness of Australia as a whole (White & Kline, 2012).

Teacher attrition in Australia's rural schools is high (Trinidad, Broadley, Terry, Boyd, Lock & Byrne, 2012). Geographic isolation from family and friends, inadequate access to services and recreational facilities, inadequate preparation for multi-stage classrooms, inadequate housing, professional isolation, and extreme weather conditions account for much of the turnover of the often young and inexperienced teachers that find their way into rural schools (see for example Drummond, Halsey & van Breda, 2012; Page, 2006; Sullivan & Johnson, 2012). If Australia is to increase its likelihood of competing in a global market, then attention must be focused on the advancement of educational opportunities within rural communities *alongside* those of metropolitan communities. This involves, among other strategies, promoting teaching in rural communities as a desirable option for graduate teachers.

This paper examines data from graduate teachers working in rural Australia to identify how teachers and teacher education can build a rural teacher workforce with the pedagogical expertise appropriate to rural contexts and graduate teachers who engage professionally with parents and the communities in which they work.

Methodology

The SETE project utilized a mixed-method approach to capture a broad picture of the experiences of teacher education graduates and the complexity of individual workplace settings. In this instance, the SETE datasets are utilized to investigate the micro-politics of rural contexts.

Over four calendar years online surveys and case studies were used to collect data linking graduates' experiences and perceptions of their effectiveness to features of initial teacher education programs and teaching contexts. The SETE study invited survey participation from all teachers who graduated 2010-2011 and were newly registered as teachers in either Victoria or Queensland – a population of approximately 15,000. Case studies focus on over 180 graduate teachers employed in 30 government schools that capture the diverse geography and student demography across the two states. Each collection of data, survey or case study, informed subsequent data collection. There were four rounds of surveys of graduate teachers (2012-2014), three rounds of surveys of these graduate teachers' school Principals, and up to five case study visits to the strategically selected schools. Sitting alongside this data collection is a national mapping of all Australian teacher education programs. This paper draws on one of the 30 case studies and selected items from the Graduate Teacher Survey 2013.

Development of the SETE Graduate Teacher Surveys drew from relevant literature, discussions with experts including industry partners, and examination of surveys in the area of teacher education. Established survey instruments informed question construction, including the Staff in Australia's Schools teacher questionnaire 2010 (McKenzie, Rowley, Weldon & Murphy, 2011) and the Australia Government Department of Education, Science and Training (DEST) survey of final year teacher education students 2006 (DEST, 2006). Questions were framed around themes of curriculum, pedagogy, assessment, classroom management, catering for diverse learners, professional ethics, collegiality, engagement in ongoing professional learning, relationships with students and engagement with parents and local community. Survey participants were invited to reflect both on their preparation for teaching and their effectiveness as a beginning teacher.

Two scales built into the surveys are reported: the Preparation Scale and the Effectiveness Scale. Each scale is made up of 16 statements requiring a response on a five point Likert scale (1=Strongly disagree, 5=Strongly agree), one question in each scale relates specifically to perceptions of pedagogical development and one in each to perceptions of professional engagement with parents and the community. Both scales demonstrate good internal consistency with Cronbach alpha coefficients of 0.91 (Preparation) and 0.92 (Effectiveness). The survey question used to collect data about teacher preparedness and effectiveness is provided In Figure 1.

Now that you've been in the teaching profession for some time, please think about your effectiveness as a teacher now AND think back to your teacher education program and how well it prepared you for your current teaching context. Indicate on the scale provided how much you agree or disagree with each of the following statements. Please select one answer for every choice.

| | My teacher education program prepared me in the following area... | | | | | I am effective in the following area now ... | | | | |
|---|---|-----------------------|-----------------------|-----------------------|-----------------------|--|-----------------------|-----------------------|-----------------------|-----------------------|
| | SD (1) | D (2) | Neither (3) | A (4) | SA (5) | SD (1) | D (2) | Neither (3) | A (4) | SA (5) |
| Know students and how they learn (1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Planning for and implementation of effective teaching and learning (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Know the content and how to teach it (3) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Teaching culturally, linguistically and socio-economically diverse learners (4) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Design and implementation of curriculum (5) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Assessment and the provision of feedback and reporting on student learning (6) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Discipline based expertise (7) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Use of ICT (8) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Literacy and numeracy (9) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Pedagogy (10) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Creation and maintenance of supportive and safe learning environments (11) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Classroom management (12) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Professional engagement with parents/carers and the community (13) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Collegiality (14) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Professional ethics (15) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Engagement with ongoing professional learning (16) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Figure 1. SETE Preparedness and effectiveness scale items

The survey data analysed for this paper consists of 1,539 Graduate Teacher Surveys collected during April 2013. Respondents were employed as teachers, had completed 32 survey items about their perceptions of their preparedness for teaching and effectiveness, and had named the school in which they were employed. Scores for preparedness and effectiveness were considered on the basis of the location of their schools.

The case studies provide a deep qualitative account of graduate teachers' preparedness for the initial years in the teaching profession. Case study sites were selected based on 2010 student enrolment data, the school Index of Community Socio-Educational Advantage (ICSEA) value, proportion of students with language backgrounds other than English, proportion of Aboriginal or Torres Strait Islander students, the number of first year teachers employed and school location. Primary, secondary and P-12 schools are represented. Case study data comprises: interviews with the graduate teachers and self-reports on their preparedness and effectiveness; their sense of their professional trajectories and career

achievements; and interviews with the Principals of these teachers. One case study of a rural primary school is examined in this paper. Copies of the SETE surveys and case study questions can be viewed at www.setearc.com.au.

Reading across these data enables the researchers to identify large-scale rural education workforce issues and to examine the nuanced ways these play out in particular rural school settings. The stand-alone findings gathered via the two methods reveal the ways in which each method is able to expose patterns that the other may mask, highlighting the distinct advantages of using these in combination for rural teacher education research.

Results

Quantitative analysis: surveys

The Graduate Teacher survey (Round 3) used for data collection was an iteration of the Graduate Teacher Survey Round 1 (March-April 2012) and Round 2 (October 2012). There were a total of 2,268 responses to the Round 3 teacher survey, of the respondents 1,851 were employed as teachers. The overall response rate was 17.6 per cent, calculated by dividing the number of returned surveys by the number of emails sent to eligible graduate teachers registered with either the Victorian College of Teachers or the Queensland Council of Teachers. The response rate by jurisdiction is provided in Table 1.

| State/Territory | Number of teachers sent an email | Number of teachers that responded | Response rate per jurisdiction % |
|-----------------|----------------------------------|-----------------------------------|----------------------------------|
| VIC1 | 7,141 | 1,360 | 19.0 |
| QLD | 5,740 | 861 | 15.0 |
| Other2 | - | 47 | - |

Table 1: Response rate for Round 3 Graduate Teacher Survey

NOTES 1. There were 8,460 new teachers registered in Victoria, however only 7,141 indicated that they completed their teacher education program in 2010 or 2011. 2. Indicates 1) teachers who met the eligibility criteria at the beginning of the project but have either since moved state or allowed their registration to lapse 2) teachers registered in more than one state.

Table 2 shows the characteristics of the graduate teachers who responded to the Round 1, 2 and 3 surveys. Information on graduate teachers is presented by sex, age, Aboriginal and/or Torres Strait Islander descent, if the respondent is the first in their family to gain a tertiary qualification, and main language spoken.

| Teacher characteristics | Round 1 | | Round 2 | | Round 3 | |
|-------------------------|---------|------|---------|------|---------|------|
| | n | % | n | % | n | % |
| Sex | | | | | | |
| Male | 293 | 20.3 | 665 | 22.5 | 523 | 23.1 |
| Female | 1,150 | 79.7 | 2,289 | 77.5 | 1,744 | 76.9 |
| Age groups | | | | | | |
| 21-30 | 859 | 59.9 | 1,905 | 64.8 | 1,401 | 62.3 |
| 31-40 | 284 | 19.8 | 546 | 18.6 | 429 | 19.1 |
| 41-50 | 224 | 15.6 | 376 | 12.8 | 335 | 14.9 |
| 51-60 | 60 | 4.2 | 99 | 3.4 | 78 | 3.5 |
| 61-70 | 6 | 0.4 | 9 | 0.3 | 4 | 0.2 |

| | | | | | | |
|---|--------------------------|--------------|--------------------------|--------------|--------------------------|--------------|
| 71+ | 1 | 0.1 | 6 | 0.2 | 0 | 0 |
| Aboriginal or Torres Strait Islander descent ¹ | | | | | | |
| No | 1,423 | 99.0 | 1,656 | 99.3 | 932 | 99.1 |
| Yes | 14 | 0.9 | 12 | 0.7 | 8 | 0.9 |
| Tertiary qualification is first in family | | | | | | |
| Yes | NA | NA | 1,261 | 42.7 | 953 | 42.4 |
| No | NA | NA | 1,689 | 57.3 | 1294 | 57.6 |
| English as main language ¹ | | | | | | |
| Yes, the only language | 1,176 | 81.9 | 1,411 | 84.6 | 808 | 84.0 |
| Yes, the main language | 155 | 10.8 | 166 | 10.0 | 104 | 10.8 |
| No, but spoken | 95 | 6.6 | 73 | 4.4 | 38 | 4.0 |
| No, rarely or never used | 11 | 0.8 | 18 | 1.1 | 12 | 1.2 |
| TOTAL | 1,443² | 100.0 | 2,967² | 100.0 | 2,268² | 100.0 |

Table 2: Individual characteristics of graduate teachers

NOTES 1. Includes only the participants new in these rounds 2. Totals are for all responses and may vary between variables. Percentage is calculated on valid responses.

The proportion of females to males responding to the survey was similar to the proportion of female to male graduates in the Australian teaching workforce, as shown in the 2010 Staff in Australia's Schools (SiAS) report (McKenzie, Rowley, Weldon & Murphy, 2011). The SETE sample has a greater proportion of respondents aged over 30 than shown in this SiAS report. The percentage of graduate teachers in the 21-30 age group has risen, from 60 per cent in Round 1 to 65 per cent in Round 2 and 62 per cent in Round 3. Round 2 has less graduate teachers in the 41-50 age group than in Round 1, which had 16 per cent, while for Round 3 the proportion rose again to 15 per cent.

Aboriginal and Torres Strait Islander teachers in the SETE graduate teacher sample make up less than one per cent. This is less than identify as Aboriginal and/or Torres Strait Islander in the Australian population, which is 2.5 per cent (ABS, 2011). In Round 2 and Round 3, respondents were asked if they were the first in their immediate family to get a tertiary qualification. Forty-two per cent stated that they were. Eighty-four to 85 per cent of Round 2 and Round 3 graduate teacher respondents spoke only English at home, which is slightly higher than for the general Australian population which is 81 per cent (ABS, 2011). Round 1 responses matched the general population proportion.

Data cleaning and grouping

Data were grouped based on the geographical location of the schools where respondents worked: Major city (n=1,018) and Rural and regional (n=521). 'Major cities' comprised all schools located in major cities of Australia as defined within the Australian Bureau of Statistics remoteness structure (2012). 'Rural and regional' comprised all schools located in inner regional (n=348), outer regional (n=128), remote (n=26), and very remote (n=19) Australia. Aggregation was necessary due to the small numbers of respondents working in outer regional, remote and very remote schools.

Homogeneity of variance was assessed for grouped data by inspection of Levene’s test. No significant differences were detected for perceptions of preparedness or effectiveness which revealed that normality was met for those variables when compared to a p-value of .01 as recommended by Tabachnick and Fidell (2007).

For contextual information only, the mean effectiveness and preparedness scores for each location are provided in Table 3. For each location type, the greatest proportion of respondents had been employed in their current school for 13-18 months, and in the overall Round 3 dataset a majority had completed their teacher education program on a metropolitan campus and approximately one-fifth of the cohort had completed their studies at a regional campus.

| School location | Perceptions of preparedness | | | Perceptions of effectiveness | | |
|-----------------|-----------------------------|------|-----|------------------------------|------|-----|
| | N | Mean | SD | N | Mean | SD |
| Major cities | 1,018 | 3.50 | .62 | 1,018 | 4.18 | .31 |
| Inner regional | 348 | 3.46 | .59 | 348 | 4.16 | .43 |
| Outer regional | 128 | 3.56 | .59 | 128 | 4.16 | .39 |
| Remote | 26 | 3.38 | .46 | 26 | 4.19 | .32 |
| Very remote | 19 | 3.25 | .69 | 19 | 4.08 | .43 |
| TOTAL | 1,539 | 3.49 | .61 | 1,539 | 4.17 | .42 |

Table 3: Graduate teachers’ mean scores on the preparedness and effectiveness scales by school location, Round 3

| School location | Lived in suburb where school is located (%) | | Lived in an area with similar cultural diversity (%) | | Lived in an area with a similar population size (%) | | Lived in an area with a similar socio-economic makeup (%) | |
|------------------------|---|------|--|------|---|------|---|------|
| | Yes | No | Yes | No | Yes | No | Yes | No |
| Major cities (n=1,047) | 27.5 | 72.5 | 66.8 | 33.2 | 71.8 | 28.2 | 67.1 | 32.9 |
| Inner regional (n=363) | 35.3 | 64.7 | 66.9 | 33.1 | 59.8 | 40.2 | 65.3 | 34.7 |
| Outer regional (n=134) | 29.1 | 70.9 | 50.0 | 50.0 | 42.5 | 57.5 | 53.0 | 47.0 |
| Remote (n=27) | 22.2 | 77.8 | 37.0 | 63.0 | 33.3 | 66.7 | 33.3 | 66.7 |
| Very remote (n=20) | 15.0 | 85.0 | 15.0 | 85.0 | 30.0 | 70.0 | 20.0 | 80.0 |
| TOTAL | 29.1 | 70.9 | 64.2 | 35.8 | 65.5 | 34.5 | 64.4 | 35.6 |

Table 4: Graduate teachers’ experiences living in locations similar to their current school location, prior to enrolling in their teacher education program

Tables 3 and 4 above illustrate important differences between groups that were considered when interpreting the aggregated data. In crude summary, graduate teachers working in major cities and regional Australia reported higher levels of preparedness compared to their colleagues working in remote and very remote Australia. There was a simultaneous slight drop in self-reported effectiveness scores the further graduate teachers worked away from major cities. Table 4 also shows that those working in remote and very remote schools were in general less likely to have lived in the areas in which they work or in locations with similar cultural diversity, population size or socio-economic makeup. This noted, these tables compare small numbers of graduate teachers working in regional and

remote settings to a much larger group of teachers working in major cities and as such should be treated with caution.

Preparedness

An Independent-samples t-test was conducted to assess differences between geographical location and the perception of preparedness of teaching graduates, pedagogical preparedness and preparedness for professional engagement with parents and community. No statistical differences were found between the aggregated geographical location for any of the dependent variables:

Overall perception of Preparedness $t(1537) = .58, p = .56$, two-tailed

Pedagogy $t(1537) = -.72, p = .47$, two-tailed

Professional engagement with parents and community $t(1537) = -.12, p = .91$, two-tailed

Means and Standard deviations are presented in Table 5.

| Variables | Major cities | | | Rural and regional | | |
|--|--------------|------|------|--------------------|------|------|
| | N | Mean | SD | N | Mean | SD |
| Perceived preparedness | 1018 | 3.50 | .62 | 521 | 3.43 | .59 |
| Pedagogy | 1018 | 3.86 | .82 | 521 | 3.89 | .72 |
| Professional engagement with parents and community | 1018 | 2.91 | 1.08 | 521 | 2.92 | 1.04 |

TABLE 5: Means and standard deviations for perceived preparedness, pedagogy and professional engagement with parents and community of graduate teachers based on geographical location.

Table 5 demonstrates that graduate teachers from major cities compared to those working in rural and regional locations did not differ significantly on their perceived preparedness, perceived pedagogy and perceived professional engagement with parents and community, though they feel more prepared in terms of pedagogy relative to parent and community engagement.

Effectiveness

Again, an Independent-samples t-test was conducted to assess differences between geographical location and the perception of effectiveness of teaching graduates, pedagogical effectiveness and effectiveness engaging professionally with parents and community. No differences were found between geographical location for any of the variables:

Overall perception of effectiveness $t(1537) = 1.00, p = .32$, two-tailed

Pedagogy $t(1537) = .25, p = .80$, two-tailed

Professional engagement with parents and community $t(1537) = -.29, p = .77$, two-tailed

Means and Standard Deviations for perceived preparedness, pedagogy and professional engagement with parents and community by Geographical location are presented in Table 6.

| Variables | Major Cities | | | Rural and regional | | |
|--|--------------|------|-----|--------------------|------|-----|
| | N | Mean | SD | N | Mean | SD |
| Perceived effectiveness | 1018 | 4.18 | .42 | 521 | 4.15 | .42 |
| Pedagogy | 1018 | 4.03 | .64 | 521 | 4.02 | .59 |
| Professional engagement with parents and community | 1018 | 4.17 | .69 | 521 | 4.18 | .64 |

Table 6: Means and standard deviations for effectiveness of graduate teachers based on geographical location.

The results revealed no significant differences for graduate perceptions of preparedness and effectiveness based on aggregate school location groupings (major cities vs. rural and regional). In addition, there were no significant statistical differences between the aggregated location groupings and pedagogy or professional engagement with parents and community. Comparison of Tables 5 and 6 reveal that graduate teachers developed high levels of effectiveness in relation to parent and community engagement though they were not as prepared by their teacher education programs in this area.

Aggregation of the data into two large groupings was necessary to conduct the analysis, but in doing so it is understood that difference between the sub-groups that make up the rural and regional cohort are masked. Due to the small number of responses from graduate teachers working in remote and very remote schools, their perspectives are obscured in this analysis. This is an issue for careful consideration given that fewer responses are expected from graduate teachers working in remote and very remote locations as there are far fewer schools in these areas. It must also be acknowledged that the important differences between urban school settings are also hidden in this form of large-scale analysis.

This project was explicitly constructed as a mixed methods study because each method on its own does not tell the whole story. Given the potentially contentious nature of this finding we turn to the qualitative data to further examine and unpack impacts of rurality on workforce preparedness and effectiveness.

Qualitative analyses: Case studies

The qualitative data presents an opportunity to look at the magnitude of differences in graduate teachers experiences in various school settings by exploring what works differently for teachers in the different environments. The qualitative data can then be read alongside the large-scale survey data to provide a more complete picture of the experiences of graduates in their early years in the teaching profession.

The case study site, referred to as Grevillea Primary School, is located in rural Victoria; it is located in outer regional Australia according to the ABS remoteness structure and is defined by the Victorian Department of Education and Childhood Development (DEECD) as a ‘rural’ school. Grevillea has an Index of Community Socio-Educational

Advantage value below the national average of 1000, and in 2012 41-50 per cent of students had language backgrounds other than English and none identified as Aboriginal or Torres Strait Islander (Australian Curriculum, Assessment and Reporting Authority, 2014). Two graduate teachers were initially employed at the school – one female mature age, career change graduate; and one younger male graduate teacher who completed a four-year undergraduate teacher education program. Three site visits took place between 2012-2014. The vignette below follows Karoline in depth due to her continued employment at the school, Kane's (not his real name) reflections are used as a point of contrast or illustration.

A brief vignette summarises the case study data as it relates to the graduate teachers' perceptions of preparedness and effectiveness in the workforce in terms of 1) developing pedagogical expertise and 2) their professional engagement with parents and the community.

Grevillea Primary School vignette

Grevillea Primary School is committed to improving the teaching and learning outcomes for every child through a culture of supporting excellence, effort and teamwork. The school designs programs to cater for a range of student backgrounds and needs. Clearly identified goals of improving literacy, numeracy and ICT are apparent. There is an explicit commitment to developing strong, capable and engaged learners and to building strong relationships with the wider community. The school has less than 30 students and three teachers (two of whom graduated in 2011). On approaching the school you are struck with a sense of history and peacefulness. The buildings are historic (circa 1900s) at the front with more modern facilities at the back. There is an old-fashioned school bell – reminiscent of the liberty bell – that although no longer used, sets the tone of a school that has been around for a while. The teaching Principal is welcoming.

Pedagogy – preparation and development over time

The Principal's reflection on the two graduates was positive. There was a sense that the mature age graduate – Karoline, in particular was seen as articulate and able to discuss and understand pedagogy as well being enthusiastic and committed. The Principals' judgment was influenced by the selection criteria set by the DEECD and the teacher regulatory authority and how well the graduates met these. The graduates felt that as this was a very small school it was difficult to have been prepared for this context in terms of the only other teaching staff being a teaching Principal and thus having to rely on each other more for guidance. Although the graduates felt prepared by their teacher education programs, both indicated that more practical application of the theory at university would have been useful and that stronger mentoring and induction would have increased their confidence and ability to feel better equipped in the 'rural' multi-age/multi-stage classroom they found themselves in.

There was a general sense from the Principal that graduates were well prepared for her school and working in the community although there was an acknowledgement from both graduates at the first visit that they had little involvement with the community. The reflection from the graduates was that the theory made accessible via teacher education helped them to prepare for their lessons – in particular Vygotsky's Zone of Proximal Development to help consider where a student's learning should be pitched. Classroom management was a highlighted strength in their teacher education programs as equipping them with appropriate strategies to use in the (rural) classroom.

Kane went to university straight from high school and completed a four year degree – although it took him a little longer as he had some time off during his studies. Kane grew up in the area and was living only 15 minutes from the school. Kane hadn't necessarily planned to teach in the area. In his words : *"I was taking anything I could get really. There was an opportunity and I rang up and applied, and that's about it"*. His appointment was only for 6 months and he was sure it wasn't going to be renewed.

Karoline is a career change new graduate who had previously undertaken a variety of employment including in professional and semi-professional careers. She was also only initially considering casual relief teaching as an option due to having a young family when she was encouraged to apply for her job at Grevillea by her university mentor. Her initial appointment was for six months and her classroom was less than 15 students.

There was a sense of surprise that working in a smaller school was as busy as it was which can be seen in the following quote:

Well I was talking to a teacher recently in a small school like this and he was saying that he'd been in a bigger school and come to the smaller school, and he was saying that he thought he was busier here now than he was when he had a bigger class, because he knew them so well (Karoline)

The expectation with a small class with three grade levels that the preparation for this was more complex than others may experience. As Karoline explained when asked about the small class size: *Yes, small numbers but you've got to teach right across the curriculum too, you know? (Karoline)*

Kane felt there was a trade off between working in a small school as opposed to other bigger schools where he had had previous experience as a casual relief teacher.

... there are less children and there are less parent-teacher interviews obviously, so there will be less reports, but I also find that I have to plan lots of different levels of activities and also I'm doing a lot of my planning by myself. I know that friends in bigger schools ... do a lot of collaboration with their planning, whereas I'm planning a lot of things myself I've got less kids there but I've got more work to do for those kids.....

When we first met Karoline she presented as a quiet and calm new graduate who was trying to work through the year one step at a time. In terms of feeling prepared and reflecting back on her time at university she referred to this as a *'springboard, a foundation'* (Karoline) and indicated that as she had undertaken a twelve month graduate diploma she felt less prepared to the other graduate employed there who had undertaken a four year Bachelor qualification which can be seen in the following quote:

Well during the one year it's even less really. I suppose what it is though is it's a springboard to kind of self-learning, and if you're a good self-learner, you take that one year and sort of go, "gosh I don't know anything about this or that" and there certainly were lots of holes, but then you go off and you investigate it or you ask or whatever. I think that a professional highlight is that feeling of being more competent; that first term last year I felt just stupid really, in a way. You give up this other life where you're in a workplace where people value you and they respect your opinion and they think that you've got skills, and then you go to this whole new thing, and you feel like you know almost nothing about how to run the day, and I did that first term - I felt like a bit of a fool in a way! But fortunately you're in the privacy of your own classroom a lot of the time. But yes, I see the uni as kind of a springboard, a foundation. I don't mind quite a bit of the theory, but I certainly could have done with a lot more practical advice and tips. I saw a running record but I never saw one being taken and suddenly I'm out here expected to be doing one.... I think I'm becoming the teacher that I

thought I'd be but it's a journey. (Karoline)

On the second visit Karoline was now the longest serving graduate, as Kane had left after his short-term contract had finished. Karoline presented as a more self-assured teacher and indicated that she had been working with three pre-service teachers since we had spoken. This was for her a vindication of how more prepared and effective she was seen as by the Principal. At the same time as her confidence was growing she was still doubting that she had enough experience to be working with pre-service teachers:

Yeah, it was great. They were good, yeah. It was good experience. But it does challenge you in a way, doesn't it, having a student in your class. Because you do question yourself and the way that you do a lot of things. And then on some other levels I was going oh, this is my one little world view. I'm telling a student this is how it's done or whatever, but, you know, there's so many thousand ways to skin a cat, isn't there? So I just said you know, you need to get out in to a bigger school and ask that question to a broader... you were just getting my one small perspective. (Karoline)

Karoline felt that it was difficult to be fully prepared as a teacher as it was a complex journey that had many obstacles to work through:

Because there are so many, sort of challenges. No two children are the same. You know, or you've got someone with a bit of a learning issue or something in your class room. It takes a while to get through that maze of working out what's going on. We've been going through that one this year. (Karoline)

Karoline's confidence in her abilities was enhanced by not only the fact that her contract was renewed but she had been converted to ongoing. Preparation for Karoline however was more to do with how much she was developing as a teacher as a consequence of working in a small school:

Well I'm ongoing, fortunately. But the issue for me really is my first teaching job, here I am in a small country school and I love it. And I do see myself staying here for a while. But if the time comes that I want to move on, you're only a graduate for three short years. You become much less attractive to employ. You end up going, well, in my final graduate year, do I, if I want to go to a big school, do I make, take the plunge and try to get out in that final graduate year? Knowing that you may be, have less choices in the future because of that. (Karoline).

The rural context was highlighted by Karoline as being 'small', and offering personal fulfilment but a sense of not really experiencing fully what it means to be a 'real' teacher as if the context meant that she was less able to experience a variety of opportunities that would make her better prepared in a larger school.

Parent and community relationships – preparation and development over time

As noted earlier the school publically prides itself on the relationships with the whole school community. Kane was upfront about the fact that she had had little contact with the community since being appointed to the school. In response to a question to talk a little bit about the community she replied: *In truth I haven't really met too many people from the community (Kane)*. Kane also emphasised that during university 'dealing' with parents was a concern, which can be seen in the following:

... I think that was the biggest fear of everyone at uni. "How do you deal with the parents?" was one of the first things. The words "deal with" - it was always those words. I don't know what it's like at a

bigger school, I'm assuming it would be a lot different, a lot more pressure, but here I haven't really felt any pressure from parents. I mean, it sounds bad, but until the parent-teacher interviews, I had trouble putting the parents' faces to kids, so I wasn't sure whose parents were who's in the first term (Kane).

Karoline on the other hand felt that this wasn't a particularly stressful part of the job, as she stated:

I guess for me it's a side, because I've got other life experience, I did often deal with families in other jobs, and because I've got kids of my own I've dealt with teachers as a parent so it really does help to make you more comfortable I think. (Karoline)

Although indicating that there was little contact with parents and the community Karoline did have a strong perception of who they were despite only having been there a short while (4 months):

It seems really cohesive I'd have to say - they're very disparate people but the sense of community is good at the school this year.... I think it's probably a fairly low SES kind of community - I think people come here because the land is cheapish and the lifestyle is good, but it's quite a mix. I've got one child whose mum is a teacher, so you've got professionals right through to people who are on Centrelink payments full time, mum and dad not working at all and haven't worked for quite a period of time. And then some in between. (Karoline)

This reflection was reinforced by the Principal who further elaborated that:

The community is interesting here because on first glance you wouldn't even know there's a community here. There's a lot of acreages behind trees and everything is quite, everyone is quite self contained in their house. Lots of different jobs. Not many farmers. In fact I don't think we have a farmer on the community, they're all jobs in [nearest regional centre] or people who have part time jobs, both partners. (Linda –not her real name)

On the second visit with Karoline she seemed to have a clearer more positive sense of the community and the way in which she was connected into this.

I think it's great. Because it's a functioning community, there's a fair degree of harmony. The parents seem satisfied with what the children are getting and the kids are, behaviour's reasonable, they're pretty good with other people coming in. (Karoline)

Despite this increased sense of belonging in the community and feeling more confident negotiating this in her classroom, there was also a level of angst about how easily this could change in such a small setting:

Yeah, like, it's a good learning environment. The kids get on pretty well. The staff get on, you know. But I can imagine it doesn't take much to upset the apple cart. If you had one conflict happening with a parent or something, as has happened previously here I know and in other small schools, I could just see how the whole thing could go, be upset really easily.... So I think it's great when it's functioning well. It's fantastic and it's added value. (Karoline)

On the third and final visit Karoline's confidence in her role as teacher had increased but there was still a keen sense of being unsure about what was happening outside of her school as there were limited opportunities for professional development or exposure to other teachers or ideas. Prior to our visit there had been an acting principal and Karoline eagerly devoured as much information from him as possible. As she stated: *he'd been around a lot of other schools, and so I had really good conversations. He was like the voice from outside coming in; pump him for information.*

Discussion

The sustainability and development of Australia's rural communities is intricately linked to the effectiveness of Australia's education policy context, teacher workforce and teacher education systems. The literature tells us that Australia's many rural schools appear to be underserved by a system that delivers sub-standard opportunities to rural students" (see for example Human Rights and Equal Opportunity Commission 2000; McTurk, Nutton, Lea, Robinson & Carapetis, 2008; Oakes, 2005; Reid et al., 2010; Smyth 2010). We also know that the overwhelming majority of teachers are trained in universities in urban areas with less than a quarter of all practicum placements taking place in non-metropolitan schools (Halsey, 2009). This section draws on the survey and case study data to consider how school location characteristics impact graduate teachers' transition into the teaching workforce and in particular their pedagogical development and professional engagement with parents, carers and the community.

The statistical analyses conducted with aggregated survey data suggest that the location of the schools in which graduate teachers are employed (metropolitan as compared to regional and rural) has little bearing on their perceptions of their preparedness for teaching or on their effectiveness as teachers, including the development of pedagogical skills and engagement with parents/careers and the community. On the whole, the quantitative data suggests that graduate teachers are prepared for the school settings in which they begin their teaching careers, with mean scores for preparedness and effectiveness, including the various sub-scales with the exception of Professional engagement with parents and the community, consistently yielding scores well above the mid-point of 3. This is true of respondents working in each location group revealing that there is more similarity in graduate teachers' experience of teacher education and beginning teaching than there is difference. This is a large-scale finding that enables teacher educators to speak with confidence about the value and quality of Australia's teacher education programs for graduate teachers working across Victoria and Queensland. It suggests that graduate teachers leave their teacher education programs with a collection of professional learnings, tools and experiences that resonate in a variety of school contexts.

The finding of no statistical difference between graduate teachers working in metropolitan when compared to regional and rural schools does, however, appear to contradict much of what previous research tells us about teaching in rural and regional schools and the challenges regarding rural education. Looking to the disaggregated simple descriptive statistics provided in Tables 3 and 4 the overall successful transition of graduate teachers into regional schools conceals shortfalls associated with preparedness for working in remote and very remote schools. While on the whole self-report of preparedness and effectiveness for all groups remain skewed towards the positive end of the scales, there are differences between groups that require attention. The case study data provides a means to explore these differences, with case study findings able to speak back to the specificity of context and to the bluntness of the quantitative measures employed.

In the Grevillea case it emerged that both graduates perceived themselves to be effective overall but that there were areas in which they were more and less effective and prepared. Contextual factors that their studies did not adequately address included working on a small staff, catering simultaneously for a large age and stage range, and teaching across the curriculum. Graduate teachers working in urban schools had equivalent lists. Important influencers associated with school leadership and the school policy context account for some of the differences unique to particular schools.

The case study presented here is but one example of how rural presents itself in the discourse of effective and/or prepared for graduates. Karoline expressed that she was

prepared during her teacher education but the location offered little opportunity for her to implement and reinforce her learnings. Not feeling as if she was part of the teaching profession and her lack of access to and isolation from professional colleagues had an impact on her confidence in her abilities. Even after three years she was still reflecting on feeling as if she was unable to fully access collegial networks and consequently a tentativeness and anxiety about her professional development comparative to her peers was ever present. These findings are reflected in other non-rural case studies but the small size of the school seemed to heighten this effect.

Pedagogy

Existing literature reveals little in the way of specific pedagogical approaches deemed effective or ineffective for beginning teachers. Reflective practice is identified as an important facet of pedagogy (Choy et al. 2011), in how teachers think and act (Mills, Goos, Keddie, Honan, Pendergast, Gilbert & Wright, 2009; Schussler, Stooksberry & Bercaw, 2010), and to close the gap between the perceived theory/practice divide (Grossman, Hammerness & McDonald 2009; Korthagen 2010). Relationships with leading teachers such as the Principal and mentors are important to beginning teachers' pedagogical approaches. Aspfors and Bondas (2013) note that graduates stress the importance of forming productive relationships with the Principal, where the Principal is caring and provides a conducive environment for teaching and learning. This notion is similar to findings from Berry, Daughtrey and Wieder (2010) where other teachers contribute to beginning teachers' success.

The significance of this is highlighted by Karoline's reflection that as her Principal was a teaching Principal mentoring support wasn't available to help her develop her skills. Although she acknowledged that this was due to the context rather than the Principal's abilities this presented a challenge for Karoline:

... [Linda], as a teaching Principal, we only had the two teachers last year and I was teaching whole school PE, whole school art - it was too much in my first year to be honest, so there were very few times that we actually had time to sit and talk about anything, other than staff meeting when there was a whole lot of other business to be done. So I'd have to say no, but not due to [Linda's] fault, to the resources. (Karoline)

Through the case study participants' acknowledged pedagogical approaches such as critical routines, as an area of effectiveness. Also noted was how the graduates 'manage' with regards to competence or 'control' (or are controlled). These appear to be gaps in the rural teacher education literature.

Engagement with parents/carers and the community

Where we place people to learn affects greatly what they learn about teaching, students, families, community life, and socio-political influences on education (McLaughlin & Burnaford 2007). Australia's schools are more multicultural than ever before, with increasing numbers of children who hail from low socioeconomic backgrounds, who are ethnically diverse, and who speak languages other than English. Many graduate teachers, including the participants in the SETE case studies, are finding that their first teaching jobs occur in vibrant multicultural settings, leading teacher education programs to become more concerned with preparing their teacher candidates to enter and remain in such educational environments.

The rural context can present many challenges and opportunities for teachers. The experience involves both the educational challenges associated with remoteness and the opportunities of small classes and a strong community atmosphere. Rural teachers have the opportunity in many (but not all) rural communities to experience the rewards of being valued members of a community and can benefit from the strong involvement many rural communities have in their school. Conversely teachers can also see these attributes of rural contexts as negatives, focusing on the challenges of isolation and the limited number of teaching staff at many small rural schools. Somewhere between these two poles of experience exists the reality of working in rural and remote schools (Roberts, 2004). This can be seen with the vignette from Karoline and her school. The reality for her was that although she valued her community due to parents being less involved than she had anticipated she was at a loss initially as to how to engage with them. Later on she also recognized the precariousness of the relationships with the teachers and parents and how quickly that can change everything. Karoline's testimony concurrently disrupts and reaffirms notions of rural communities as cohesive.

Research related to teacher retention recognise teachers' sense of mission, their dispositions for hard work and persistence, their targeted teacher preparation that included both academic and practical knowledge, the practice of reflection, the opportunity to change schools or districts and still remain in their profession, and sustained ongoing support and access to professional networks help to sustain teachers in schools that their colleagues tend to shun (Cooper & He, 2013). These same factors are named by the case study participants and for these graduate teachers, teacher preparation quality seems to refer to teachers' connection with the lives, heritages, and cultural forms of the children and families in the community.

Interestingly, in this case high levels of cultural and linguistic diversity amongst the students were not commented on by the graduates. This omission can be interpreted in a number of ways including as indicative of graduate competencies accommodating diverse learners or, conversely, as evidence of their failure to recognize cultural heritage and language as significant (see Forrest and Dunn, 2013) for broader discussion of manifestation of racism in rural Australia).

The aggregated survey data reveals that regardless of school location, graduates perceive themselves to be much less prepared than effective when it comes to professional engagement with parents and the community. Building an awareness and a sense of commitment to diverse settings in education suggests that prospective teachers need a map to learn about the communities in which they will take teaching positions – not just a map of the building in which they will teach (McLaughlin & Burnaford, 2007).

Rural workforce development

'Professional isolation' (Roberts, 2004) is seen as one of the main disadvantages in attracting teachers to rural schools and of working in a rural setting. In general, undertaking a rural practicum is optional for Australian teacher education students, and preparation for these experiences is not included as standard practice (Kline, White & Lock, 2013). Communities have a critical role in supporting pre-service teachers during rural and regional professional experience, thus attracting them to in-service teaching in rural schools. What retains novice teachers in rural schools is a personal connection to rural communities and they view themselves as individuals who prefer to live in such communities. Further, they see the school as a prominent institution in the community (Cooper & He, 2013). This developing sense of connectedness is evident in Karoline's testimony.

Rural schools need high-quality teachers who understand rural areas, which necessitates contextualising pre-service teacher preparation (Hudson & Hudson, 2008). According to Hudson and Hudson (2008), instilling confidence and empowering pre-service teachers to teach and live in rural areas require first-hand experiences to create attitudinal changes.

While the support of beginning teachers is a general concern for the profession it becomes more crucial in rural and remote areas due to the high number of beginning teachers and their isolation from friends and family. In rural and remote areas Roberts (2004) recommends support programs need to be school based and include adequate time to travel to neighbouring schools to network with colleagues. Beginning teachers in rural and remote areas are often the only teacher in their faculty and any collegial support requires travelling large distances. Karoline references distance and access and opportunity to professional development and/or other members of the teaching profession as a constant source of professional and personal anxiety for her over the entire three visits. On the more positive side of the spectrum living in small rural and remote communities can be a unique experience because of the close interrelationship between the school and the teachers in the community.

The issues of recruiting and retaining¹ teachers in rural areas continue to dominate the literature. It is recognized that rural schools in the United States have a below-average share of highly credentialed teachers, and compensation in rural schools tends to be low, perhaps because of a lower fiscal capacity in rural areas, thus complicating efforts to attract and retain teachers (Monk, 2007). Comparative findings were made by Plunkett and Dyson their research initiated in response to a question posed by a local school Principal about how to attract and retain new high quality teachers in part of regional Victoria, Australia (Plunkett & Dyson, 2011). While some teacher educators work with the pragmatic assumption that many of their graduates will choose to teach in country schools because they are country people, and know that the myths and rumours are not the whole story or have learned otherwise, Reid et al. (2010) believe this to be insufficient and inadequate as a means of ensuring teacher supply and commitment to rural schools. In their discussion of rural primary schools in New Zealand, Kearns, Lewis, McCreanor and Witten (2009) suggest instead “a school is both an asset and a drawcard for a rural community” (p.131), and that schools play a role in the “production and reproduction of communities and the social cohesion of neighbourhoods” (p.132). English scholars Walker and Clark (2010) further note that school participation can reflect an emotional commitment to the local community. Interestingly Kane had grown up and lived near this community but despite this did not remain in this school due to his contract being renewed. Another graduate was employed in his stead but he only remained for a year. This graduate was a mature age male who had a health background and decided after his contract was finished to return to his previous profession.

Roberts (2004) contends that the development of teacher education programs addressing rural and remote contextual issues needs to be dovetailed into practicum and internship experiences. None of the graduates referred to having received any contextual information as an explicit part of their teacher education. Such an experience could encourage graduates to take up such an appointment or dissuade them from taking up a position for which they are ill prepared. It is believed that by making an informed decision newly appointed teachers will bring a positive attitude and flourish in their new appointment. This assertion is supported by the case study participants who reveal that retaining teachers in rural schools is a complex matter. Simplistic recruitment models such as those which award financial incentives to teachers who undertake rural positions is in some ways a deficit model of school staffing as it attracts people with incentives rather than positively promoting the career and a rural placement (Roberts, 2004).

Conclusion

This analysis of a sub-set of the SETE data tells us that graduates of teacher education are faring well, but highlights differences in experiences such as those based on school location that are best captured using a combination of qualitative and quantitative methods. The divergence of findings from the qualitative and quantitative components of the research provide a strong case for longitudinal, mixed-methods work, illustrating how neither approach used in isolation can match the wealth of insight possible when the approaches are systematically coupled in an iterative design.

The size of the quantitative dataset is significant and meets the needs of policy makers who tend to prefer working from large-scale findings over results from small-scale studies (Watterson, 2013). The large numbers of participants in the SETE surveys enables various variables to be isolated and manipulated to explore the associations between dimensions of teacher education programs, individual teacher and school characteristics, albeit in a necessarily blunt fashion. By teaming quantitative surveys with case studies in an iterative design, results of the surveys can be read against the storylines of graduate teachers as they develop their professional identity in school contexts. In the SETE project, the data collected via case studies has been able to feed directly into the refinement and development of survey items that better capture important differences, in this case, the case study data reveals ways in which richly specific character of an individual school community and can contribute to the discussion about rural education and development more broadly to uncover the nuances and complexities of the diverse contexts in which graduates work. The significance for rural education debates is the opportunity to identify ways to better measure differences between locations in order to assess the difference in school location. The qualitative work tells us what we may have missed using the quantitative instruments and shows us that 'equal outcomes' don't mean that the experience is the same.

From this work it appears that there is more similarity in graduate teachers' experience of teacher education and beginning teacher than there is difference, but that differences associated with school demographics and individual community settings, identified using qualitative approaches, can provide a nuanced lens through which the quantitative data can be viewed and the unique features of schools understood. While the case study provides only one example of rural context, it illustrates the power of using qualitative data to interpret and identify rural teacher workforce needs.

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