

School of Education

**Rethinking connectedness: An investigation into the access
of teacher professional learning in regional and remote
Western Australia.**

Tania Lee Broadley

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Declaration

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university. To the best of my knowledge and belief this thesis contains no material previously published by any other person except where due acknowledgement has been made.

Signature: _____
Tania Lee Broadley

Date: _____

Abstract

Many teachers working in remote and regional areas have limited access to collegial support networks. This research aimed to examine the existing strategies that were being undertaken by the Department of Education in Western Australia, to provide professional learning to teachers in regional and remote areas. It was important to establish the perceptions of teachers' access to professional learning from those working at the coalface in geographically dispersed areas. Consequently, the possible opportunity for improving the amount and variety of professional learning, through the application of both synchronous and asynchronous technologies was proposed. The study was guided by the primary research question: "In what ways might technology be used to support professional development of regional and remote teachers in Western Australia?" Generating descriptions of current practice of professional learning along with the teacher perceptions were central to this research endeavour.

The study relied on a mixed method research approach in order to attend to the research question. The data were collected in phases, referred to as an explanatory mixed methods design. Quantitative data were collected from 104 participants to provide a general picture of the research problem. To further refine this general picture, qualitative data were collected through interviews and e-interviews of 10 teachers. Participants in the study included graduate teachers, teachers who had taught more than two years, senior teachers and Level Three teachers from seven teaching districts within Western Australia. An investigation into current practice was included in this phase and technologies available to support a professional learning community over distance were documented. The final phase incorporated the formulation of a conceptual framework where a model was developed to facilitate the successful implementation of a professional learning community through the application of synchronous and asynchronous technologies.

The study has identified that travel time in order to access professional development is significant and impacts on teachers' personal time. There are limited relief teachers available in these isolated areas which impacts on the opportunities to access professional development. Teachers face inequities, in terms of promotion, because professional development is explicitly linked to promotional opportunities. Importantly, it was found that professional learning communities are valued, but are often limited by small staff numbers at the geographic locality of the school. Teachers preferred to undertake professional learning in the local context of their district, school or classroom and this professional learning must be established at the need of the individual teacher in line with the school priorities. Teachers reported they were confident in using technology and accessing professional development online if required, however, much uncertainty surrounded the use of web 2.0 technologies for this purpose. The recommendations made from the study are intended to identify how a professional learning community might be enhanced through synchronous and asynchronous technologies.

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Table of Contents

Declaration	ii
Abstract	iii
Acknowledgements	v
Table of Contents	vii
List of Tables	xii
List of Figures	xiii
Glossary of Terms	xv

Chapter One – Introduction

1.1	Overview	1
1.2	Rationale for the Study	1
1.3	Background	2
1.4	Aims and Objectives.....	5
1.5	Methodology Overview.....	6
1.6	Theoretical Foundations.....	7
1.7	Significance of the Study	8
1.8	Terminology	10
1.9	Thesis Overview	11

Chapter Two – Literature Review

2.1	Overview	14
2.2	Current Climate of Australian Schools	14
2.2.1	Digital Education Revolution	15
2.2.2	National Curriculum of Australia	18
2.2.3	Professional Standards for Australian Teachers	21
2.3	The Western Australian Context in Brief	24
2.4	A Brief History of Professional Development	25
2.5	Community of Practice Theory	28
2.6	Learning Communities	30
2.7	e-Learning Communities	34
2.8	Regional and Remote Education	38

2.8.1	Regional and Remote Inquiries	38
2.8.2	Impact on Teacher Retention	41
2.8.3	Pre-service Teacher Preparation	42
2.8.4	Access to Further Education	43
2.9	Preliminary Theoretical Framework	45
2.10	Chapter Summary	45

Chapter Three – Methodology

3.1	Overview	46
3.2	Research Approach	46
3.3	Research Design	48
3.3.1	Phases of the Study	48
3.3.2	Sample	51
3.3.2.1	Background of Country Teaching Program	51
3.3.2.2	Background of Remote Teaching Service	52
3.3.2.3	Sample Selection	53
3.4	Phase Two	55
3.4.1	Stage 1 – Quantitative Data Collection	55
3.4.2	Stage 1 – Qualitative Data Collection	57
3.4.3	Stage 2 – Investigation of Current Practice	58
3.5	Phase Three	59
3.5.1	Quantitative Data Analysis	59
3.5.2	Qualitative Data Analysis	60
3.5.3	Findings and Conceptual Framework	60
3.6	Triangulation, Validity and Reliability	60
3.7	Ethical Considerations	62
3.8	Chapter Summary	63

Chapter Four – Quantitative Results

4.1	Overview	64
4.2	Survey Conduct and Response Rate	64
4.3	Survey Instrument	65

4.4	Reliability and Validity	65
4.5	Respondent Profile	67
4.5.1	Gender, Experience and Teaching Status	67
4.5.2	Teaching Qualifications vs Current Teaching Position	70
4.5.3	Employment Program (CTP & RTS)	71
4.5.4	Size of School	72
4.5.5	Teaching Regions	73
4.6	Results – Total Population	74
4.6.1	Access to Professional Development	75
4.6.2	Learning Communities	76
4.6.3	Use of Technology/ICT	78
4.6.4	Value of Professional Development Approaches	79
4.6.5	Professional Development Selection.....	80
4.6.6	Ten Highest Ranking Items	81
4.7	Results – Regional vs Remote Teachers	82
4.7.1	Tests of Normality	83
4.7.2	Significance of Relationship Between Variables	88
4.8	Results – By Teaching Region	89
4.8.1	ANOVA	89
4.8.2	Agreement by Category	92
4.8.2.1	Access to Professional Development	92
4.8.2.2	Learning Communities	94
4.8.2.3	Use of Technology/ICT	97
4.8.2.4	Value of Professional Development Approaches	98
4.8.2.5	Professional Development Selection	100
4.9	Summary of Results	101
4.10	Chapter Summary	105

Chapter Five – Qualitative Results

5.1	Overview	106
5.2	Respondent Profiles	106
5.3	Access to Professional Development	108
5.4	Learning Communities	112

5.5	Use of Technology	115
5.6	Value of Professional Development	117
5.7	Professional Development Selection	119
5.8	Final Thoughts and Teacher Recommendations	123
5.9	Summary of Results	125
5.10	Chapter Summary	127

Chapter Six – Investigation of Current Practice

6.1	Overview	128
6.2	Department of Education Context	128
6.2.1	E-Learning Portal	129
6.2.2	Professional Learning Institute Enrolment System	132
6.2.3	Networking and Internet Capabilities	135
6.3	The Role of Higher Education in Professional Development	135
6.4	The Role of Professional Associations in Professional Development..	138
6.5	Chapter Summary	139

Chapter Seven – Findings, Discussion and Conclusions

7.1	Overview	140
7.2	Research Aims and Objectives	140
7.3	Research Overview	141
7.4	Key Findings	143
7.4.1	Travel Time is Significant and Impacts on Teachers’ Personal Time	144
7.4.2	Limited Availability of Relief Teachers’ Impact on Access to Professional Development.....	145
7.4.3	Promotion and Teacher Registration is Explicitly Linked to Professional Development	146
7.4.4	Professional Learning Communities are Valued	147
7.4.5	Professional Learning Conducted in the Local Context	148
7.4.6	Professional Learning Established at Teacher/School Level	149
7.4.7	Teachers Confident in Using and Accessing Technology	151
7.4.8	Social Cohesiveness is Valued and Often Limited by Isolation	153

7.5	Application of the Community Cohesion Model	153
7.6	Recommendations and Model	155
7.7	Limitations of the Study	159
7.8	Considerations for Future Research	160
7.9	Conclusions	161

References	163
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Appendices

Appendix A:	List of CTP and RTS Schools from 2008	176
Appendix B:	Quantitative Survey	179
Appendix C:	Emails to Principals for Stage 1 Quantitative Data	185
Appendix D:	Emails to Principals for Stage 2 Qualitative Data	187
Appendix E:	Information Sheet for Principals	189
Appendix F:	Information Sheet and Consent Form for Participants	191
Appendix G:	Qualitative Interview Schedule	194
Appendix H:	Electronic Copy of Survey on Web 2.0 File Sharing Site	196
Appendix I:	Social Networking Group for Participants	198
Appendix J:	Example of Teacher Reply to Participate	200
Appendix K:	Level 3 Classroom Teacher Competency Rubrics	202
Appendix L:	SPSS Variables Screen Shot	205
Appendix M:	SPSS Raw Data – Access to Professional Development.....	207
Appendix N:	SPSS Raw Data – Learning Communities	209
Appendix O:	SPSS Raw Data – Use of Technology/ICT	211
Appendix P:	SPSS Raw Data – Value of Professional Development Approaches	213
Appendix Q:	SPSS Raw Data – Professional Development Selection	215
Appendix R:	Qualitative Raw Data	217

List of Tables

Table 4.1	Cronbach Alpha Coefficient Reliability Values for Categories	66
Table 4.2	Demographic Information Detailing Respondent Numbers by Gender, Years of Teaching and Current Teaching Status.....	68
Table 4.3	Respondents' Total Years Teaching Compared With Total Years Teaching in a Regional/Remote Area.....	69
Table 4.4	Demographic Information Detailing Current Teaching Region	74
Table 4.5	Category Level Ranked by Highest Mean	75
Table 4.6	Descriptive Statistics of Access to Professional Development Ranked by Highest Mean	76
Table 4.7	Descriptive Statistics of Learning Communities Ranked by Highest Mean	77
Table 4.8	Descriptive Statistics of Use of Technology Ranked by Highest Mean	79
Table 4.9	Descriptive Statistics of Value of Professional Development Approaches Ranked by Highest Mean	80
Table 4.10	Descriptive Statistics of Professional Development Selection Ranked by Highest Mean	81
Table 4.11	Ten Highest Ranking Items by Mean	82
Table 4.12	ANOVA Items of Significance Between Teaching Regions	90
Table 4.13	Bonferroni Post Hoc Items of Moderate Significance	91
Table 4.14	Strong Agreement and Agreement within Access to Professional Development by Teaching Region	94
Table 4.15	Strong Agreement and Agreement within Learning Communities by Teaching Region	96
Table 4.16	Strong Agreement and Agreement within Use of Technology by Teaching Region	98
Table 4.17	Items of Very High Value and High Value within Value of Professional Development Approaches by Teaching Region	99
Table 4.18	Strong Agreement and Agreement within Professional Development Selection by Teaching Region	100
Table 5.1	Participant Profiles from Qualitative Data Collection Phase	107

List of Figures

Figure 1.1	Model of Community Cohesion.....	7
Figure 2.1	National Secondary School Computer Funding Expenditure by State.....	16
Figure 2.2	Dominant Curriculum Model.....	19
Figure 2.3	Capabilities-based Curriculum Model.....	20
Figure 2.4	Former DoE District Boundaries.....	25
Figure 2.5	Model of Teacher Change.....	26
Figure 2.6	Interconnected Model of Professional Growth.....	27
Figure 2.7	Factors Influencing School Capacity and Student Achievement.....	32
Figure 2.8	Model of Community Cohesion.....	33
Figure 2.9	Significant Factors Contributing to Educational Disadvantage in Rural and Regional Australia.....	44
Figure 3.1	Research Conceptual Framework.....	49
Figure 3.2	Timeline of Research Design Phases.....	50
Figure 3.3	Stratified Random Sample of Schools Surveyed.....	53
Figure 3.4	Education Districts in Western Australia.....	54
Figure 4.1	Five point Likert Scale for Survey Instrument.....	65
Figure 4.2	Four point Likert Scale for Value of Professional Development Category.....	65
Figure 4.3	Current Teacher Status Sorted by Gender.....	69
Figure 4.4	Comparison of Original Teaching Qualification and Current Teaching Position.....	71
Figure 4.5	Teachers Employed in RTS and CTP.....	72
Figure 4.6	Number of Teachers Employed in Current School.....	73
Figure 4.7	Boxplots of the Value of Professional Development Approaches Category for Remote Teaching Service and Country Teaching Program.....	84
Figure 4.8	Boxplots of the Use of Technology Category for Remote Teaching Service and Country Teaching Program.....	86
Figure 4.9	Boxplots of the Learning Communities Category for Remote Teaching Service and Country Teaching Program.....	87
Figure 5.1	Participant Locations in Relation to DoE Districts.....	108

Figure 6.1	Conceptual Framework of DoE Portal System.....	129
Figure 6.2	Synchronous Web Conferencing Collaboration Tool.....	131
Figure 6.3	PLI Online Calendar and Enrolment System Login Page.....	132
Figure 6.4	PLI Workshop Calendar.....	133
Figure 6.5	Elluminate Synchronous Software User Interface.....	137
Figure 7.1	Rethinking Connectedness Model.....	157

Glossary of Terms

ACARA:	Australian Curriculum, Assessment and Reporting Authority
ACE:	Australian College of Educators
AITSL:	Australian Institute for Teaching and School Leadership
ALP:	Australian Labor Party
CMC:	Computer Mediated Communication
CoP:	Community of Practice
CTP:	Country Teaching Program
DoE:	Department of Education (Western Australia)
DEEWR:	Department of Education, Employment and Workplace Relations
DER:	Digital Education Revolution
DEST:	Department of Education, Science and Training
DOTT:	Duties other than Teaching
EDNA :	Education Network of Australia
HREOC:	Human Rights and Equal Opportunity Commission
ICPA:	Isolated Children's and Parents' Association
ICT:	Information and Communication Technologies
ICTIF:	Information and Communication Technology Innovation Fund
MCEETYA:	Ministerial Council on Education, Employment, Training and Youth Affairs
OTSL:	Online Teaching and Learning System
OPL:	Online Professional Learning
PD:	Professional Development
PL:	Professional Learning
PLI:	Professional Learning Institute
RREAC:	Rural and Remote Education Advisory Council
RSS:	Really Simple Syndication
RTS:	Remote Teaching Service
SIDE:	School of Isolated and Distance Education
SiMERR:	Centre of Science, ICT and Mathematics Education for Rural and Regional Australia
SIS:	School Information System (Curriculum Information Management)
SPERA:	Society for the Provision of Education in Rural Australia

CHAPTER ONE

Introduction

*“Nothing has such power to broaden the mind as the ability to investigate systematically and truly all that comes under thy observation in life”
Marcus Aurelius AD121-180*

1.1 Overview

This chapter begins by introducing the research and providing a rationale and background to the study. The chapter outlines the aims and objectives of the research and provides a brief overview of the methodology used within the study. The significance of the study is outlined and an overview of the thesis structure is provided.

1.2 Rationale for the Study

An interest in regional education evolved through the author’s experience of living and working in regional areas of Western Australia for over twenty years. The earliest years began with her primary years of education undertaken in a two room school in the Goldfields South Eastern region, some 400 kilometres from the metropolitan area. The author’s secondary education was situated in the South West, Midwest and Pilbara regions of Western Australia. After several years of working in the Pilbara and Midwest, the author worked as a research assistant in educational research relating to regional and remote issues. The opportunity to delve into research related directly with teachers, schools and communities in these areas of the state allowed the fire to reignite. More recently, whilst engaging in her data collection for this study, the author relocated again to her childhood roots of the Goldfields South Eastern region, to a town located some 730 kilometres from the metropolitan area. This journey in regional education has provided the catalyst for the author to add to the body of knowledge in the field of regional education and teacher professional learning.

Many teachers working in regional and remote areas have limited access to collegial support networks. The link between retaining teachers in these areas and the importance of being connected within a professional learning community have been highlighted by a national study conducted by the National Centre of Science, ICT and Mathematics Education for Rural and Regional Australia (SiMERR). This research generated a report to the Department of Education, Science and Training (DEST) from which the recommendation “that education authorities, in partnership with schools and school communities, universities, and professional organisations meet the continuing needs of teachers in rural and regional areas through a range of strategies that ensure equitable access to ongoing quality professional learning” (Lyons, Cooksey, Panizzon, Parnell & Pegg, 2006, p. xiii). Inequitable access to professional learning was reported under the broader theme of professional connectedness and isolation. A substantial finding that “primary teachers in remote areas indicated a significantly higher unmet need for professional development opportunities such as mentoring, release time for professional development and collaboration with colleagues than teachers did elsewhere (Lyons et al., 2006, p. 85)”, identifies the importance of further research to identify a framework for best utilising technology to support such an initiative.

Interesting research by Henderson (2006) began to appear in the literature about the notion of community in blended professional learning. Henderson’s research was grounded in the Community of Practice theory coined by Etienne Wenger in 1998. This study has been designed to ultimately build on the valuable work of Henderson in 2006. It goes beyond the concept of blending asynchronous and face to face learning, as Henderson did, extending into the realm of synchronous software and its potential uses.

1.3 Background

A number of studies have been conducted in Australia that highlight the importance of professional learning and the difficulty faced by regional and remote teachers with regard to access (Lyons et. al, 2006; Gerard Daniels, 2007; Ministerial Review of Schooling, 1994; Rural and Remote Education Advisory Council, 2000; Vinson,

2002). In Western Australia, with a significant number of schools in regional and remote areas, there has been ongoing research and reporting into issues affecting teacher retention in regional areas. The report, *Schooling in Rural Western Australia*, compiled some 15 years ago, made extensive recommendations with regard to increasing resources to professional learning (Ministerial Review of Schooling, 1994). More recently, in 2000, the *Pathways to better education and training for rural and remote Western Australia* report once again identified access to professional learning as a significant area of concern for teachers outside of the metropolitan area (Rural and Remote Education Advisory Council, 2000). This report posed the benefits of a cross-sectoral approach to professional learning, where schools from the Department of Education (DoE), Catholic and Independent sectors might move to a joint approach to offer their staff professional learning in communities that were a considerable distance from the metropolitan area. However, the implementation of these findings and policies into practice appear to be limited.

Along with access to professional learning, has been the discussion of effective modes of delivery. Face to face professional learning, in regional and metropolitan areas, is offered in isolation, or in some cases, is complemented with virtual learning environments. Wallace and Boylan (2007) explored a number of issues affecting the retention of rural teachers and noted importance of the ‘provision of in-service education that is well supported both financially and by staff release in rural places as well as in larger regional and urban centres’ (p. 27). This is supported by Auh and Pegg (2009) who believe professional learning held within a school, based on issues to be solved within that school appear to be most beneficial. This research showed that teachers gain more from professional learning that is situated within the local context and based on their needs. As schools are faced with budgetary constraints the reality of this occurring in Western Australia is questionable.

Lloyd and Cochrane (2005) reported the ‘professional learning community’ as an effective form of professional learning as the focus in on the teachers as members of a wider community of learners. The ethos of a professional learning community in the education arena is built around the continuous study of teaching and learning.

Teachers who engage in these learning communities are working together to expand their teaching repertoire. Joyce, Weil and Calhoun (2000) reported their work with schools and recommended a structured 'learning community' model to assist in sustaining such an initiative. This incorporates the use of 'coaching teams' where two or three teachers engage and support each other with academic learning and teaching skills and strategies. Each 'coaching team' is then linked to one or two other teams, which forms a study group. The study group is limited to around six teachers. Auh and Pegg (2009) reinforce the importance of teachers working in teams in subject areas in a school or if required, across schools to reduce feelings of professional isolation in regional and remote areas.

Professional isolation and access to professional learning has affected teachers in country areas for some time (Lyons, Cooksey, Panizzon, Parnell & Pegg, 2006). The primary objective of professional learning is to improve teachers' competency which in turn will impact on student achievement. All teachers working within Western Australia must be registered with the Western Australian College of Teaching (WACOT). For renewal of membership teachers need to demonstrate they have engaged in a minimum of three out of 15 types of professional learning activities and keep records that verify this participation. Within their professional learning position statement, WACOT (2008) states that "as professionals, teachers need to update their skills and knowledge continuously, not only in response to a changing world, but in response to new research and emerging knowledge about teaching and learning. There is a growing recognition that highly skilled and knowledgeable teachers have the greatest impact on student achievement." Interestingly, there is no reference to regional, rural or remote within this position statement or how teachers in these areas might access a minimum of three professional learning activities. A further search of the WACOT website reveals that no reference is made to regional, rural or remote within any other statements and policies.

For teachers in regional and remote areas of Western Australia, the opportunity to participate in activities provided by professional associations has been limited. Boyd, Broadley and Terry (2008) discussed the presentation of two quality, cost

effective “Hot Topics” seminars using video-conferencing technology. This initiative was undertaken to address a need for professional learning and networking between educators in regional and remote locations in Western Australia. Until this initiative, there had been limited evidence of this having occurred between professional associations in the metropolitan area and teachers in regional areas of the state.

Much has been written about the use of technology to bridge the gap for regional and remote teachers (Boyd, Broadley & Terry, 2008; Steketee & McNaught, 2007; Trinidad, 2007; Trinidad & Broadley, 2008). However, the literature shows that whilst many schools are encouraging their teachers to actively embed ICT in their teaching and learning practices, many have not considered this medium to deliver professional learning opportunities to their teachers.

1.4 Aims and Objectives

The primary aim of this research was to develop a conceptual framework that would facilitate improving the amount and variety of professional learning available to regional and remote teachers.

In order to achieve this aim the following objectives were developed:

- 1) Examine the existing strategies in place to provide professional learning to regional and remote areas of Western Australia.
- 2) Investigate regional and remote teachers’ perceptions of their access to professional learning in Western Australia.
- 3) Describe current practice and technologies available to support a professional learning community over a geographically dispersed distance.
- 4) Devise a conceptual framework to facilitate the implementation of a professional learning community through the application of synchronous and asynchronous technologies.

From the aims and objectives of the project emerged the primary research question: *“In what ways might technology be used to support professional learning of regional and remote teachers in Western Australia?”*

1.5 Methodology Overview

A mixed method research approach has been used in this study in order to attend to the research question. Mixed method research focuses on “collecting, analysing and mixing both qualitative and quantitative data in a single study or series of studies”, in order to understand the problem better (Creswell & Plano Clark, 2007, p. 5).

This study was conducted in phases, referred to as an explanatory mixed methods design. Phase One included an extensive review of the literature in order to position this study in the context of the previous research and identify the gaps in the literature.

In Phase Two, data were collected in two different stages. In Stage One, quantitative data were collected to provide a general picture of the research problem, followed by the qualitative data to further refine the general picture (Fraenkel & Wallen, 2006). This closely fits with Creswell and Plano Clark’s (2007, p. 71) purpose for using such an approach in that “qualitative data helps explain or build upon initial quantitative results.” In Stage Two, data were collected to describe current practice in the DoE and other professional learning providers in order to document the technologies currently available to support professional learning in an online environment.

Phase Three involved considering associations and relationships from the findings and formulating a conceptual framework to facilitate improving the amount and variety of professional learning available to regional and remote teachers by using synchronous and asynchronous technologies. The results of this mixed-method research have provided a better understanding of the research problem than either approach alone.

1.6 Theoretical Foundations

This study focuses on the importance of groups of people who share an interest in teaching and strive for excellence in their profession. As a result it was important to identify a theoretical foundation that would underpin the formulation of a conceptual framework to support these groups. Extensive studies conducted by Wenger (1998), Lave and Wenger (1999) and Wenger, McDermott and Snyder (2002) into situated learning and community cohesion have championed the Community of Practice theoretical framework. Increasingly, the literature refers to the notion of a professional learning community within an e-learning environment, where teachers have convenient access to ongoing support, collaborative learning, and meaningful and stimulating discussion (Davies, Ramsay, Lindfield & Couperthwaite, 2005; Henderson, 2006; Herrington & Herrington, 2001; Rablin, 2007). These professional learning communities are often supported by asynchronous technologies through the Computer Mediated Communication (CMC) tools within a learner management system. Unlike one-off skills based professional learning, these communities can be sustained over time and encourage teachers to share and negotiate ideas to work together toward a common goal resulting in a Community of Practice (CoP). Henderson's (2006) study on community cohesion began to explain why a community of practice is valuable when teachers are mutually engaged, respond to a common need and share their experiences (see Figure 1.1).

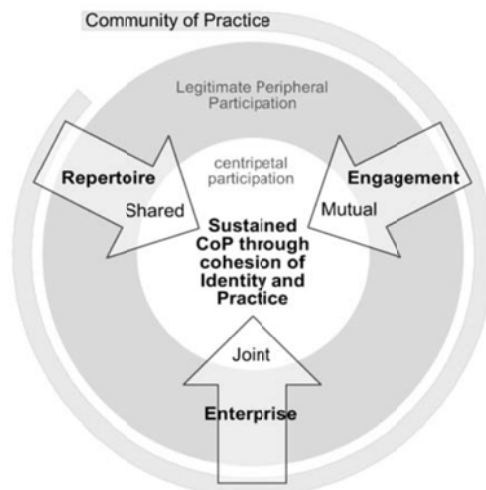


Figure 1.1 Model of community cohesion (Henderson, 2006).

These communities are integral for individual teachers; whom as part of a wider professional community engage in learning through social participation. Within this social participation teachers construct and continuously create their identity through sharing in these communities of practice (Wenger, 1998). The professional learning of teachers can be tailored to meet their specific needs as they are ongoing and embedded in the context of the community.

It is proposed that Community of Practice (CoP) theory could provide a preliminary theoretical framework to the research. Underpinning this model are three major factors: first the formation of a localised CoP is reliant on the members engaging in similar things and forming a sense of belonging by which their perspective becomes more meaningful or significant (mutual engagement). Second, this sense of belonging is then the basis of which those working in an interconnected way engage in communal negotiations toward a common goal (joint enterprise). The third factor is that the engagement of the members in the community see them responding to challenges that arise and developing a collection of lessons learnt about their practice which result in a knowledge base which defines the CoP (shared repertoire).

The CoP theory is central to groups of people who share a passion for something they do and learn how to do it better as they interact regularly within their community. While Henderson's (2006) Model of Community Cohesion presents the factors influencing community cohesion, it does not indicate the interrelationship between the technology and the participants. This research aims to explore the blended environment of asynchronous and synchronous technologies to gain a better understanding of how teachers' professional learning might be improved through community cohesion using these technologies.

1.7 Significance of the Study

While many studies have been conducted into regional and remote education across the states and territories of Australia, the review of the literature showed teacher professional learning through synchronous technology was not widely researched.

Further research into the area of professional learning has been recommended within the Twomey Report. This was exemplified in a section addressing equity which recommended that:

employees should be encouraged to pursue professional development opportunities to expand their qualifications base and enhance their careers”. This recommendation was supported by participant comments such as, “Provide better access to quality professional development for people working in rural and remote locations (Education Workforce Initiatives Taskforce, 2008, p. 123).

In December 2008, Professor Denise Bradley AC delivered the Final Report into the Review of Australian Higher Education (Commonwealth of Australia, 2008b). This report highlighted the importance of targeting under-represented groups currently accessing higher education including; those from low-socio economic backgrounds, regional and remote areas and Indigenous students. In order to increase participation the report states:

An additional allocation of \$80 million per year to develop innovative, collaborative, local solutions to provision of higher education in regional and remote areas is recommended. As well, serious consideration should be given to the development of a university with special expertise in provision of higher education across regional and remote Australia (Commonwealth of Australia, 2008b).

In terms of the findings from the Review of Australian Higher Education, these are significant to teachers who are living and working in regional and remote Australia. In order to access postgraduate studies in Education, which also fall under the realm of teacher professional learning, considerable change needs to occur.

Further investigation was undertaken in 2009, as the Senate conducted a national Inquiry into Rural and Regional Access to Secondary and Tertiary Education Opportunities. A large number of submissions from organisations and community

members cemented the foundation of the need for equity and access to quality education programs. This further highlights the significance of the study in the current context of regional and remote teachers accessing professional development from higher education providers.

The current context of change in Australian schools, more specifically the uptake of digital learning through an education revolution, the implementation of a national curriculum and the accountability of teachers through the new professional standards, necessitates extensive professional learning of teachers in all of these areas. This current study provides important information to policy makers of these initiatives regarding the challenges associated with professional learning in regional and remote areas of Western Australia.

In addition, a number of organisations and professional associations including, the Australian College of Educators in Western Australia (ACE-WA), the Rural and Remote Education Advisory Council (RREAC) and the Society for the Provision of Education in Rural Australia (SPERA), have indicated a need for research into effective implementation strategies and maintenance of professional learning at a distance.

1.8 Terminology

It is crucial to explain the use of the terminology within this study. The term *professional development* (PD) is used throughout this study, particularly within the literature review. This term is linked to the concept of upskilling and developing teacher competence that in turn will improve student learning outcomes. The term is also used in the data collection phase of the study, as those working in schools are familiar with this terminology. More recently, the education sector has moved to the notion of *professional learning* for teachers rather than the *professional development* of teachers. Professional learning indicates a more holistic approach where formal and informal opportunities encourage other forms of teacher learning, including reflective practice and collaboration, that aim to impact student outcomes.

Teachers were surveyed and interviewed about their perceptions of a *professional learning community*. For the survey data collected in Stage One, participants were provided with a brief definition which said “a collegial group who are united in their commitment to student learning – can be formal or informal”. Within Stage Two of the data collection, participants were interviewed and were asked what the term meant to them, what it might be within a school and a district and how it could be done online.

The term *community* relates to a wide range of phenomena and has been studied in great depth by many social science researchers. In this study, the aim was not to validate the definition of the term *community*, rather the term *professional learning community* was used to discuss a group of educators working in a collaborative manner toward improving teaching practice. This definition was not presented as a definitive definition of a professional learning community, however, it provides a common understanding for the participants in the study and the readers of this thesis.

1.9 Thesis Overview

The purpose of this thesis is to provide insights into the professional learning of teachers working in regional locations. It is presented in seven chapters and 18 appendices.

Chapter 1 provides an introduction to the study and contextualises professional learning for regional and remote teachers in Western Australia. It outlines the theoretical framework and the aims and objectives of the study. Finally, it provides the overview of the design, an overview of the methodology and highlights the significance of the study.

Chapter 2 offers a review of the literature, which is pertinent to the study described in this thesis. This is presented in terms of the current climate of Australian schools, professional development and innovation change; regional and remote research; e-learning; community of practice theory and recent initiatives in e-learning

communities. It also informs the basis of the detailed conceptual framework which informed the findings of the study.

Chapter 3 describes the methodology used in this study. Firstly, a philosophical foundation of the research approach is provided which offers a rationale for the research design. The techniques used to select the sample will be specified and the developmental stages of the instrument design will be outlined. The phases of the study will be discussed, including the objectives that were to be met in each phase.

The phases of the research design are described under the following headings:

- Phase 1 – Background and literature review.
- Phase 2 – Quantitative, qualitative data collection and description of current practice.
- Phase 3 – Findings and conceptual framework.

Furthermore, the processes involved in collecting and analysing the data will be discussed. The final sections will consider triangulation, validity, reliability and ethical considerations for the study.

Chapter 4 details the results of the quantitative data collection. Descriptive data are presented through mean scores and standard deviations. Major differences between regional (Country Teaching Program) and remote (Remote Teaching Service) teachers at both the category and individual item are displayed. Further analysis looks at the differences between the major teaching districts within Western Australia.

Chapter 5 provides the qualitative research results that present rich data to clarify and expand on the survey results in Chapter 4.

Chapter 6 highlights the current practice being undertaken by the DoE to provide professional learning to their teachers. It attempts to explain the e-learning portal environment and the separate events management system hosted by the Professional Learning Institute (a department of DoE). The networking and internet capabilities within the DoE schools around Western Australia are discussed in order to

understand the proficiency of the communications system to schools around the state. Further, technologies being used to deliver professional learning to regional areas in Western Australia are provided through documentation of initiatives within higher education providers and professional associations.

Finally, in Chapter 7 the findings are discussed in relation to the research question. The proposed conceptual framework is presented through a model and discussed in depth. Conclusions are offered and recommendations for further research posed.

CHAPTER TWO

Literature Review

2.1 Overview

This chapter describes the current climate of education in the Australian context in order to establish the need for research into this area. In addition, the background of the Government school system within Western Australia is provided along with a review of the national and international literature pertinent to the area of professional learning of teachers. In line with the research questions, this chapter reviews past research and reporting of the challenges affecting teachers in regional and remote areas. This chapter also elaborates on Community of Practice theory which is the underpinning philosophy for this study.

In particular this literature review highlights the need for further research into the use of e-learning and online communities in order to support the professional learning of regional and remote teachers in Western Australia. This chapter is particularly important in providing the current educational context of the nation and establishing the research conducted until this time into this area.

2.2 Current Climate of Australian Schools

The shift toward a digital school has led to the need for a national strategy toward e-learning practices. As a result of new technologies and the move toward a knowledge economy the focus of Australian schools is shifting toward a new way of learning (Spender & Stewart, 2002). The new way of learning includes a flexible delivery approach where learners can be connected anytime, anywhere to self-direct their knowledge making. Students need to be equipped with the skills required to successfully engage in employment, leisure and relationships in the twenty first century. Demands are placed on our schools to encompass the new way of learning and prepare students for the information age (Ministerial Council on Education, Employment, Training and Youth Affairs, 2004; Spender & Stewart, 2002). For

teachers, this new way of learning poses the challenge of transforming pedagogies to encompass new technologies. With any pedagogical change arises the need of a myriad of professional learning opportunities and ongoing support mechanisms for teaching professionals.

With the change in Federal government in 2007 and the election of two different Prime Ministers since that time, the promise of an educational revolution aiming to invest in human capital through the education of the Australian people was presented. The Minister for Education at the time, Gillard (2008b), discussed three key points for transforming our schools which included the improvement of quality teaching, ensuring every child benefits and mandating transparency and accountability. Further, Gillard (2008b) stated the educational reform of Australian Schools will “offer new support for the development and leadership of our teachers” and “establishing new national professional standards for teachers”. With the clear expectation on a national level for transformation in Australian Schools comes the need for transformation of teachers working within those schools. A number of initiatives are considered to assist with such reform including the implementation of a Digital Education Revolution, the move to a National Curriculum and the implementation of a National Framework for Professional Standards for Teaching.

2.2.1 Digital Education Revolution

Over the past few years, the notion of an education revolution has inundated the Australian media. A discussion paper in January 2007 revealed Australia’s national investment in education had fallen behind a number of our OECD counterparts and as a result the investment in education would be addressed (ALP, 2007).

A Federal initiative, coined the National Secondary School Computer Fund, aimed to provide a laptop for every child in secondary schools, along with the networking infrastructure to connect with the ‘information superhighway’ and online teaching materials relevant to the curriculum within each state. Since this initiative was released in 2007, there have been two rounds offered (Round 1 and Round 2), and an additional supplementary round (2.1) has also occurred. In 2008, under the Round 1

label, 896 schools received 116,820 computers improving the computer to student ratio from 1:8 or worse to a target ratio of 1:2. In January 2009, the Round 2 schools were announced with 1394 schools receiving 141,319 computers allowing those in the second round to also move to a ratio of 1:2. Further a supplementary round entitled Round 2.1 in March 2009, announced that 512 schools would receive 34,700 computers (Department of Education, Employment and Workplace Relations, 2010b). Figure 2.1 shows the total of national funding that has been expended over each state and territory.

NATIONAL Total by State

	No of Schools	Number of Units	Flexible Funding*	Total Funding Provided	% of ALL rounds of Funding
NSW	872	110,139	\$1,399,000	\$111,538,000	38%
VIC	561	65,787	\$124,000	\$65,911,000	22%
QLD	501	54,544	\$123,000	\$54,667,000	19%
WA	310	27,113	\$31,000	\$27,144,000	9%
SA	239	20,284	\$20,000	\$20,304,000	7%
TAS	103	6,316	\$-	\$6,316,000	2%
ACT	40	6,342	\$57,000	\$6,399,000	2%
NT	75	2,227	\$4,000	\$2,231,000	1%
	2701	292,752	\$1,758,000	\$294,510,000	100%

Figure 2.1 National secondary school computer funding expenditure by State (DEEWR, 2010c).

The 2007 discussion paper suggested professional development would be addressed by working with state governments and universities to ensure teachers have “access to training that will allow them to use the technology”. This is now evident in the Digital Strategy for Teachers and School Leaders whereby:

through this strategy, the Australia Government will commit \$40 million over the next two years for the professional development of teachers and school leaders in the use of ICT (Department of Education, Employment and Workplace Relations, 2010b).

Professional development has been split between two phases including the ICT Proficiency Project and the ICT Innovation Fund. A limited amount of information

has been provided with regard to the ICT Proficiency Project; however, a consultant will be employed to provide a ‘scoping study’ of self-assessment and best practice to determine the steps toward ICT proficiency on a national level.

In contrast the ICT Innovation Fund has been announced and has provided organisations with \$16 million funding between four projects that will undertake activities which “improve the capabilities of pre-service, enhance capacity of in-service teachers or drive innovation through leadership” (Department of Education, Employment and Workplace Relations, 2010a). This funding has been provided from the start of 2011 until June 2012.

It is evident from the four project descriptions that regional and remote schools and teachers have not been a priority area. The “Teaching the Teachers for the Future” project, which has secured the largest budget at \$7.8 million, will be a national approach by all 37 Australian universities with teacher education programs. A content analysis of this project indicated there was no reference to explicitly supporting regional or remote teachers, as the emphasis was on pre-service teachers. The “ICT in Everyday Learning: Teacher Online Toolkit” project focuses on providing online resources for the delivery of the Australian Curriculum and will enable “teachers to access professional learning at the school level with local support” (Department of Education, Employment and Workplace Relations, 2010b). Similarly, this project does not state how regional and remote teachers will access this support at the local school level. Ironically, the “Anywhere, Anytime Teacher Professional Learning” project has stated that its impact will be initially on teachers, principals and teaching students within the NSW region, yet in the future it “could” be scaled to all throughout Australia. Benevolently, this project does state:

the products developed through this project will mean all teachers, whether in rural, regional or metropolitan areas can access the same high quality professional learning (Department of Education, Employment and Workplace Relations, 2010b).

The fourth project entitled, “Leading ICT in Learning” will assist principals lead their school communities to understand the role and potential of ICT to transform the learning environment. It will only target school leaders at all 9,500 schools across Australia with the aim of establishing a sustainable national infrastructure to develop through collaborative networks for professional growth. Within this collaborative network the notion of remote schools has been stated (Department of Education, Employment and Workplace Relations, 2010b).

Evidently the process of implementation for the Digital Strategy for Teachers and School Leaders is questionable, as some 292,000 computers have been provided to schools and teachers without timely professional learning for pedagogical change using this technology.

After conducting text analysis on the Department of Education, Employment and Workplace Relations website in December 2010, there were no explicit details about the logistics of delivering professional learning to the diverse geographical locations of schools and teachers in Australia. This is of great concern to those teaching professionals in rural and remote areas.

2.2.2 National Curriculum of Australia

The notion of a national curriculum in Australia is not new. In the late 1980s the Ministers for Education of each state set common national goals that would plant the seed for a future national curriculum reform (McGaw, 2010). This was in the form of the *Hobart Declaration* of 1989.

In 2002 and 2003, Professor Alan Reid from the University of South Australia was selected as a DEST Research Fellow to investigate the relevance of a national curriculum in the current climate and how this might be advanced in a productive manner (Reid, 2005). In the findings from this research, Reid argued “if the purpose of education is to promote human development through experience, then the starting point for curriculum work should be the identification of the capabilities that people need, individually and collectively, to live productive and enriching lives in the 21st

century.” (Reid, 2005, p. 53). This report identified the need for curriculum to move away from the traditional model of acquisition of knowledge and content (see Figure 2.2) to a capabilities-based curriculum model (see Figure 2.3).



Figure 2.2 Dominant curriculum model (Reid, 2005, p. 56).

Reid (2005) argues when curriculum planning starts with knowledge and content, as determined by the model in Figure 2.2, evidence shows that the “teaching OF subjects or learning areas become an end to itself” (Reid, 2005, p. 56). In contrast, the capabilities-based model of curriculum development, as seen in Figure 2.3 and reflected in the pending National Curriculum of Australia, allows teachers to teach through the knowledge and content in order to develop the capabilities that students will require to operate in a competent manner within the workforce of the twenty first century.

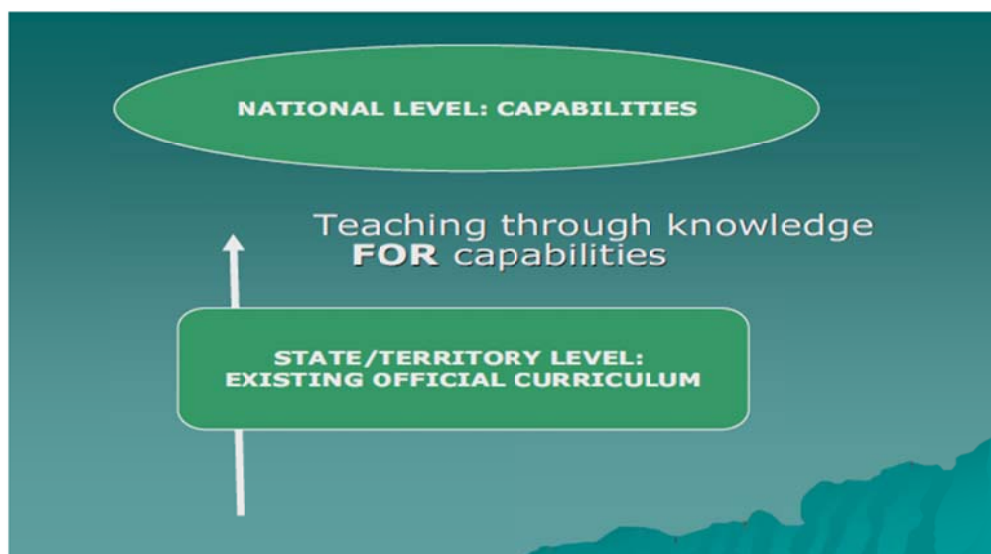


Figure 2.3 Capabilities-based curriculum model (Reid, 2005, p. 57).

From Reid’s (2005) research into the need for a national curriculum, the National Curriculum Board was established. In April 2008, this independent body, chaired by Professor Barry McGraw, was charged with development of a national curriculum in consultation with a large range of stakeholders including all education sectors, teachers, parents, students, academics, business groups and professional organisations (Gillard, 2008a). In December 2008, the Australian Curriculum Assessment and Reporting Authority Act 2008 were established under the Commonwealth of Australian Law (Australian Government, 2008). The Act established the functions, powers and procedures of the Board of the Australian Reporting and Assessment Authority (ACARA), formerly the National Curriculum Board. This Board was officially announced in 2009 and ACARA’s work has been guided by the fore mentioned Melbourne Declaration.

Additionally, the Melbourne Declaration on Educational Goals for Young Australians was developed in 2008 by the Education Ministers from each state and territory (Ministerial Council on Education, Employment, Training and Youth Affairs, 2008). This declaration documented the collaborative goal setting and the commitment to action plan in order to achieve these goals. One such action plan is documented as “promoting world class curriculum and assessment”. In this plan the notion of a national curriculum was stated whereby all state and territory

governments, along with the Federal government, would work with all school sectors toward such a deliverable. This report identifies remoteness as a cause of inequity as seen in Goal One:

Reduce the effect of other sources of disadvantage, such as disability, homelessness, refugee status and remoteness (Ministerial Council on Education, Employment, Training and Youth Affairs, 2008).

With the introduction of the National Curriculum the need for professional learning of all teachers in all schools of Australia is paramount in the implementation of such an initiative. The national curriculum includes the introduction of ten general capabilities that will be embedded throughout each learning area in order to prepare students for future employment in the 21st century. These include literacy, numeracy, ICT, thinking skills, creativity, self-management, teamwork, intercultural understanding, ethical behaviour and social competence. The document states that “particular attention has been given to the incorporation of literacy, numeracy, ICT, thinking skills and creativity” (ACARA, 2009). Recent literature indicates that up skilling teachers to be prepared to teach the knowledge and skills required within the national curriculum will require considerable support and development sustained over time (Broadley, 2010; Wise, 2010). The general capabilities embedded throughout each learning area present a challenge for teachers who do not have a sound pedagogical base for teaching with ICT or higher order thinking skills. As a result professional learning for all teachers who will implement the national curriculum is critical.

2.2.3 Professional Standards for Australian Teachers

The quality of teaching in Australia has been one of great discussion over many years. One important article that signifies this was written by Loudon (2000), who analysed and critiqued the four Australian standard frameworks in the first wave of teaching performance standards. These were developed in the 1990s by state government agencies in a number of states of Australia and focussed on differing

levels of performance from beginning teachers through to experienced teachers. Louden (2000) argues that all four of these attempts to define teaching standards shared some common weaknesses including “long lists of duties, opaque language, generic skills, decontextualised performances, expanded duties and weak assessments”. Taking the argument in a new direction, Louden (2000) proposed that the successful development of standards needed to include teachers working in the field, professional associations and academics. Further, the development of standards needed to be a higher standard and be strengthened in terms of being “brief, transparent, specialised, contextualised, focused on teaching and learning and matched by strong assessment”. The focus on teacher quality is consistent with current research on the importance of the teacher in improving student learning outcomes.

In connection with the earlier literature from Louden (2000), the Australian College of Educators, a national professional association, recognised the need for a collaborative effort to pursue a unified approach to teaching standards (Australian College of Educators, 2000). Opportunities were provided for teacher professional associations to gain funding from the federal government in order to develop teaching standards in their discipline areas. The work of more than 20 professional associations, carried out in a consultative process with teachers in their subject areas, contributed to the *National statement from the teaching profession on teacher, standards, quality and professionalism* in May, 2003. This statement indicated the primary purpose of standards is to provide guidance for pre-service teacher education programs and continuing teacher professional learning (Australian College of Educators, 2003).

More recently, Ingvarson (2010) has argued there are two purposes for teacher evaluation. One is to ensure basic standards of professional practice are met and the other is to provide high standard of professional accomplishments and incentives for attraction and retention. These fall into two separate realms of school management responsibility and profession-wide responsibility. After providing a historical overview of the development toward a national standard for the profession, Ingvarson (2010) discussed the locus of authority for where such responsibility

should lie. The formation of a national professional body for teachers has been somewhat problematic and evolved over much iteration. A succession of national bodies for the profession has been documented by Ingvarson (2010). The Australian Teaching Council was started in the 1990s and was followed by the National Institute for Quality Teaching and School Leadership (NIQTSL), which later changed to Teaching Australia. In late 2009, Teaching Australia was yet again replaced with the Australian Institute of Teaching and School Leaderships (AITSL). AITSL was charged with building on the work of Teaching Australia and the professional associations to provide a one national process of certification of teachers toward a vision of teaching as a profession.

The most current document at a national level at the present time is the *National Framework for Professional Standards for Teaching*.

The specific role of the National Framework for Professional Standards for Teaching is to achieve national consistency and a common approach to recognising quality, as well as to facilitate a national co-operative approach in supporting teacher quality (Ministerial Council on Education, Employment, Training and Youth Affairs, 2003).

Four levels of teacher standards identified in the framework are Graduate, Proficient, Highly Accomplished and Lead. This framework aims to provide guidance, support and recognition for the ongoing professional learning of teachers and is currently under a validation process to identify the appropriateness of the standards within each level. These standards aim to deliver accountability for teachers in terms of professional knowledge, professional practice and professional engagement (MCEETYA, 2003, p. 11). Communicating these standards to teachers and having them embedded in practice requires significant professional learning. Professional learning in regional locations has already been seen to be problematic.

2.3 The Western Australian Context in Brief

In Western Australia, Kindergarten to Year 12 schooling is divided into two systems and a sector. While government and Catholic schools are within systems (DoE and CEO), independent schools comprise a sector. This study has focussed on the largest employer of teachers within schools in Western Australia, the Department of Education (DoE) system.

In terms of population, almost 74% of the State resides in the Perth metropolitan area, a further 11% resides in the South West and the remaining 15% is scattered throughout the other non-metropolitan areas (Australian Government, 2010). Due to the large expanse of the state of Western Australia, the DoE formerly divided its schools into districts. This study was conducted at the time when the organisational structure included districts, however, in 2011 a restructure of DoE occurred to include regions rather than districts. These current regions comprise of two located in the metropolitan area (North and South) and six located outside of the metropolitan area (Kimberly, Pilbara, Midwest, Wheatbelt, Southwest and Goldfields).

Figure 2.4 indicates the original district boundaries, within the map of the state, that are relevant to this study. There were formerly fourteen education districts, of which seven districts include the employment of teachers in the Country Teaching Program and the Remote Teaching Service. Data in this thesis are discussed in terms of these seven districts, rather than the current restructured regions.

Schools classified in the Country Teaching Program are located more than 35 kilometres outside the Perth metropolitan area, however many are in small, isolated and challenging communities. The Remote Teaching Service (RTS) schools are some of the most isolated schools in the world. Some may be in small towns whereas others are in community settings with predominantly Aboriginal populations. The lists of these schools can be found in Appendix A within this thesis.

Public school teachers employed within the DoE system are categorised as Graduate Teachers (first two years), Teacher (seven increments), Senior Teacher (application process) and Level 3 Classroom Teacher (application process). There is a promotional system in terms of school administration such as heads of learning areas, deputy principal or principal for which teachers have the opportunity to apply for.

It is important to provide a context of the positions available to teachers within this system as both the Senior Teacher and Level 3 Classroom Teacher are required to provide evidence of approved professional learning through either postgraduate study or the Professional Learning Institute (PLI) modules. This brings to the fore the importance of access to professional learning for teachers who are working outside of the metropolitan area.

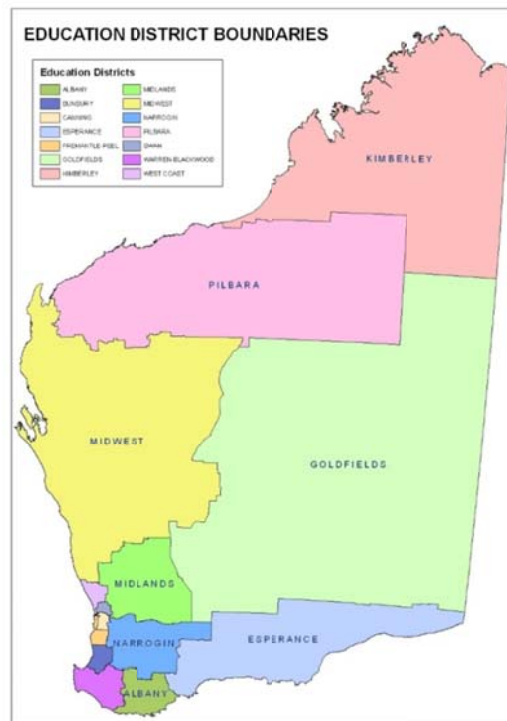


Figure 2.4 Former DoE district boundaries (Department of Education, 2010c).

2.4 A Brief History of Professional Development

The term professional development within the education sector is something of an archaic term. While much of the literature has reference to professional development, more recently, the education sector has moved to the notion of *professional learning* of teachers rather than the *professional development* of teachers. Professional learning indicates a more holistic approach where formal and informal opportunities for teachers encourage reflective practice, collaboration and improving student outcomes. This section aims to provide the history from the original focus on individual teacher professional development to the more holistic professional learning approach.

One of the most critical targets of education reform is the continuing development and learning of teachers (Desimone, 2009). During the 1970s and early 1980s a number of major studies contributed to the literature on effective staff development (Joyce & Showers, 1980; Knowles, 1973; Sparks, 1983).

Thomas Guskey dedicated over two decades to the importance of identifying evidence of effectiveness in professional development programs (Guskey, 1986; Guskey, 1999, Guskey; 2003). An early model of teacher change was developed in a four step linear process and proposed significant changes in teachers' beliefs and attitudes occur only after they have undertaken learning, implemented it in the classroom and identified a change in the students learning (Guskey, 1986). The causal chain on which professional development programs were traditionally based can be seen in Figure 2.5.

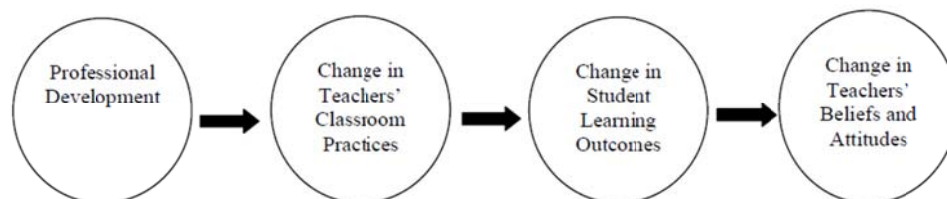


Figure 2.5 Model of teacher change (Guskey, 1986).

Although Guskey’s model was highly valuable to the field of professional development in the eighties, further models have identified the process of teacher change is non-sequential and in fact, highly interconnected (Clarke & Hollingsworth, 2002; Newmann, King & Youngs, 2000). These interconnected models recognise the complexity of professional development and unlike Guskey’s model, consider the environment surrounding the teacher to be critical to professional growth. Figure 2.6 reflects the domains that encompass the teacher’s world and contribute to teacher professional growth, not confined to the personal domain alone.

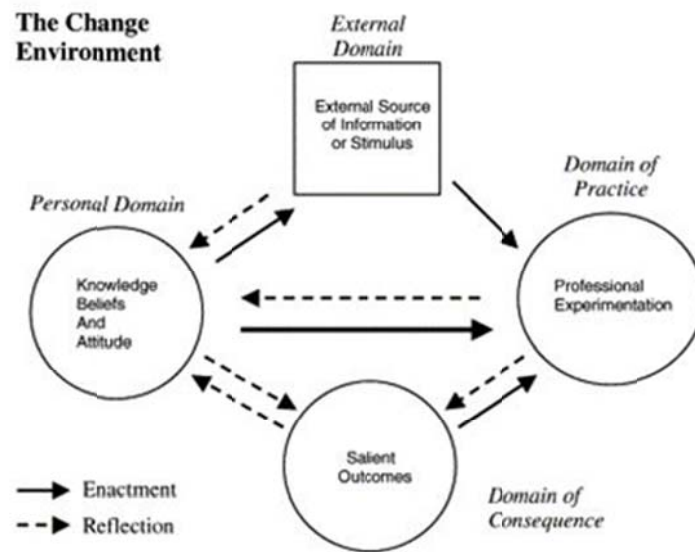


Figure 2.6 The interconnected model of professional growth (Clarke & Hollingsworth, 2002).

The professional development of teachers and improvement of the teaching profession as a whole requires a paradigm shift (Sparks, 1994). Drawing upon Sparks, Billett (1998) alluded to teachers’ professional development being a phenomenon that can be part of their daily teaching within their classrooms. Billett’s study proposed that by engaging in authentic activities and a framework of guided learning in the workplace, the knowledge of construction occurs in context and is not then tested by transfer between learning place and work place (Billett, 1998).

Similarly, research conducted by Smart (1998) found that teacher learning cannot be forced, teachers cannot be developed passively, but can develop actively. A comparable view is held by Fullan (2007) who argues that the term is a major obstacle to progress in teacher learning and the notion that teachers should be learning all the time. Fullan discusses professional development in the guise of workshops, courses and programs as an external authority being applied to teachers, which in fact is deeply inconsistent with many theories of learning.

A similar vision is held by Zmuda, Kuklis and Kline (2004) who pose a shared school vision of continuous improvement where staff development is the key to achieving transformation toward the school as a competent system. The competent system at the school level is built by teachers who believe they can function more successfully collectively rather than at an individual level. Working toward a shared vision allows staff to be active participants of a continuous improvement journey who see the value of innovation and how this translates to student achievement. “Each school must identify its core beliefs, develop a shared vision, measure the congruency between the current reality and the vision, determine the changes that will close the gaps, support teachers during the change process, and foster a culture of collective autonomy and accountability” (Zmuda, Kuklis & Kline, 2004).

2.5 Community of Practice Theory

Groups of people who share a passion for teaching and strive for excellence in their profession often rely on regular interaction with similar people. Wenger (1988) refers to these groups as a Community of Practice. It has been argued that the term Community of Practice (CoP) has been overused in many educational and corporate contexts to identify a group with similar interests. Current literature indicates the terminology attributed to community and communities of practice are elusive and often used interchangeably when discussing the socio-cultural operation of a plethora of groups, particularly online (Lloyd, Cochrane & Beames, 2006; Preece, 2000). The theory of a ‘sense of community’ focussing on the members’ feelings of acceptance, belonging and commitment has been widely researched yet does not

infiltrate the depths of knowledge management and situated learning (McMillan & Chavis, 1986).

Wenger's (1998) work into communities of practice posits the necessity for several key characteristics to occur before a Community of Practice can be truly identified and recognised. Firstly, there must be a practice associated within the community that allows for mutual engagement, joint enterprise and a shared repertoire. Mutual engagement occurs when there is a negotiation of meaning organised around what the community does, which in effect, defines the community. The members of the community partake in mutual engagement through a blended medium of face to face, email, telephone or other distance modes which are all acceptable (Wenger, 1998). The diversity of community members is recognised and attributes to the unique identity each member assumes within the community. This construct can be applied to the teaching profession.

Teachers are culturally diverse, present in a range of ages and teach in a variety of contexts; however they are mutually engaged in the community by their enthusiasm for teaching and learning. Secondly, the practice of negotiation between the community and the larger context it resides in involves joint enterprise. The members of the community respond to the goals of the larger organisational structure by negotiating their own practices within it. The third attribute of practice is the development of shared repertoire. Shared repertoire develops in a historical manner when members of the community engage in practices that are directly constructed within the boundaries of the community. It includes routines or concepts that the community has produced since its inception, and have become part of its practice (Wenger, 1998). The relationships built by members allow them to engage in socially constructed learning.

A more recent study focussing on online community development was conducted by Brook and Oliver (2003). This study produced a model that described three key components integral to online community development. These key components were: "those that exist prior to any instructor actions, identified as presage factors. Instructor actions, identified as process teaching and learning strategies and various

outcomes including sense of community, identified as the product” (p. 3). When applying this model to five online communities, this study revealed that instructor actions impacted on the participant’s sense of community more so than other presage factors. This highlights the importance of the instructor in online communities of practice.

In many cases, teachers have restricted access to like-minded peers in order to establish such a community. Hayes (2007) argues the need for teachers to access communities beyond their immediate school context to enhance their professionalism. Through the use of information communication technologies (ICT), the opportunities for teachers to engage in an online Community of Practice may remove the limitations currently faced by remote teachers.

2.6 Learning Communities

Successful implementation of ICT and pedagogical change brings forth implications such as professional learning for teachers, which must be considered. In McWilliam’s (2002) view, the construct of professional learning stems from three significant realms – health and safety, leadership and management, and information technology. These realms of professional learning are recognised as a necessary process within the teaching profession, yet bring to the fore the question of implementation and sustainability. An extensive amount of literature suggests links between professional learning and impact on pedagogy are not significant (Gore & Ladwig, 2006; Henderson, 2007; Landvogt, 2005; McWilliam, 2002). Due to teacher time and access to resources, professional learning is often presented within single or short sequence offerings, providing inspiration yet failing the challenge of implementation and sustained practice. McWilliam (2002) and more recently, Parr (2004) posed the argument against a bureaucratic approach to professional learning where policy makers convey single-solutions to skill development. The approach from these top-down implementations included professional learning content closely aligned with student learning outcomes; a focus on practical skills for teachers and meeting the requirements of registration institutions (Parr, 2004). These approaches are often not truly reflective of the needs of teachers at the coalface and research

shows that on return to the classroom have not informed teaching practice or improved student learning (Anderson & Henderson, 2004; Trinidad, 2004). Moving toward a model of professional learning that sustains pedagogical development will involve more than skills-based one-off professional development.

The seminal study in this area by Fullan (2005) indicates three levels are required to adopt a system focussed on professional learning communities. These levels are the school/community level, the district level and the state or national level. The work by Fullan draws upon Newmann, King and Youngs (2000) initial study that examined nine primary schools in the United States that possessed a high collective capacity to bring about improved student achievement. Similarly, their theory suggested that professional development needed to address all aspects of capacity at many levels rather than the individual teacher's competence. Newmann, King and Youngs (2000) provide the model in Figure 2.7 as a conception of how professional development affects all aspects of capacity.

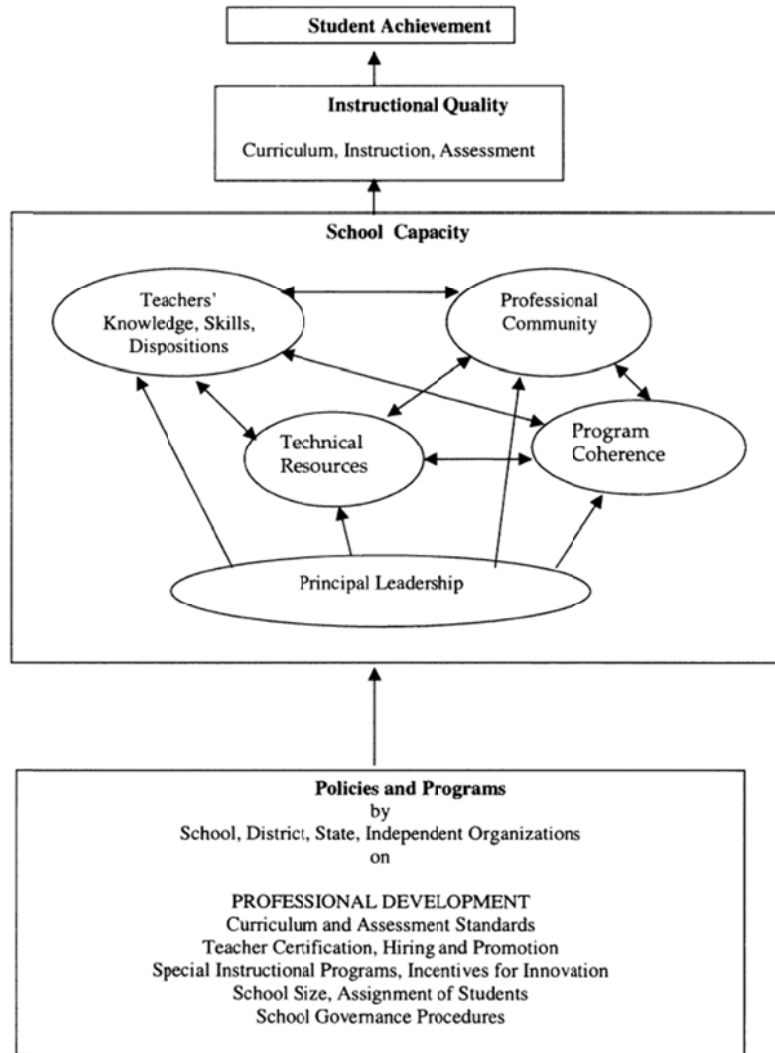


Figure 2.7 Factors influencing school capacity and student achievement (Newmann, King and Youngs, 2000, p. 262).

This study exemplified that while individual teacher competence of subject matter and pedagogy is critical, professional development needs to expand beyond the improvement of individual teachers and broaden to the school as a community. Newmann, King and Youngs (2000) proposed that “if professional development is to boost student achievement, it should address five aspects of school capacity: teachers’ knowledge, skills and dispositions; professional community; program coherence; technical resources and principal leadership” (Newmann, King and Youngs, 2000, p. 290).

More recently, Henderson's (2006) study on community cohesion began to explain why a Community of Practice is valuable when teachers are mutually engaged, respond to a common need and share their experiences (see Figure 2.8).



Figure 2.8 Model of community cohesion (Henderson, 2006).

These communities are integral for individual teachers; whom as part of a wider professional community engage in learning through social participation. Within this social participation teachers construct and continuously create their identity through sharing in these communities of practice (Wenger, 1998). The professional learning of teachers can be tailored to meet their specific needs as they are ongoing and embedded in the context of the community.

Lloyd and Cochrane (2005) reported the 'professional learning community' as an effective form of professional learning as the focus is on the teachers as members of a wider community of learners. The ethos of a professional learning community in the education arena is built around the continuous study of teaching and learning. Teachers who engage in these learning communities are working together to expand their teaching repertoire. Joyce, Weil and Calhoun (2000) reported their work with schools and recommended a structured 'learning community' model to assist in sustaining such an initiative. This incorporates the use of 'coaching teams' where two or three teachers engage and support each other with academic learning and teaching skills and strategies. Each 'coaching team' is then linked to one or two

other teams, which forms a study group. The study group is limited to around six teachers. Auh and Pegg (2009) reinforce the importance of teachers working in teams in subject areas in a school or if required, across schools to reduce feelings of professional isolation in regional and remote areas.

Effective leadership by the principals of schools willing to establish learning communities has been discussed by DuFour and Eaker (2009), however the individual efforts of a principal cannot transform a school alone. The importance of a collaborative effort from all staff and the need for a shared vision toward continuous improvement has been noted. In fact, DuFour and Eaker (2009) believe that learning communities cannot be successful without teachers who act as professionals within their community.

2.7 e-Learning Communities

In order to provide access to teachers wanting to further their professional learning, the use of technology is certainly presenting a valuable alternative. As learners are not limited by time and location, the flexibility offered through e-learning is advantageous to all learners but largely convenient for those living geographically disparate from physical campuses (O'Neill, Singh & O'Donoghue, 2004). Teachers can access learning from any place, at any time through the internet. The flexibility of e-learning allows a self-paced, self-directed, autonomous learner who engages in a 'virtual' environment that simulates the experiences of those enrolled in face to face programs (Bates, 2005).

Along with access to professional learning, has been the discussion of effective modes of delivery. Face to face professional learning, in regional and metropolitan areas, is offered in isolation, or in some cases, is complemented with virtual learning environments that offer a blended delivery. Wallace and Boylan (2007) explored a number of issues affecting the retention of rural teachers and noted importance of the "provision of in-service education that is well supported both financially and by staff release in rural places as well as in larger regional and urban centres" (p. 27). This is supported by Auh and Pegg (2009) who argued that professional learning held

within a school, based on issues to be solved within that school appear to be most beneficial. Their research showed that teachers gain more from professional learning that is situated within the local context and based on their needs. As schools are faced with budgetary constraints the reality of this occurring may be questioned.

Increasingly, the literature refers to the notion of a professional learning community within an e-learning environment, where teachers have convenient access to ongoing support, collaborative learning, and meaningful and stimulating discussion (Davies, Ramsay, Lindfield & Couperthwaite, 2005; Henderson, 2006; Herrington & Herrington, 2001; Rablin, 2007). These professional learning communities are often supported by asynchronous technologies through the Computer Mediated Communication (CMC) tools within a learner management system. Unlike one-off skills based professional development, these communities aim for sustained professional learning over time and encourage teachers to share and negotiate ideas to work together toward a common goal. There are two general strategies for communicating over a physical link; asynchronous or synchronous. The level of interaction is affected by the choice of either delivery. Bringing live or real-time learning opportunities to the content by means of online tutorials, chat rooms, video conferencing and the like, is referred to as *synchronous* communication. *Asynchronous* communication is often conducted through tools such as online discussion boards, email and learning objects (Bates, 2005; Bonk, Wisner & Lee, 2004; Sanders, 2001).

Over recent years there have been a number of research studies to evaluate professional learning of teachers through a technological medium. Research into the current practices and issues of regional and remote teachers within Western Australia found the notion of a Community of Practice to be a vital element expressed by both beginning and experienced teachers (Trinidad & Broadley, 2008). Teachers working in these areas often experienced a strong sense of geographic and social isolation from peers, colleagues and appropriate support mechanisms due to huge distances between towns and communities. Access to professional learning networks whereby a group of people could share ideas and deepen their knowledge of teaching and learning was challenging to establish and maintain.

In 1995, the State, Territory and Commonwealth Ministers of Education and Training established a company to ‘facilitate and coordinate collaboration in the use of education communications and related open learning techniques by providing appropriate education, technological and project management services to schools, TAFE, higher education, industry and adult and community education sectors’. (Putland, 2006). This company, Education.au Limited, through its venture EdNA (Education Network Australia) claimed to be ‘Australia’s leading online resource collection and collaborative network for the education and training community’ (Putland, 2006). The release of a new professional networking service for Australian educators enabled teachers in all sectors to become a member of a social networking group where they could join communities of similar interests, display a professional profile and view activities of their online colleagues. Since the inception, a merger between Education.au Limited and the Curriculum Corporation occurred in March, 2010 and was rebadged as Education Services Australia. This venture was released in March 2008, however, personal communication with the Manager – Building Online Communities in January, 2010, reveals there is yet to be an evaluation of its success.

An industry partnered research study proposed by Herrington, Herrington and Omari (2002) recognised the lack of support for beginning teachers in Western Australia and proposed the development of a website to allow students to access a discussion board, exemplary teaching videos, links to professional learning modules and a virtual bookshelf. The study planned to support the beginning teachers within a learning community that partnered with experienced teachers from the DoE (WA). After reviewing the literature, no further findings of this study were retrieved. A more recent initiative, building on the original Western Australian project, by Herrington, Herrington, Kervin and Ferry (2006) conducted at the University of Wollongong, described a similar website design that was to provide an online Community of Practice for beginning teachers. Similarly, the site was designed to assist in retention of beginning teachers in regional areas, however this time throughout the New South Wales region. In this further developed version of the project, new technologies were incorporated within the website through Really Simple Syndication (RSS) feeds for dynamic curriculum updates and weblogs for

reflection on teaching practice. The online Community of Practice was conceived to have built on the existing community from the pre-service teacher education program within the University.

In a broader study, Herrington and Herrington (2006a) investigated the use of the internet for professional learning by ten varying professional groups including teachers. This study was conducted in Queensland and Western Australia and included data collected from 527 teachers. The purpose for teachers using the internet in this study varied from predominantly email and web searching for teaching resources; with less than a quarter of the usage being for discussion and chat. There was no hard evidence that professional learning was being accessed by the internet, however teachers could see the potential of doing so and the researcher's indicated:

Professionals in rural and remote areas of Australia generally recognise the potential benefits of the internet in providing for some of their professional needs. Under ideal conditions of access and reliability, that is, when they have the competence, time and access, the professionals in the study identified several areas where the internet could be used to support their professional development (Herrington & Herrington, 2006b, p. 81).

Similarly, Lloyd and Cochrane (2005) indicated that one of the most effective forms of professional development arises from professional learning communities. However, Henderson (2006) emphasized the importance of thinking further than the mode of delivery and focusing on the complex nature of teachers and how they are situated in the wider community of learners.

Perhaps the biggest challenge for developers of e-learning communities is developing a sense of belonging, trust and support. A strategy to address this may be to create a professional learning experience that combines face to face and online sessions, a model known as blended learning. Owston, Wideman, Murphy and

Lupshenyuk (2008) in undertaking evaluations of three blended teacher professional learning programs in Canada found very little empirical research had been conducted prior. According to Owston et. al. (2008), their findings indicated all participants in the three programs developed a sense of community, however none could be characterized as a Community of Practice as articulated by Wenger (1998). In conclusion, their study supported the argument that blended learning is a viable model for teacher professional learning, however further research is required to find ways of increasing teacher participation in the online component. This is supported by Anderson and Henderson (2004) who state the necessity of an increase in social presence in teacher blended learning to assist with sustained engagement of the learning focus.

With the geographical dispersion faced by teachers in WA, the application of technology to meet professional learning needs is paramount. The review of literature has identified existing models of asynchronous communication to support professional learning; however the concept of synchronous technologies to provide access to interactive, real time collegial networks must be investigated to assist in isolation of teachers in Western Australia.

2.8 Regional and Remote Education

Much of the literature specifically focussed on regional and remote education around Australia indicates the issues might be similar between states and territories, however the vast distances in Western Australia are somewhat amplified. To contextualise this study, it is important to understand the previous research that has been conducted into education within these areas.

2.8.1 Regional and Remote Inquiries

A number of studies have been conducted in Australia that highlight the importance of professional learning and the difficulty faced by regional and remote teachers with regard to access (Lyons et. al, 2006; Gerard Daniels, 2007; Human Rights and Equal

Opportunity Commission, 2000b; Ministerial Review of Schooling, 1994; Rural and Remote Education Advisory Council, 2000; Vinson, 2002).

A national report from the Commonwealth Schools Commission entitled *Schooling in Rural Australia 1988* made ten recommendations to improve access and quality of rural schooling (Commonwealth Schools Commission, 1988). Of these recommendations, three were pertinent to this current study and include teacher in-service, off campus teacher education and information technologies. The Commonwealth Schools commission has since been abolished; however recent inquiries have stated “that even today full implementation of these 1987 recommendations would go a long way towards addressing the future needs of rural and remote school education” (HREOC, 2000b).

In Western Australia, with a significant regional and remote area, there has been ongoing research and reporting into issues affecting teacher retention in regional areas. The report, *Schooling in Rural Western Australia 1994*, compiled some 15 years ago, made extensive recommendations with regard to increasing resources to professional development. This review and other anecdotal evidence in relation to rural and remote Australia was the catalyst for a much larger national review entitled *Bush Talks*. The objectives of this review were to: “identify major human rights issues confronting people living beyond the main population areas; to inform rural and remote area Australians about human rights and to develop projects to enhance the enjoyment of human rights in 1999 and 2000” (HREOC, 1999). The HREOC provides the following rationale for conducting the review:

In almost every aspect of our work, the Human Rights and Equal Opportunity Commission has noticed that people in rural and remote Australia generally come off second best. Distance, isolation, lower incomes and minority status all exacerbate the experience of discrimination, harassment, and lack of services and participation (HREOC, 1999).

The Bush Talks review included community meetings across Australia, however in Western Australia, only five communities were visited and these were larger regional communities (many being cities) including Geraldton, Albany, Bunbury, Kalgoorlie and Narrogin. This in itself is alarming, with the largest distance travelled for the review being Kalgoorlie, a regional city, some 595 kilometres from the capital city of Perth. Although Kalgoorlie may be considered an outback town, it is not considered to be remote or isolated in that it has an extensive transport network of rail, bus and air services both within the state and to the eastern states. Although a range of crucial issues including health, aged care, youth services, telecommunications and education were raised, the review could have provided a broader range of communities that encapsulated more communities in more remote locations.

A number of issues with access to education evolved from the Bush Talks report. As a result, the National Inquiry into Rural and Remote Education was initiated by the Human Rights and Equal Opportunity Commission (HREOC) in February 1999. The data collected from Western Australia included submissions from DoE (formerly known as the Department of Education and Training of WA) and the WA Farmers Federation. Further, seven hearings and community meetings were documented. Somewhat in contrast to the Bush Talks, these meetings were held in very remote areas in the far north of the state including Billiluna, Kununurra, Halls Creek, Derby, Fitzroy Crossing, Broome and South Hedland. The themes of teacher professional development and technology were found throughout a number of these community meetings. In terms of professional learning, issues of access arise with reference to extensive travel time, high cost, low funding, ineffective one off training and lack of relief teachers. With the review being conducted some 11 years ago, it was interesting to note that technology was discussed in a more positive light including the internet connections being reliable but slow however most felt that they had sufficient access to computers in the schools. The potential for technology was discussed by many participants; however, no link was made between how the technology might alleviate some of the professional learning issues.

Similarly, in 2000, the *Country Roads: Pathways to better education and training for rural and remote Western Australia* report once again identified access to professional development as a significant area of concern for teachers outside of the metropolitan area (Rural and Remote Education Advisory Council, 2000). This report also posed the benefits of a cross-sectoral approach to professional development. However, the implementation of these findings and policies into practice appear to be limited.

2.8.2 Impact on Teacher Retention

A convincing body of evidence has been accumulated to indicate that the attraction and retention of human service professionals to regional, rural and remote areas both in Australia and internationally is a challenge (Commonwealth of Australia, 2008a; HREOC, 2000b; Miles, Marshall, Rolfe & Noonan, 2003; Pegg, 2007; Roberts, 2004; Wallace & Boylan, 2007). The link between retaining teachers in these areas and the importance of being connected within a professional learning community have been highlighted by a national study conducted by the National Centre of Science, ICT and Mathematics Education for Rural and Regional Australia (SiMERR). This research generated a report to the Department of Education, Science and Training (DEST) from which the recommendation “that education authorities, in partnership with schools and school communities, universities, and professional organisations meet the continuing needs of teachers in rural and regional areas through a range of strategies that ensure equitable access to ongoing quality professional learning” (Lyons, Cooksey, Panizzon, Parnell & Pegg, 2006, p. xiii). Inequitable access to professional development was reported under the broader theme of professional connectedness and isolation. A substantial finding that “primary teachers in remote areas indicated a significantly higher unmet need for professional development opportunities such as mentoring, release time for professional development and collaboration with colleagues than teachers did elsewhere (Lyons et al., 2006, p. 85)”, identifies the importance of further research to identify a framework for best utilising technology to support such an initiative.

A number of states within Australia are committed to the delivery of quality public education and have engaged in significant individual and collaborative initiatives. In February 2007, the Minister for Education and Training announced the establishment of a Taskforce to review the education and training workforce and identify requirements to ensure a consistent supply of quality teachers within Western Australia. Similarly with other states, attracting and retaining teachers to regional and remote areas is a government priority. Research from Herrington and Herrington (2001) and Sharplin (2002) indicates that the choice to accept a 'country posting' is more than a career or professional decision. Although some professional concerns are evident, many teachers identify the personal and social challenges such as establishing new social networks and 'fitting' into the community as being a potentially negative consequence of relocating.

2.8.3 Pre-service Teacher Preparation

Increasingly, higher education providers offering pre-service teacher courses are recognising the need for preparation for teaching in regional areas. Recent studies have indicated that in order to improve attraction and retention, pre-service teachers require formalised opportunities to become familiar with regional education contexts (Lock, 2007, 2008; Sharplin, 2002, 2008, 2010). In many cases this has been addressed through a variety of strategies including field trips, resources and formal courses of study. In Lock's (2007) study, pre-service teachers were surveyed to ascertain their opinions of a rural experience program which assisted with return travel costs and weekly stipend to undertake practicum placements in rural areas. Although a small number of participants responded, over all they were positive about the influence of the program and its impact on their future thoughts of teaching in such areas. The findings of this study were consistent with Halsey (2005), who found that pre-service teachers acknowledged how important it was to be adequately prepared for rural placements prior to becoming a fully qualified teacher.

2.8.4 Access to Further Education

A study by Harvey (2005) in Queensland determined that career path and pedagogical content were motivating factors for teachers to undertake postgraduate study. Of the 178 respondents surveyed across five schools within this study, 15% were enrolled in postgraduate study. There is no evidence of whether these were regional or remote teachers; or if they were enrolled in a face to face or online medium. This was considered vital information in the context of the current study, to identify if access to higher education in the form of professional learning was reported as a significant factor for regional teachers.

In December 2008, Professor Denise Bradley AC delivered the Final Report into the Review of Australian Higher Education (Commonwealth of Australia, 2008b). This report highlighted the importance of targeting under-represented groups currently accessing higher education including; those from low-socio economic backgrounds, regional and remote areas and Indigenous students. In order to increase participation the report states:

An additional allocation of \$80 million per year to develop innovative, collaborative, local solutions to provision of higher education in regional and remote areas is recommended. As well, serious consideration should be given to the development of a university with special expertise in provision of higher education across regional and remote Australia (Commonwealth of Australia, 2008b).

An important recommendation essential to a more flexible and adaptable system of regional provision is found in Recommendation 16 indicating that “funding to develop innovative local solutions through a range of flexible and collaborative delivery arrangements in partnership with other providers such as TAFE” (Commonwealth of Australia, 2008b, p. 112).

Similarly, further investigation into access of higher education was undertaken in 2009, as the Senate conducted a national Inquiry into Rural and Regional access to Secondary and Tertiary Education Opportunities (Commonwealth of Australia, 2009). A substantial number of submissions (n=759) from organisations and community members cemented the foundation of the need for equity and access to quality education programs. A seminal submission by the Society for the Provision of Education in Rural Australia outlined two significant points including the need for policy makers to apply a rural lens whilst developing education policy (Wallace & Boylan, 2007) and that secondly, sustainable rural communities are built on the foundation of a local delivered education to its youth (Society for the Provision of Education in Rural Australia, 2009). Further, this organisation acknowledged three main factors that impacted on non-metropolitan education; thus being distance, low socioeconomic status and aboriginality. Figure 2.9 exemplifies the connectedness between the three factors and illustrates the need for a holistic approach to address these challenges.

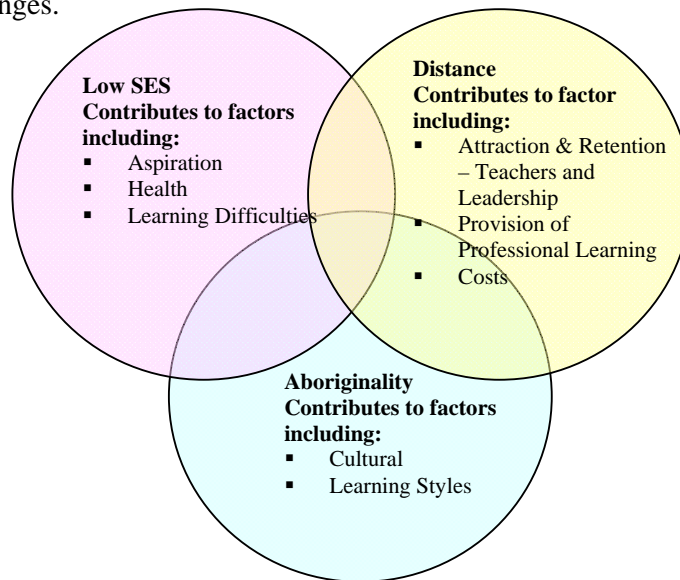


Figure 2.9 Significant factors contributing to educational disadvantage in rural and regional Australia (SPERA, 2009).

It is clear from recent literature in this area that many teachers working in regional and remote areas have limited access to professional learning opportunities within the higher education sector in the form of postgraduate study.

2.9 Preliminary Theoretical Framework

It is proposed that Community of Practice theory can provide a preliminary theoretical framework to this research. By applying Henderson's (2006) Model of Community Cohesion to the blended environment of asynchronous and synchronous technologies there may be a way to establish an understanding of how teachers' professional learning could be enhanced through this mode of delivery.

2.10 Chapter Summary

The current context of change in Australian schools, more specifically the uptake of digital learning through an education revolution, the implementation of a national curriculum and the accountability of teachers through the new professional standards, has been highlighted in this chapter. This change has necessitated extensive professional learning in order to ensure that teachers are up skilled in all of these areas.

Research indicates that professional learning of teachers in regional and remote areas of Western Australia is complex and technology and the internet could provide some answers to the challenges being faced. A shift away from traditional forms of one off professional development to communities of learners, both face to face and online, is indicated through much of the current literature.

Significant funding is being invested into professional learning of teachers in Australia, for the digital education revolution and the national curriculum implementation, however little research has been conducted to provide recommendations about how this will be dispersed to those working in regional and remote locations.

This chapter has described the current climate of education in the Australian context in order to establish the need for research into this area. In line with the research questions, previous research has been reviewed and the challenges affecting teachers in regional and remote areas have been reported. A review of Community of Practice theory has been provided, which is the underpinning philosophy for this study.

CHAPTER THREE

Methodology

3.1 Overview

This chapter describes the methodology used in this study. The chapter begins with an overview of the research approach and then provides a rationale for the research design. The phases of the study are discussed, including the objectives that were to be met in each phase. The techniques used to select the sample are specified and the developmental stages of instrument design are outlined. The chapter examines the processes involved in collecting and analysing the data. Finally, validity and reliability, ethical considerations and data storage are addressed.

3.2 Research Approach

For this research to be truly meaningful, it was important that an understanding of the relationship between epistemology and research design be attained. Underpinning this research with a philosophical foundation was considered as an integral part of the research journey. This section of the chapter aims to identify the researcher's orientation which has assisted in framing the research design.

At the beginning of the 20th century, quantitative research based on positivist philosophy dominated educational inquiry (Creswell, 2005). Those who conducted research from the positivist philosophy believed “social observations should be treated as entities in much the same way that physical scientists treat physical phenomena” (Burke Johnson & Onweugbuzie, 2004, p. 14). According to these purists, educational researchers should remove bias, remain emotionally detached and test hypotheses (Cohen & Manion, 1994). Although earlier records are evident within other fields, it was toward the end of the century that emergent qualitative research presented an alternative form to educational research. It enabled qualitative purists (also called *constructivists* or *interpretivists*) to reject what they called positivism. Within the post positivism realm of qualitative research, an assumption

that there were multiple realities, socially constructed by different individual viewpoints highlighted the meaning that people personally held about education (Burke Johnson & Onweugbuzie, 2004).

Both quantitative and qualitative approaches have underlying philosophical assumptions that guide the researcher. Much debate has been held over the expanding use of combined quantitative and qualitative data; however, the mixed method approach intentionally combines the strengths of both paradigms to better understand the problem (Creswell, 2003; Creswell & Plano Clark, 2007; Fraenkel & Wallen, 2006; Greene & Caracelli, 1997). It is worthy to note the importance of understanding and correctly applying the respective methodologies.

Mixed method research focuses on “collecting, analysing and mixing both qualitative and quantitative data in a single study or series of studies”, in order to understand the problem better (Creswell & Plano Clark, 2007, p. 5). A mixed method research approach was used in this study in order to attend to the research questions most appropriately. The data were collected in phases, referred to as an explanatory mixed methods design. Quantitative data collected from the survey in Phase One provided a general picture of the research problem, followed by qualitative data to further refine the general picture (Fraenkel & Wallen, 2006). This closely fits with Creswell and Plano Clark’s (2007, p. 71) purpose for using such an approach in that “qualitative data helps explain or build upon initial quantitative results.” The results of this mixed-method research have provided a better understanding of the research problem than either approach alone. This is reinforced by Greene and Caracelli (1997) who propose when used in combination, quantitative and qualitative methods complement each other and allow for a more robust analysis, taking advantage of the strengths of each.

Following the review of the literature pertinent to this study and after gaining a personal understanding of the philosophical assumptions held by the researcher; it was decided that the most appropriate research approach for this study would be a mixed method sequential design.

3.3 Research Design

The research method for this study was selected on its ability to provide a mechanism for attaining the research objectives within the context of the study. A plethora of educational research literature advises to select strategies that will be most effective in probing and understanding the critical issues in question (Creswell, 2005; Creswell & Plano Clark, 2007; Fraenkel & Wallen, 2006; Greene & Caracelli, 1997). In terms of strategies, this refers to the instruments, procedures, analysis and reporting applied to the research. The conceptual framework illustrated in Figure 3.1 was used to guide the research design for this study. It provides a summary of the design and specific phases and stages included.

Figure 3.2 presents an overview of the timeline constructed to guide the phases of the study. It is provided to further depict how each phase and stage is closely aligned with the research objectives stated in Chapter One.

3.3.1 Phases of the Study

This study incorporated three distinct phases. Phase One aimed to provide an extensive review of the literature in order to position this study in the context of the previous research and identify the gaps in the literature. Phase Two included two stages of data collection. In Stage One, quantitative data were collected through surveys to provide a general picture of the research problem, followed by qualitative data collected through interviews to further refine the general picture document regional and remote teachers' perceptions of their access to professional learning in Western Australia (Research Objectives 1 and 2). Furthermore, in Stage Two of this phase, data were collected to describe current practice in the Department of Education and other professional learning providers in order to document the technologies currently available to support professional learning in an online environment (Research Objective 3). Phase Three included data analyses, findings and the formulation of a conceptual framework to facilitate the implementation of a professional learning community through the application of synchronous and asynchronous technologies (Research Objective 4).

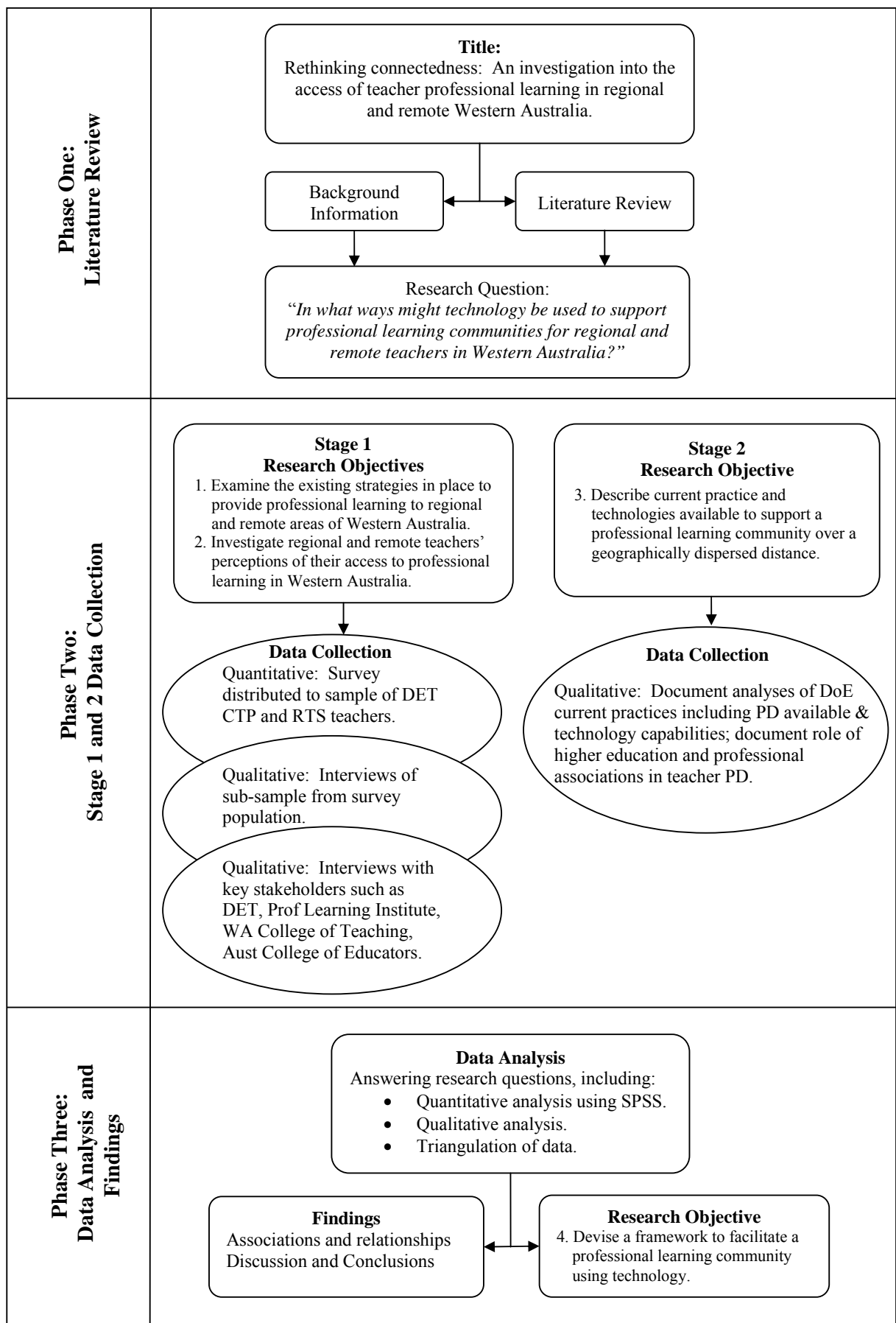


Figure 3.1 Research Conceptual Framework.

February – May 2008 June 2008 July 2008 – October 2008	<p><i>PHASE 1</i></p> <ul style="list-style-type: none"> ▪ Preliminary literature review; continuing throughout study. ▪ Preparation of candidacy proposal. ▪ Submit application for candidacy. ▪ Ongoing literature review. ▪ Draft early chapters of thesis.
November 2008 – January 2009 February 2009 – June 2009	<p><i>PHASE 2 (Stage 1 - Research Objective 1 and 2)</i></p> <ul style="list-style-type: none"> ▪ Obtain ethics from Curtin University & DoE. ▪ Develop survey instrument, interview protocol ▪ Environmental scan of stakeholders. ▪ Administer quantitative survey. ▪ Ongoing data analysis. ▪ Qualitative interview of sub sample. ▪ Ongoing data analysis.
July 2009 – December 2009	<p><i>PHASE 2(Stage 2 - Research Objective 3)</i></p> <ul style="list-style-type: none"> ▪ Document DoE current practice, technology available, higher education and professional associations' role in teacher PD. ▪ Refine early chapters. ▪ Ongoing data analysis.
January 2010 –March 2010	<p><i>PHASE 3(Research Objective 4)</i></p> <ul style="list-style-type: none"> ▪ Devise conceptual framework. ▪ Ongoing data analysis.
April 2010 – November 2010 December 2010 – March 2011	<ul style="list-style-type: none"> ▪ Refine early chapters, revise literature review. ▪ Draft findings, discussion and conclusions. ▪ Complete write up of thesis. ▪ Adjust chapters as necessary. ▪ Submit thesis.

Figure 3.2 Timeline of research design phases.

3.3.2 Sample

In 2008, the researcher met with the Director and Senior Management personnel of the Professional Learning Institute (PLI), developed to offer professional learning programs for all WA Department of Education staff. The PLI started in 2005 as the section within the Department of Education offering professional learning programs for graduates, senior teachers, support staff and leaders. It also offers a range of scholarships at postgraduate level in the tertiary sector. From this discussion, it was decided that the sample needed to consist of two distinctive categories that would provide a clear indication of the perceptions of teachers in both regional and remote areas. These distinctive categories were teachers employed in regional or country areas (classified as the Country Teaching Program) and those employed in very remote areas (classified as the Remote Teaching Service).

3.3.2.1 Background of Country Teaching Program

Schools classified in the Country Teaching Program are located more than 35 kilometres outside the Perth metropolitan area, however, many are in small, isolated and challenging communities. Statistics provided by the staffing directorate of the Department of Education in 2008 indicated the CTP consists of approximately 118 schools and employs 2,491 teachers including administrators. All country schools have access to the internet and a range of ICT. Department of Education (2010a) list the additional incentives of working in these schools as:

- permanent status on appointment subject to the completion of two years continuous satisfactory service in the program.
- the opportunity to transfer more easily to a school of your choice following your service with the CTP.
- financial incentives of between \$980 and \$8,500 per year depending on the location.

3.3.2.2 Background of Remote Teaching Service

The Remote Teaching Service (RTS) schools are some of the most isolated schools in the world. Some may be in small towns, whereas others are in community settings with predominantly Aboriginal populations. Most schools cater for pre-school children through to Year 10 (4-15 years of age), and some offer programs to Year 12. These schools also deliver a range of subjects through Schools of the Air and Schools of Isolated and Distance Education (SIDE). The Remote Teaching Service encompasses 43 schools in very remote locations and employs 341 staff including administrators. There is a separate selection process in order to gain employment within the RTS and teachers are generally offered a three year contract. Department of Education (2010b) list the additional incentives of working in these schools as:

- additional salary allowance from \$10,000 to \$15,000 per year.
- locality allowance of between \$2,085 and \$4,798 per year depending on the location of the school.
- permanent status on appointment subject to the completion of two years continuous service in a RTS location.
- 10 weeks paid leave after three years continuous service in the same location or 22 weeks paid leave after four years continuous service in the same location (in addition to the standard school holidays).
- additional professional learning.
- rent free housing (semi furnished) and storage of your furniture and effects while you are in your remote location and payment of relocation costs.

Additionally, on completion of a three year contract, if a teacher chooses not to remain in the remote school they are guaranteed a teaching position in the metropolitan area or an area of their choice, if available.

3.3.2.3 Sample selection

A proportionate stratified random sampling of the CTP and RTS programs was undertaken to ensure that a balanced proportion from both programs were surveyed (Creswell, 2005). Stratified sampling is a probability technique where the researcher divides the population into subgroups and then randomly selects the final participants from the different subgroups. This was the preferred sample selection as the study aimed to observe existing relationships between two or more subgroups and required a balanced proportion to do so. In 2009, at the time of the data collection, the total number of schools in each program were CTP schools (n=118) and RTS schools (n= 43). It was decided to include a total of 50 schools in the survey sample. In order to ensure a correct proportional allocation, the formula in Figure 3.3 was applied. It shows an equation where the group number is multiplied by the sample size and divided by the total amount.

$$\text{CTP} = (118 \times 50) / 161 = 36.645 = 37 \text{ schools}$$

$$\text{RTS} = (43 \times 50) / 161 = 13.354 = 13 \text{ schools}$$

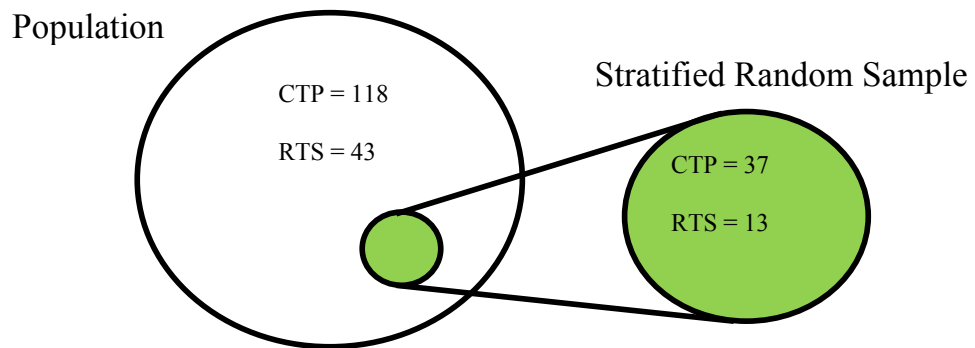


Figure 3.3 Stratified random sample of schools surveyed.

A total of 50 schools were provided the opportunity to participate in the survey. In order to undertake a stratified sample of 50 schools over both programs, the sample consisted of 37 schools from the CTP and 13 schools from the RTS, all were a diverse range of size and district locality. Within the 37 CTP schools the sample allowed for a large number of teachers to respond to the survey, inviting a possible 549 teacher responses. From the 13 RTS schools, 169 teachers were invited to participate in the survey. All responses were anonymous and did not identify names of respondents or names of the schools that they were employed within at the time of the study. Names of the schools invited to participate have been provided in Appendix A, however there can be no link made between the respondent and the schools in which they work due to the anonymous responses.

Figure 3.4 gives information as to the education district boundaries as administered by the Department of Education, during the period of this investigation.



Figure 3.4 Education districts in Western Australia (DoE, 2010c).

Participants who responded to the initial survey were invited to contact the researcher if they were willing to participate in Stage Two of the study, which included semi-structured interviews conducted by telephone or email. To ensure their survey responses remained de-identified, no email addresses or names for the qualitative phase were collected with the surveys. Respondents were invited to email the researcher separately to provide contact details for ongoing data collection.

3.4 Phase Two

This phase included two stages of data collection. In Stage One, quantitative data were collected through surveys followed by qualitative data collected through interviews. In Stage Two, data were collected to describe current practice in the Department of Education and from other professional learning providers. The following sections provide further detail of the data collection undertaken at each stage within Phase Two.

3.4.1 Stage 1 – Quantitative Data Collection

A survey using a five point Likert scale with 42 statements and a series of open-ended questions were administered to the participants of the quantitative stage. In order to identify the purpose of the survey instrument an extensive review of the literature was undertaken by searching scholarly peer reviewed journal articles and electronic databases. The following search terms were used in varying combinations: teacher professional development; technology; ICT; regional; rural; remote; learning communities. Government policies at the state and national level were reviewed within the themes identified from the literature research.

After a review of the literature and exploration of the area, an appropriate instrument that had already been developed and used in the area was not identified. As a result, it was necessary to develop a suitable instrument for this study. Based on the literature pertinent to regional education and ICT as a medium for professional learning, a survey instrument was developed in line with the research objectives. The coding categories for professional development (PD) were adapted from the Gall

report (Gall, Renchler, Haisley, Baker & Perez, 1985), but included examples from the Western Australian context to assist in clarification of meaning.

Once the initial survey instrument was drafted, the researcher again contacted senior management at the Professional Learning Institute for feedback. After this feedback was provided, changes were made to the instrument to ensure the terminology was aligned within the professional learning context of DoE as these teachers were the intended sample. The survey instrument was then pilot tested with five teachers who were currently working in the context of regional and remote schools. These five teachers were known to the researcher and were employed in situations similar to those of the intended participants of the study. From the responses and discussion with the five teachers, slight changes were made to the instrument, but were mainly in terms of sequence and structure rather than content. This allowed for validation of the instrument (Creswell, 2005).

Moser and Kalton (1985) proposed that a five or seven point scale may produce slightly higher mean scores relative to the highest possible attainable score, compared with those with scales with nine or ten point scales. As the participants of the survey were being asked to provide a level of agreement, a five point likert scale from strongly agree to strongly disagree was used.

The instrument sent to participants included 11 demographic questions to provide a profile of the survey population. The main body of the instrument included the following five categories: access to professional development; professional learning communities; use of technology/ICT; value of PD approaches and mandatory versus self initiated PD. Further, an open ended section where teachers could provide information about the type of PD they had engaged in within the first semester of 2009 was included. An example of the survey can be found in Appendix B of this thesis.

Evidence from the Professional Learning Institute (PLI) suggested that not all teachers in these regions were consistent in accessing their email. Based on this evidence it was decided to mail paper-based surveys to these teachers. Each school

was sent an information package which included an information sheet, survey and reply paid envelope for each teacher/administrator employed within the school. The school data were sourced from the schools online information available through the DoE. A letter to the principal of each school was included within the package and additionally, an email was sent to each principal to advise they would be receiving the package. An example of emails, sample letters and information sheets provided to participants can be found in Appendix C, D, E and F of this thesis

In addition, an electronic copy of the survey was provided in the event that teachers required an extra copy or preferred to submit electronically. This was created within box.net, a web 2.0 application that allows sharing and managing of files in a familiar folder structure. The link to the box.net site was provided on the bottom of the survey that was mailed to participants. Appendix H shows the box.net site and access details. It was noted from the details within this site that the survey was accessed only four times by participants. A social networking group was established in Facebook for the study and the details were provided to the participants with the hard copy of the survey. This group did not appear to be well accessed and it was evident that only two teachers had joined the network within this social networking medium. An example of this can be found in Appendix I of this thesis.

Anonymity was maintained for all participants of the survey; however, the choice to be included in a follow up interview meant the participant was required to provide contact details. This was done by emailing the researcher independently of the survey which meant that there was no direct connection recorded which ensure anonymity was upheld.

3.4.2 Stage 1 – Qualitative Data Collection

A list of names and email address was collected as the survey participants emailed their intention to continue with the qualitative data collection within this stage of the study (see example in Appendix J). The participants of the interview represented a sub-sample of the original group of survey participants and allowed for a deeper understanding of the phenomenon in question.

The interviews were conducted by email, telephone and where possible, face to face. The strengths and weaknesses of e-interviews were considered prior to the decision to conduct interviews over email. It was decided that this method included flexibility for teachers to respond in their own time, which was attractive to many of the participants. Research by Bampton and Cowton (2002) informed the decision as it offered possibilities for researching those participants who live beyond the geographical reach of the researcher. Additionally, MacNeill, Cavanagh and Reynolds (2009) argue that “the e-interview facilitates more considered, valid responses to the questions in the interview process” (p. 5).

The interview included open ended questions to ensure all points were discussed to the level of detail the participant was comfortable with. From this original interview participants were emailed or telephoned when necessary, in order to clarify any anomalies and fully understand the data provided by the participant.

Included in this stage was an environmental scan of current stakeholders in the regional education arena to understand current and potential changes to professional learning that may have been taking place. Stakeholders within this field included Department of Education (WA), Education Network of Australia, Professional Learning Institute, Western Australian College of Teaching, Australian College of Educators, Rural and Remote Education Advisory Council and the Society for Provision of Education in Rural Australia. The environmental scan was conducted by meeting with key personnel from these organisations and collecting data in the form of policies and procedures, along with the researchers’ notes from the meetings. The data from this environmental scan has assisted with triangulation of the research findings from the teacher sample (Fraenkel & Wallen, 2006).

3.4.3 Stage 2 – Investigation of Current Practice

In Stage Two, an investigation was conducted to ascertain what current practices were being undertaken by the DoE to provide professional learning to their teachers. Informal interviewing of key personnel in the Professional Learning Institute and the

Department of Education were held. The e-learning portal environment and the separate events management system hosted by the PLI were documented. The networking and internet capabilities within the DoE schools around Western Australia were also documented to understand the proficiency of the communications system to schools around the state.

3.5 Phase Three

This phase included data analyses, findings and the formulation of a conceptual framework to facilitate the implementation of a professional learning community through the application of synchronous and asynchronous technologies.

3.5.1 Quantitative Data Analysis

Quantitative data from Stage One were analysed through the use of a computer package that provides statistical analysis of data. The SPSS (Statistical Package for the Social Sciences) application allowed for in depth data preparation, analysis, graphing and modelling (Field, 2009).

After the data were entered into SPSS, the first important procedure was to undertake data cleaning. Frequencies were run on each variable to identify any contaminated data. Common sources of errors identified were missing data and coding errors, which were tracked back to the original dataset and corrected.

Responses to each item were described by reporting counts and percentages, and means and standard deviations where appropriate. To report differences between regional and remote responses the data were analysed using independent samples, T-tests or the equivalent non-parametric test where appropriate; but for category data crosstabs and Chi-square tests were used (Ho, 2007). Importantly, data consolidation and analysis was ongoing throughout each phase of the study. The data were analysed in relation to the research objectives and any other phenomenon that arose beyond the research question.

3.5.2 Qualitative Data Analysis

Qualitative data collected through transcripts from interviews and e-interviews in Stage One were coded for emerging concepts and content analysed according to the structure designed in the interview guide.

All of the qualitative data, including e-interviews and face to face interviews, were entered into QSR NVivo 9.0 software. No advanced features such as automatic coding were used for the study, as it was decided to manually code the data in terms of the main categories emerging from the quantitative data.

3.5.3 Findings and Conceptual Framework

In Phase Three, the study involved a synthesis of the data derived from the analyses. From this, associations and relationships were conceptualised to inform the findings. Additionally, a conceptual framework was devised to facilitate a professional learning community using both synchronous and asynchronous technologies. This conceptual framework is presented as a model in the final chapter of the thesis.

3.6 Triangulation, Validity and Reliability

As this study used a mixed methods research design, the research lends itself to a range of validation techniques for the purpose of checking data and the interpretation of data.

For the quantitative data, reliability and validity of the survey were confirmed by conducting Cronbach's alpha coefficient reliabilities within SPSS. According to Hair, Anderson, Tatham and Black (1998) Cronbach alpha α is a measure of reliability that ranges from 0 to 1, with a minimum value of .60 considered acceptable. Reliability factors were determined and confirmed by calculating Cronbach alpha coefficient reliability values for each category within the survey instrument. In addition to measuring the internal consistency, this was also

conducted to provide evidence that the scale was unidimensional and additional analyses could be performed.

The notion of triangulation is to ensure that multiple methods will produce cross verification validation. A triangulation strategy was used in this study to increase the validity of the research. Cohen and Manion (1986) define triangulation as an "attempt to map out, or explain more fully, the richness and complexity of human behaviour by studying it from more than one standpoint." Mathison (1988) describes methodological triangulation as using multiple methods, such as surveys, interviews and observations to examine the phenomenon of the study.

It is important to acknowledge that the researcher influences what they study by their personal connection with it (Mehra, 2001). With this in mind, the researcher has given a rich description of the contextual details surrounding the study. The decisions, procedures and conclusions arising from this study have been sufficiently documented to give others the confidence to see that researcher bias has been addressed (Yin, 2003).

To minimise researcher bias, it was appropriate to ensure the reliability and validity of the study by acknowledging the eight verification processes presented by Creswell (1998). It is recommended that a researcher address at least two of these in a research study. This research aims to achieve reliability and validity by having implemented the following techniques:

1. *Triangulation*: Multiple sources of data collection such as surveys, semi-structured interviews with participants, e-interviews, document analyses, follow up emails, telephone calls and informal interviews were accumulated. Creswell (2005) states that collecting multiple data sources of information will support the conclusions of the study and enhance validity.
2. *Member checking*: During interviews and telephone calls the researcher restated, summarised or paraphrased information to ensure a correct interpretation was made. A copy of interview transcripts and e-interviews

were provided to the participant they were derived from and they were asked for confirmation of its accuracy (Merriam, 1998).

3. *Thick description:* Finally, the thesis provides a rich and extensive detailed description of the study that will allow readers the possibility to transfer findings were appropriate (Creswell, 1998).

3.7 Ethical Considerations

Prior to the research beginning, approval was received from the Human Research Ethics Committee (HREC) at Curtin University and the DoE ethics approval process. All participants in this research were teachers or administrators, such as principals and deputy principals who were employees of DoE. They were provided with information about the study prior to participating and conducted the study as voluntary participants. Closely aligned to this is the notion of informed consent. The participants were fully informed of the procedures that would be undertaken in the study through the information sheet and consent form as depicted in Appendix F.

All participants were given the opportunity to withdraw from the research at any point in time (although no participants did at any phase of the study). Respect was shown for people to refuse to participate in the research study without reason. The participants' rights to anonymity in this thesis have been addressed by providing pseudonym names by coding.

Confidentiality is an essential factor when conducting research. The personal information of the participants has been stored separately from the data and no records have identifying information attached. Instead, code names were assigned and a system has been maintained for identification.

All data collected within the study has been kept secure and will be maintained for five years by the researcher. These data are in the form of paper based copies of surveys, printed emails and electronic transcriptions of face to face interviews. All data are kept in a locked cupboard located in a secure office, within an alarmed

building at the researchers' place of work. The data has been labelled clearly for access purposes and will be destroyed after the five year period.

3.8 Chapter Summary

This chapter has described the methodology used in this study. Firstly, a philosophical foundation of the research approach was provided; followed by a rationale for the research design. The techniques used to select the sample were specified and the developmental stages of the instrument design were outlined. The phases of the study were discussed, including the objectives that were to be met in each phase. Furthermore, the processes involved in collecting and analysing the data were discussed. The final sections considered triangulation, validity, reliability and ethical considerations for the study.

CHAPTER FOUR

Quantitative Results

4.1 Overview

This chapter provides the results of the analyses of the quantitative data collected within this study. The synthesis of these results is compiled with the qualitative data and presented as findings in the final chapter. In Section 4.2 the data collection and response rates are detailed. In 4.3 the survey instrument and the Likert scales utilised are explained in more detail. Section 4.4 confirms the reliability of the quantitative survey conducted within the study by calculating Cronbach alpha coefficient reliability. Section 4.5 provides demographic statistics of the survey respondents. Section 4.6 displays results of means and standard deviations of the total population. Section 4.7 examines the differences between regional and remote teachers' responses. Section 4.8 reports the data by teaching districts in Western Australia. Finally, this chapter concludes with a summary of the results from the quantitative survey.

4.2 Survey Conduct and Response Rate

The survey was conducted during the second semester of 2009, from June to December. Approximately 720 surveys were sent to 50 schools within the Remote Teaching Service and Country Teaching Program of the Department of Education (WA). Of these, almost 15% (n=106) of teachers responded to the survey. In situations where respondents returned the survey, but had not responded to the questions, frequency distributions of the data were undertaken to highlight these occurrences. Frequency distributions showed that two respondents had not answered any of the questions and as a result these surveys were removed from the final dataset. The final number of respondents for the survey sample was 104.

4.3 Survey Instrument

The survey instrument consisted of five categories which included forty two statements. A five point Likert scale was used in the survey instrument for four of the categories including *Access to PD*, *Learning Communities*, *Use of Technology*, and *PD selection*. An example of this is displayed in Figure 4.1. The coding of the results were entered into SPSS as numerical values selected by the respondents. For the five point scale, coding was applied from 1 at strongly agree through to 5 at strongly disagree.

		Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
22	I am confident in using technology and am capable of accessing online PD if required.	1	2	3	4	5

Figure 4.1 Five point Likert scale for survey instrument.

Similarly, in terms of the questions regarding *Value of PD Approaches*, a four point scale was used as shown in Figure 4.2. These were coded from 1 (little or no value) through to 4 (very high value).

		Little or No Value	Moderate Value	High Value	Very High Value
32	Regional workshops.	1	2	3	4

Figure 4.2 Four point Likert scale for value of PD scale.

4.4 Reliability and Validity

Reliability and validity of the survey were confirmed by conducting a Cronbach's alpha coefficient reliability within SPSS. Internal consistencies were determined and confirmed by calculating Cronbach alpha coefficient reliability values for each category within the instrument. In addition to measuring the internal consistency, this was also conducted to provide evidence that the scale was unidimensional and additional analyses can be performed. According to Nunnally and Bernstein (1994)

a reliability coefficient of 0.60 or greater is acceptable to express the internal consistency of a scale which effectively means they can be reported together. Additionally, D'haenen, den Boer and Willner (2002) report that coefficients correspond to degrees of agreement as: 0.0 to 0.20 = no agreement; 0.21 to 0.40 = very weak agreement; 0.41 to 0.60 = moderate but not acceptable agreement; 0.61 to 0.79 = acceptable agreement; and 0.80 to 1.00 = strong nearly perfect agreement. The range of reliability values for the scales is reported in Table 4.1 and range from 0.32 to 0.75.

Table 4.1
Cronbach Alpha Coefficient Reliability Values for Categories

Category	Alpha Reliability
Access to PD	.73
Learning Communities	.61
Use of Technology	.75
Value of PD Approaches	.65
PD Selection	.32

In line with D'haenen, den Boer and Willner (2002) four categories were of acceptable agreement and could be reported as a combined scale. The structure of the *PD Selection* category of the survey was checked using a Cronbach's Alpha coefficient to see if questions 39 through to 42 could be used as a combined scale for further analysis. The outcome of the *PD Selection* category was considered very weak (0.32) for Cronbach's alpha and as a result it was decided to report these questions individually. The reliability indicators for the other four categories (*Access to PD*, *Learning Communities*, *Use of Technology* and *Value of PD Approaches*) have a level of internal consistency that suggested good reliability and predictive validity.

4.5 Respondent Profiles

The background section of the survey contained 11 questions designed to collect demographic information about the teachers responding to the survey. This was specifically structured to build a profile based on gender, years of teaching experience, original qualifications, employment status, non-metropolitan teaching experience, the number of staff within their current school and district the school resides in.

4.5.1 Gender, Experience and Teaching Status

Table 4.2 presents a summary of the gender, years of teaching experience and current teaching status within the Department of Education (WA). The respondents to the survey correlated with familiar statistics regarding gender population within the teaching profession. The Western Australia College of Teachers (WACOT) is the registering board for all teachers in the state of Western Australia. Their figures showed that in 2009, 26% of its 45,000 members were male and 74% female. The respondents from the survey in this study similarly reported 23% male (n=24) and 77% female (n=80). This exemplifies that the results of this study were evenly reported with regard to gender population of the teaching profession.

As reported in Table 4.2 and Figure 4.3, the majority of the respondents were female and classified themselves as teachers who had taught for more than two years. The number of participants classified as Graduate Teachers within their first two years of teaching (n=21) and teachers who had completed the Senior Teacher 1 or 2 qualification (n=21) were identical. The smallest group of respondents (n=6, representing 5.8% of all respondents) were those who had successfully completed the Level 3 Classroom Teacher process. A large percentage of the teachers (44%) identified as being within their first five years of teaching. These data indicate that less experienced teachers working in regional and remote areas were more willing to participate in the survey than those with more teaching experience.

Table 4.2

Demographic information detailing respondent numbers by gender, years of teaching and current teaching status.

	N	%
Gender:		
Male	24	23.08
Female	80	76.92
TOTAL	104	100.0
Years of teaching:		
0-5	46	44.23
6-10	12	11.54
11-15	14	13.46
16-20	14	13.46
20+	17	16.35
No response	1	0.96
TOTAL	104	100.0
Current teaching status:		
Graduate Teacher - in his/her first two years of teaching	21	20.19
Teacher - taught for more than 2 years	55	52.88
Senior Teacher 1 or 2 – has successfully completed the process	21	20.19
Level 3 – has successfully completed the process	6	5.77
No response	1	0.96
TOTAL	104	100.0

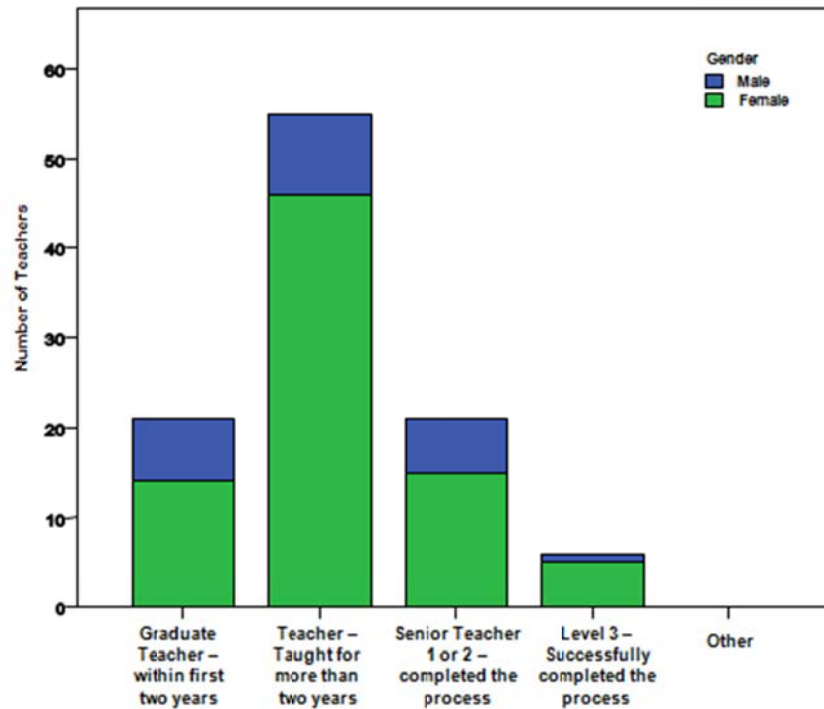


Figure 4.3 Current teacher status sorted by gender for this study.

Teachers reported the amount of time they had been teaching in total years and then the proportionate number of years they had taught in a regional or remote location. Table 4.3 shows the mean of total years of teaching was 11.59 years compared with the mean of years teaching in a regional/remote area which was less at 7.84 years. On average, this would show that teachers from this study have taught 67% of their total years of teaching in regional and remote areas.

Table 4.3

Respondents' Total Years Teaching Compared With Total Years Teaching in a Regional/Remote Area.

	Minimum	Maximum	Mean	SD
Years Teaching	.50	50	11.59	10.82
Years Teaching in Regional and Remote Areas	.08	49	7.84	8.72

4.5.2 Teaching Qualifications vs Current Teaching Position

A comparison of the respondents' original qualifications with their current teaching position is shown in Figure 4.4. Those qualified in Early Childhood Education (ECE) accounted for 13.5% (n=14), however 15.4% (n=16) indicated they were currently teaching in the Early Childhood field. This shows that two respondents working in Early Childhood were teaching outside of their qualified field or in a combination of ECE and another field. The Primary qualified respondents represent 57.7% (n=60) of the total participants. In contrast 40.4% (n=42) are currently teaching in Primary teaching positions. These data indicate that 18 teachers who were originally trained to teach in Primary positions are now teaching outside of their original area of qualification or in a position that requires them to teach over a combination of teaching positions. A total of 24% (n=25) reported being Secondary qualified teachers. Those currently teaching in Secondary positions accounted for 21.2% (n=22). From these data it is evident that three teachers who originally were Secondary qualified are now teaching in other roles. The remaining respondents from the original teaching qualification data comprise 4.8% (n=5) and reported their qualifications as Other. From the survey data it was found that Respondent 20 had a Bachelor of Education, Bachelor of Arts and Graduate Certificate in Teachers of English to Speakers of Other Languages (TESOL) and was teaching Languages Other Than English (LOTE); Respondent 21 was originally trained as a special needs teacher and was now teaching K-12; Respondents 76 and 77 held a Graduate Diploma of Education and although they had trained in middle school education were now teaching primary and secondary; similarly Respondent 83 had a Graduate Diploma of Education and although trained in middle school education was now teaching in the primary years. These data shows 6.7% (n=7) indicated their current teaching position as Other. After conducting further analysis of the surveys it was found that Respondents 20 and 21 had selected Other due to the reasons described above where their category was not clearly defined. Additionally, Respondents 25, 58, 65, 78 and 74 all reported they were currently teaching in positions other than ECE, Primary or Secondary, but did not provide further details to offer an explanation of what the current work involved. It is important to note that two teachers (1.9%) reported they were currently teaching a combination of ECE,

Primary and Secondary areas. Similarly, 14.4% (n=15) of respondents indicated they were currently teaching a combination of two areas.

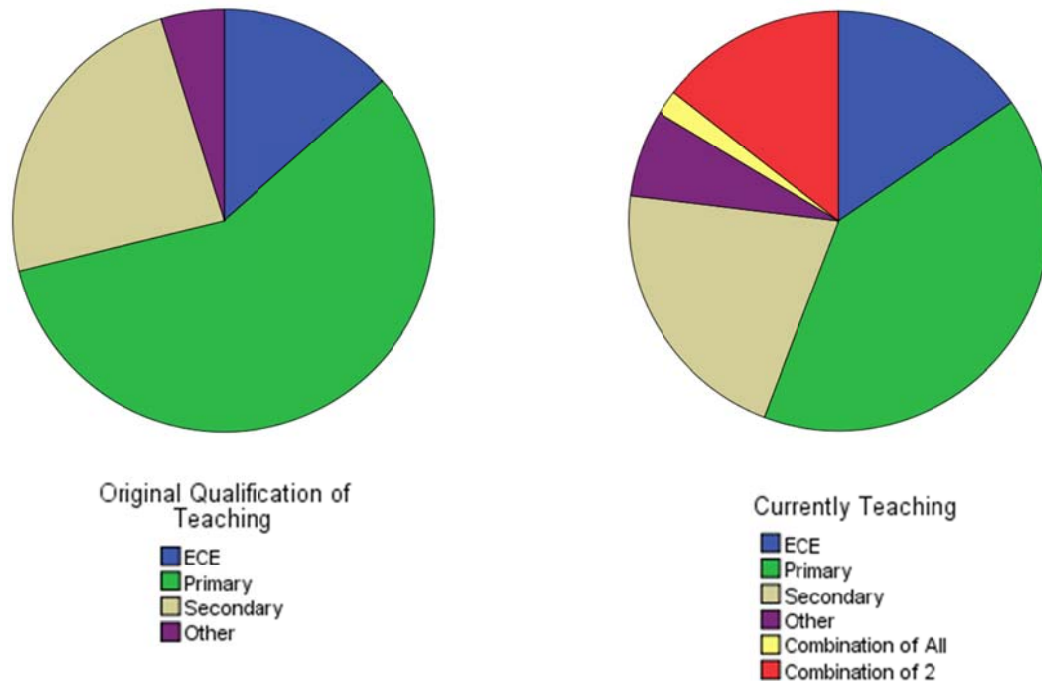


Figure 4.4 Comparison of original teaching qualification and current teaching position.

This data indicates there are teachers working outside of their qualified areas and as a result it is imperative they have access to professional learning to enable them to effectively implement an appropriate curriculum.

4.5.3 Employment Program (CTP & RTS)

In relation to regional and remote locations, the regional respondents from this study were employed within the Country Teaching Program (CTP) and the remote respondents were employed with the Remote Teaching Service (RTS). The data showed 79.8% of respondents identified as being part of the CTP and 20.2% were from the RTS. This is displayed in Figure 4.5.

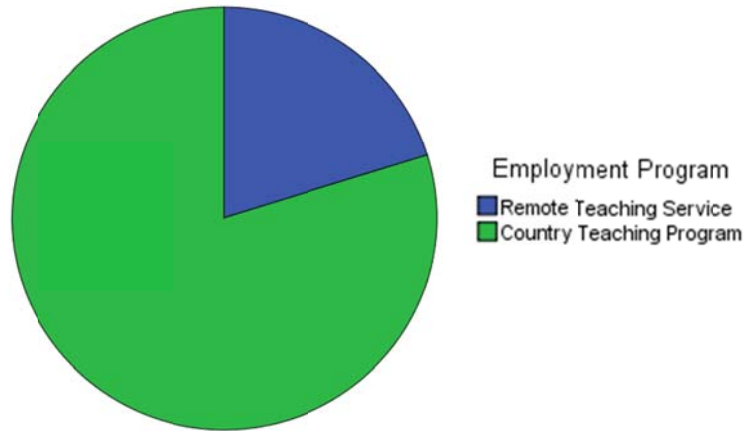


Figure 4.5 Teachers employed in RTS and CTP.

4.5.4 Size of School

The number of teaching staff working within each school is important to note within the context of this study, as the size of schools may impact on the success of professional learning communities. The respondents were employed within schools that ranged from a staff of two qualified teachers to 65 qualified teachers, showing a large variance in staff numbers, which could possibly impact on the respondents' view of learning communities, networking and collegiality. Figure 4.6 presents a frequency of respondents and the number of teachers employed in their current school. A large proportion (45.3%) of respondents reported as being employed within a school that had less than ten teachers employed. This indicates the survey data is representative of teachers who work not only in geographical isolation, but also with a limited number of colleagues. A total of 23.1% (n=24) reported they currently worked in a school with 11 to 20 teachers employed. A total of 12.5% (n=13) reported their school size as 21 to 30 teachers employed. Considerably less respondents reported working within a school that employed larger numbers of teachers, including 6.7% (n=7) from schools with 31 to 50 teachers employed and 2.9% (n=3) from schools that employed 51 to 100 teachers.

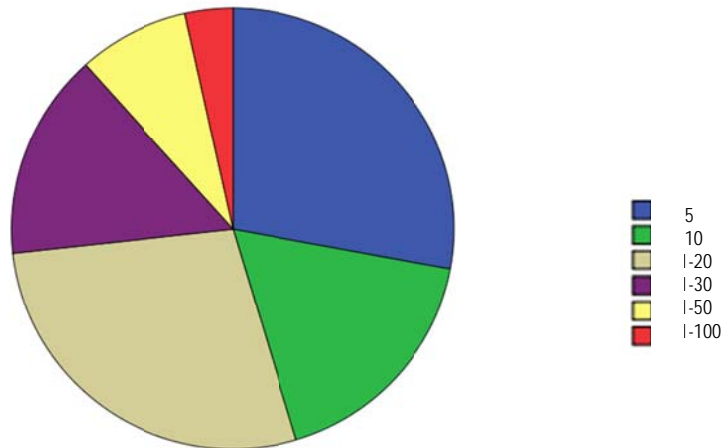


Figure 4.6 Number of teachers employed in current school.

4.5.5 Teaching Regions

It is evident within Table 4.4 that seven teaching regions were represented within this study, with the largest percent (23.1%) being from the Pilbara district. This district is a considerable distance (1300 to 1900 kilometres) from the metropolitan area. Narrogin and the Midlands District were also higher represented with 20.2% and 19.2% respectively. Although low numbers of respondents were located in the Kimberley (n=9), these teachers contributed important viewpoints to the study due to the considerable distance of this region from the metropolitan area.

Table 4.4

Demographic Information Detailing Current Teaching Region

Current Teaching Region	N	%
Esperance District	3	2.9
Goldfields District	10	9.6
Kimberley District	9	8.7
Midlands District	20	19.2
Midwest District	17	16.3
Narrogin District	21	20.2
Pilbara District	24	23.1
Total	104	100.0

4.6 Results – Total Population

The initial analyses of the data were conducted on the total population of the respondents (n=104). As described in Section 4.4, the outcome of the *PD Selection* category was considered very weak (0.32) for Cronbach's alpha and as a result it was decided to report these questions individually. For the other categories, that showed high levels of internal consistency, there were thirty eight items from the survey that were grouped into four categories (as depicted in Table 4.1). A mean was then calculated at the category level and is displayed in Table 4.5. This table shows the category level ranked in terms by highest mean.

Table 4.5

Category Level Ranked by Highest Mean

Category	Mean	Standard Deviation
Access to PD	3.43	.65
Value of PD Approaches	2.76	.41
Use of Technology	2.57	.60
Learning Communities	2.29	.40

The following sections (from 4.6.1 to 4.6.5) provide descriptive statistics at the item level ranked by category in order of the highest mean. These have been ranked in order of the highest to lowest mean to identify those of high and low levels of agreement according to the Likert scale within the survey instrument. Items that have a high mean, greater than or equal to four indicate disagreement or strong disagreement with the item. In contrast, items with a mean less than or equal to two indicate agreement or strong agreement with the item. Additionally, items with a mean close to three and showing a large percentage of the survey respondents indicate the teachers have responded with uncertainty within the item.

4.6.1 Access to PD

Table 4.6 shows the distribution of teachers' responses to each item for the *Access to PD* category including the mean score and standard deviation. The item with the highest mean (4.22) indicates teachers (84.5%) perceive that travel time to access professional development is significant. The second highest mean (3.8) although not greater than four, indicates there is not sufficient access to relief teachers that enable them to access professional development. The item with the lowest mean (1.49) shows teachers agreed that a significant amount of personal time is spent travelling to face-to-face professional development.

Table 4.6

Descriptive Statistics of Access to PD Ranked by Highest Mean

Item	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	Mean	SD
	%	%	%	%	%		
The travel time to access PD face-to-face is insignificant.	5.8	3.9	5.8	31.1	53.4	4.22	1.11
There is sufficient access to relief teachers to enable me to access PD.	1.9	20.2	10.6	30.8	36.5	3.80	1.19
I am satisfied with the amount of PD that I can access.	8.7	32.7	6.7	40.4	11.5	3.13	1.24
There are sufficient ways that I can access PD from my regional teaching location.	6.7	40.4	4.8	36.5	11.5	3.06	1.23
I am provided with sufficient funding from my school to access PD.	17.3	35.6	13.5	19.2	14.4	2.78	1.34
An incentive based system would encourage me to access more PD.	12.6	35.0	24.3	20.4	7.8	2.76	1.15
My school succeeds at notifying me of professional development that is available to me.	22.1	49.0	5.8	16.3	6.7	2.37	1.19
If I had more funding I would access more PD.	30.8	31.7	26.9	7.7	2.9	2.20	1.06
Travelling to face-to-face PD takes a significant amount of personal time.	62.5	30.8	1.9	4.8	0	1.49	0.76

4.6.2 Learning Communities

Table 4.7 shows the distribution of teachers' responses to each item for the *Learning Communities* category and the mean score including standard deviation. The item with the highest mean (4.22) confirms that 86.1% of teachers choose to be part of the professional learning community within their school. The lowest mean (1.40) shows that 100% of teachers believe attending PD with teachers from other schools is highly valuable. In addition, one item in this category indicates a level of uncertainty reported from a considerable number of participants (40.2%) which produces a mean of 2.82. This item stated that if access to an online professional learning community was available, then they would be part of this.

Table 4.7

Descriptive Statistics of Learning Communities Ranked by Highest Mean

Item	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	Mean	SD
	%	%	%	%	%		
Although there is a PLC within my own School, I choose not to be part of this.	0	1.0	12.9	49.5	36.6	4.22	0.70
I am a member of an online PLC and believe this is highly valuable.	3.1	12.5	21.9	41.7	20.8	3.65	1.05
There is no significant PLC within my regional district.	6.9	24.5	27.5	32.4	8.8	3.12	1.09
A PLC does not offer the same professional growth as a structured PD session.	3.0	26.7	32.7	31.7	5.9	3.11	0.97
Within my regional district I am part of a PLC that fosters my professional growth as a teacher.	6.8	38.8	14.6	32.0	7.8	2.95	1.14
If I had access to an online PLC, I would be part of this.	4.9	33.3	40.2	17.6	3.9	2.82	0.92
I am part of a PLC of teachers within my own school.	21.4	51.5	8.7	17.5	1.0	2.25	1.02
The PD I value includes opportunities for me to share my practice with other teachers.	25.5	58.8	6.9	7.8	1.0	2.00	0.86
I believe that a PLC is as important to my professional growth as attending formal PD opportunities.	35.9	51.5	5.8	6.8	0	1.83	0.82
Being able to attend PD outside of my regular PLC or school allows me to engage in a more positive experience.	40.2	46.1	9.8	3.9	0	1.77	0.78
I find it valuable to learn what other teachers are doing in their classroom.	58.3	40.8	0	1.0	0	1.44	0.55
Attending PD with teachers from other schools is highly valuable.	60.2	39.8	0	0	0	1.40	0.49

4.6.3 Use of Technology/ICT

Table 4.8 shows the distribution of teachers' responses to each item for *Use of Technology* category including the mean score and standard deviation. In terms of uncertainty, this section provided the highest level of teachers reporting uncertain as their response. From the respondents, 38.9% of teachers were uncertain as to whether using videoconferencing for PD was effective. In addition, over half (57.4%) disagreed that using videoconferencing for PD was effective. Similarly, 75.8% of teachers were uncertain if utilising web conferencing software was an effective way for teachers to access PD. The item that reports the lowest mean (1.71) and almost all of the teachers in agreement (93.1%) is the ability to access a computer within their home environment. The second lowest mean (2.19) is of extreme importance to this study with 73.7% of teachers stating that a blend of face-to-face and online PD is better together than in isolation.

Table 4.8

Descriptive Statistics of Use of Technology Ranked by Highest Mean

Item	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	Mean	SD
	%	%	%	%	%		
I have used videoconferencing for PD and this was effective.	6.3	7.4	38.9	31.6	15.8	3.43	1.05
Web conferencing software (such as Elluminate, Wimba, Webex, Centra7) is an effective way for teachers to access PD.	4.0	7.1	75.8	7.1	6.1	3.04	0.74
In my opinion, technology and ICT are making PD more accessible for regional teachers.	6.8	31.1	36.9	22.3	2.9	2.83	0.95
The support for ICT and technology is adequate within my school, so that I would feel confident to access online PD.	14.6	40.8	14.6	21.4	8.7	2.69	1.21
I have fast reliable internet access at home.	22.5	39.2	2.9	20.6	14.7	2.66	1.41
My school provides a sufficient number of computers.	20.4	45.6	4.9	17.5	11.7	2.54	1.31
My school has fast, reliable internet access.	16.5	46.6	10.7	21.4	4.9	2.51	1.14
I am confident in using technology and am capable of accessing online PD if required.	29.1	41.7	10.7	15.5	2.9	2.21	1.12
A blend of face to face PD and online PD is more effective than in isolation.	18.4	55.3	19.4	3.9	2.9	2.17	0.88
I have access to a computer at home.	45.1	48.0	0	4.9	2.0	1.71	0.86

4.6.4 Value of PD Approaches

Table 4.9 shows the distribution of teachers' responses to each item for the *Value of PD Approaches* category including the mean score and standard deviation. In terms of Value of PD the highest mean reported (3.28) and largest percentage of teachers (42.3%) reporting very high value was found in learning with and from their work colleagues, including mentoring. Reporting the lowest mean (2.22), teachers believed reading professional literature provided the least value in terms of professional development.

Table 4.9

Descriptive Statistics of Value of PD Approaches Ranked by Highest Mean

Item	Little or no value	Moderate value	High value	Very high value	Mean	SD
	%	%	%	%		
Learning with and from your work colleagues including mentoring	0	14.4	43.3	42.3	3.28	0.70
Regional workshops	1.0	13.5	56.7	28.8	3.13	0.67
Conferences or involvement with professional associations	4.8	19.2	56.7	19.2	2.90	0.76
University postgraduate courses	5.0	35.0	47.0	13.0	2.68	0.76
DoE initiatives (ie, Graduate Teacher, Senior Teacher modules inc. face to face and online)	11.7	28.2	48.5	11.7	2.60	0.84
TAFE courses or other training organisations	8.0	38.0	50.0	4.0	2.50	0.70
Reading professional literature	13.5	53.8	29.8	2.9	2.22	0.71

4.6.5 PD Selection

Table 4.10 shows the distribution of teachers' responses to each item for the *PD Selection* category including the mean score and standard deviation. In terms of selecting PD, the highest mean (2.14) indicates that 73.8% of teachers believe their PD should be connected to the school's priorities and endorsed programs. The lowest mean (1.34), shows that 99% of teachers believe their PD should help them build new skills and identify strategies to better meet the needs of their students.

Table 4.10

Descriptive Statistics of PD Selection Ranked by Highest Mean

Item	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	Mean	SD
	%	%	%	%	%		
My PD should be connected to my schools priorities and endorsed programs	27.2	46.6	11.7	14.6	0	2.14	0.98
All teachers should be expected to complete a specific amount of PD in order to ensure teaching and learning practices are updated.	26.2	58.3	5.8	4.9	4.9	2.04	0.98
I should be free to select PD based on my perceived needs and time available.	47.1	46.2	2.9	1.9	1.9	1.65	0.80
My PD should help me build new skills and identify strategies to better meet the needs of my students.	67.0	32.0	1.0	0	0	1.34	0.50

4.6.6 Ten Highest Ranking Items

To understand the data in a consolidated manner, Table 4.11 details the ten highest rating items from all categories in terms of highest mean.

From the analyses of total population data by individual item, the highest mean came from the *Access to PD* category and reported the significance of travel time for regional and remote teachers to access PD at 4.22. Additionally, with the highest mean at 4.22 was “although there is a PLC within my own School, I choose not to be part of this” which was situated in the *Learning Communities* category.

The lowest mean in terms of individual items came from the *Use of Technology* category, namely “Web conferencing software (such as Elluminate, Wimba, Webex or Centra7) is an effective way for teachers to access PD.”

Table 4.11

Ten Highest Ranking Items by Mean

Item	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	Mean	SD
	%	%	%	%	%		
The travel time to access PD face-to-face is insignificant.	5.8	3.9	5.8	31.1	53.4	4.22	1.11
Although there is a PLC within my own School, I choose not to be part of this.	0	1.0	12.9	49.5	36.6	4.22	0.70
There is sufficient access to relief teachers to enable me to access PD.	1.9	20.2	10.6	30.8	36.5	3.80	1.19
I am a member of an online PLC and believe this is highly valuable.	3.1	12.5	21.9	41.7	20.8	3.65	1.05
I have used videoconferencing for PD and this was effective.	6.3	7.4	38.9	31.6	15.8	3.43	1.05
I am satisfied with the amount of PD that I can access.	8.7	32.7	6.7	40.4	11.5	3.13	1.24
There is no significant PLC within my regional district.	6.9	24.5	27.5	32.4	8.8	3.12	1.09
Web conferencing software (such as Elluminate, Wimba, Webex, Centra7, etc) is an effective way for teachers to access PD. *	4.0	7.1	75.8	7.1	6.1	3.04	0.74

Item	Little or no value	Moderate value	High value	Very high value	Mean	SD
	%	%	%	%		
Learning with and from your work colleagues including mentoring	0	14.4	43.3	42.3	3.28	0.70
Regional workshops	1.0	13.5	56.7	28.8	3.13	0.67

4.7 Results – Regional vs Remote Teachers

Of the 104 respondents to the survey instrument, 83 were teaching in regional areas and identified as being employed with the Country Teaching Program, whereas 21 were from remote areas and identified as being employed with the Remote Teaching Service. In order to understand the differences between regional and remote teachers, it was decided to split the data into cases and analyse each separately.

4.7.1 Tests of Normality

Firstly, to establish the normal distribution of data, a Kolmogorov-Smirnov and Shapiro-Wilk Test of Normality was conducted. Based on these statistics and the visual representations through boxplots it was decided to conduct both parametric (independent samples T test) and non-parametric equivalent (Mann Whitney test) in order to check for consistency of results. Since there was no difference, only the parametric results are provided in this thesis.

The Kolmogorov-Smirnov Test of Normality showed the difference to normal distribution was not visibly substantial; however in the *Value of PD Approaches*, *Use of Technology* and *Learning Communities* categories there were a number of cases which were identified as responding quite differently to their counterparts. These will be displayed through boxplot representations and discussed in this section.

Boxplots in Figure 4.7 display the *Value of PD Approaches* category for both the Remote Teaching Service respondents and the Country Teaching Program respondents. From this boxplot it is evident that Respondents 21, 30 and 89 from the Remote Teaching Service are not situated in the normal distribution of data for this category. Further analysis showed the normal distribution of this category was based on the majority of teachers rating the value of the items in high or very high value. In contrast these respondents had rated six out of the seven items in the category as “little or no value” to “moderate value”.

Respondent 21, a male teacher of two years and seven months (all within a regional area) based in the Goldfields district, rated Postgraduate study as the only item of professional development that was high in value. For this respondent, those of “little or no value” were Regional Workshops and DoE initiatives including the Graduate Teacher modules.

In contrast, Respondent 89, a male teacher also from the Goldfields district, with two years and one month of teaching experience (all undertaken in a regional area), believed the only PD approach high in value was the DET initiatives. All other items were rated as “little or no value”, with the exception of Regional Workshops and Learning with and from your work colleagues including mentoring, which were rated as moderate value.

Respondent 30, a female teacher based in Kununurra, with four and half years of experience within a regional area, rated learning with and from your work colleagues including mentoring, as the only item that was high in value. All other PD approaches listed in this category were rated by respondent 30 as “little or no value” and “moderate value”. Of interest were the anecdotal notes on her survey that revealed that university postgraduate courses were “out of touch with reality”. The data within the Country Teaching Program subset of cases is considered to show normal distribution.

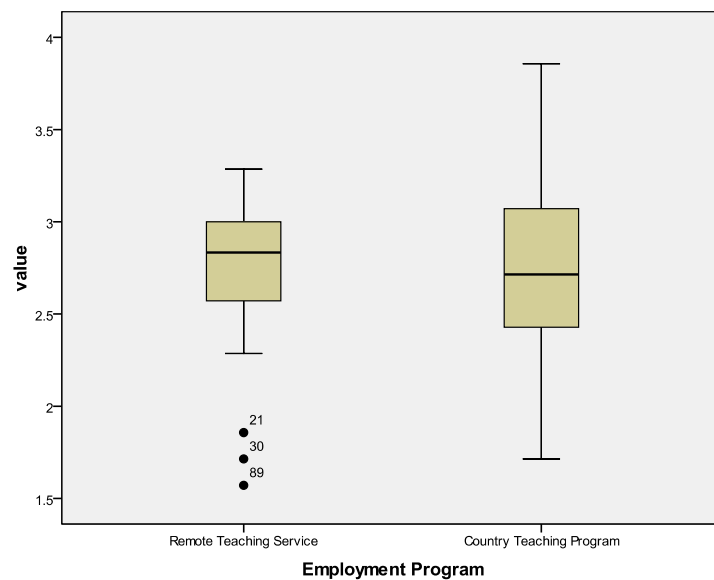


Figure 4.7 Boxplots of the Value of PD Approaches category for Remote Teaching Service and Country Teaching Program.

Figure 4.8 shows the boxplots for the *Use of Technology* category for both the Remote Teaching Service respondents and the Country Teaching Program respondents. From this boxplot it is evident that one respondent from the Remote

Teaching Service and two respondents from the Country Teaching Program are not situated in the normal distribution of data for this category.

From the survey data it was evident that Respondent 46, a male senior teacher of 15 years and 7 months from the Goldfields district is displayed outside of the normal distribution due to his responses to the videoconferencing and web conferencing statements within the item. This teacher agreed that he used videoconferencing for PD and this was effective. In contrast, 71.5% of remote teachers (n=15) within the study responded with disagreement, strong disagreement or uncertain as to using videoconferencing and its effectiveness. Additionally, he strongly agreed that web conferencing software (such as Elluminate, Wimba or Centra7) is an effective way to access PD and in his opinion, technology and ICT are making PD more accessible for regional teachers. A total of 70.8% (n=15) of remote teachers disagreed, strongly disagreed or were uncertain that web conferencing is an effective means of access to professional development.

In Figure 4.8, two respondents from the Country Teaching Program were shown outside of the normal distribution. Further investigation of the survey data revealed that Respondents 34 and 66 have answered in strong disagreement to many of the items within the Use of Technology category. From the ten items that are linked to the use of computers, the internet, videoconferencing and web-conferencing, Respondent 34, a female graduate teacher in the Midlands district, strongly disagreed to seven of the items. She was uncertain about her confidence in using technology to access PD if required and was also uncertain as to whether technology and ICT were making PD more accessible for regional teachers. Her only item of agreement was that she had access to a computer at home. Similarly, Respondent 66, a male teacher with 30 years of experience and currently teaching in the Narrogin district, strongly disagreed to eight out of the ten items in this category. He was also uncertain about the blend of face to face and online PD being more effective than in isolation and uncertain whether his school has fast reliable internet access.

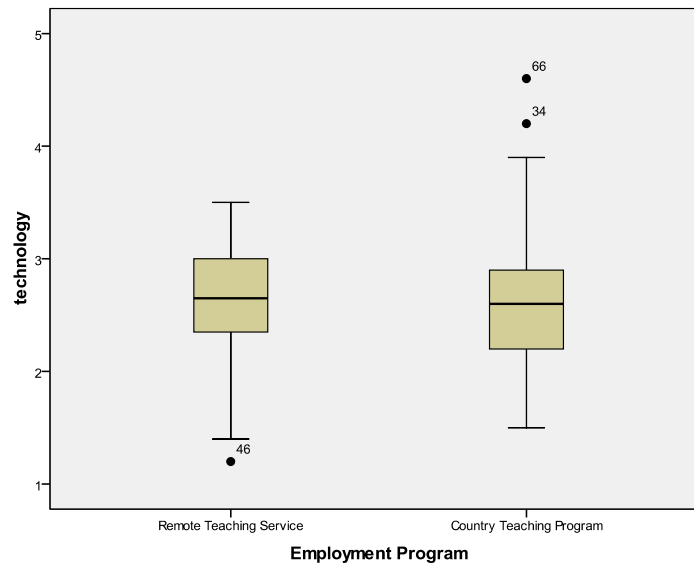


Figure 4.8 Boxplots of the Use of Technology category for Remote Teaching Service and Country Teaching Program.

Figure 4.9 shows the boxplots for the *Learning Communities* category for both the Remote Teaching Service respondents and the Country Teaching Program respondents. From this boxplot it is evident that Respondent 46 answered unlike the other respondents in relation to the variables within the *Learning Communities* category. Further investigation shows this respondent is a male, senior teacher working in the Goldfields district. This teacher had been teaching for 15 years and 7 months, of which 4 years and 6 months were in a regional area. The data clearly indicate that Q13 “I am a member of an online professional learning community and believe this is highly valuable” and Q15 “If I had access to an online professional learning community, I would be part of this” have been answered in strong agreement which is considerably different to other teachers working in the Remote Teaching Service.

From the Country Teaching Program, two respondents were shown outside of the normal distribution for the *Learning Communities* category as shown in Figure 4.9. Both Respondents 44 and 48 strongly agreed with a considerable number of items in this category. Respondent 44, a female teacher from the Midlands district with two and a half years of experience, strongly agreed with nine of the twelve items and

strongly disagreed with two items. Similarly, Respondent 48, also a female teacher with six months of experience from the Midlands district, strongly agreed to seven of the 12 items within the category. Analysis of the items showed these teachers were positive about the value of professional learning communities and there was a significant learning community within their school or schools, of which they were both actively involved.

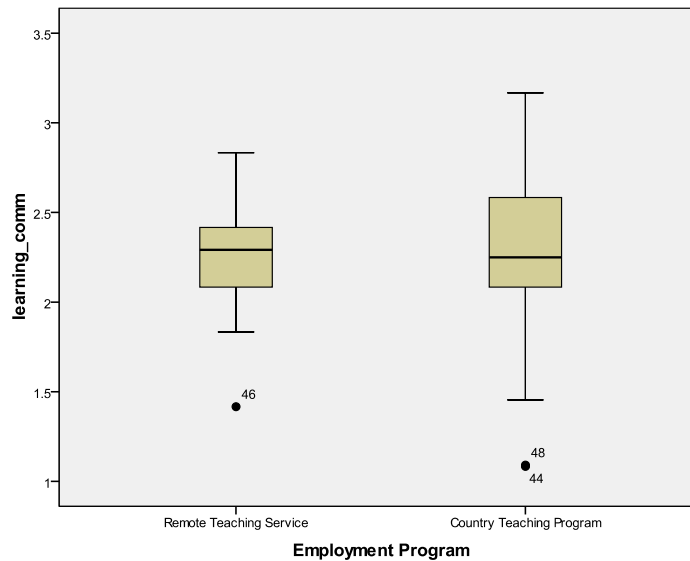


Figure 4.9 Boxplots of the Learning Communities category for Remote Teaching Service and Country Teaching Program.

As shown in Table 4.1, the outcome of the *PD Selection* category was considered very weak (0.32) for Cronbach's alpha. As the questions from within the PD selection category were to be reported individually, again tests of normality were conducted on these items. The Kolmogorov-Smirnov and Shapiro Wilk-Test of Normality showed no normal distribution for these four items so the non-parametric results from the Mann Whitney test will be reported.

For the item "I should be free to select PD based on my perceived needs and time available", 100% (n=21) of remote teachers agreed and strongly agreed with the item. In comparison, 91.6% (n=76) of country teachers from the study strongly agree and agree, however, 4.8% (n=4) disagree and strongly disagree.

The second item, “all teachers should be expected to complete a specific amount of PD in order to ensure teaching and learning practices are updated”, reported 81% (n=17) of remote teachers strongly agree and agree and 84.3% (n=70) of country teachers strongly agree and agree.

The item that asks respondents whether PD should be connected to their schools priorities and endorsed programs, 81% (n=17) of remote teachers strongly agree and agree and 71.1% (n=59) of country teachers strongly agree and agree. There were no teachers from the remote teaching service or country teaching program that strongly disagreed with this item, however, 4.8% (n=1) from the remote program disagreed and 16.9% (n=14) from the country teaching program disagreed.

All teachers from the remote teaching service strongly agree or agree that PD should help them to build new skills and identify strategies to better meet the needs of their students. Similarly, 98.8% of country teachers strongly agree or agree and only 1.2% (n=1) was uncertain of this.

4.7.2 Significance of Relationship Between Variables

Pearson Chi Square was used to determine statistical significance ($p < 0.05$) between regional and remote teacher responses. From the 42 items within the survey only two items (Q6 and Q7) were significantly different. Item Q6 relates to the travel time to access PD face to face and showed a significant difference ($p = 0.02$). This can be explained by the respondents in the Remote Teaching Service who reported 100% of teachers (n=21) disagree or strongly disagree that travel time is insignificant when accessing face to face PD. Whereas, 80.5% of regional teachers from the Country Teaching Program (n=66) disagree or strongly disagree with the item. In contrast, 12.2% (n=10) of regional teachers from the Country Teaching Program strongly agree or agree that time for travel was insignificant.

The second item (Q7) showing a significant difference ($p = 0.02$) is related to sufficient access to relief teachers to enable them to attend PD. The Country Teaching Program had a higher level of agreement with 26.5% (n=22) of teachers

strongly agreeing or agreeing that they have sufficient access to relief teachers. In contrast, 4.8% (n=1) of Remote Teaching Service respondents strongly agree or agree with the item. Of importance to this study, 90.5% (n=19) of teachers employed in the Remote Teaching Service strongly disagree or disagree that there are sufficient relief teaching staff in their remote areas to enable them to access PD. From the respondents in the Country Teaching Program, 61.4% of teachers (n=51) strongly disagree or disagree with the item.

From these data, it was decided to conduct further analyses into the comparison of items by teaching region.

4.8 Results – By Teaching Region

The following sections display the results of the data analyses by teaching region including ANOVA items of significance and agreement by category.

4.8.1 ANOVA

A one way analysis of variance (ANOVA) was conducted to ascertain the extent of statistical variation between teaching regions. ANOVA was applied to each item of the independent variables comparing the means across teaching regions. The results revealed that six items had low to moderate levels of significant differences between teaching regions (see Table 4.12). Of these, three showed a low level of significance Q7 ($F=2.24, p<0.05$), Q14 ($F=2.31, p<0.05$), and Q16 ($F=2.40, p<0.05$) and three showed a moderate level of significance Q21 ($F=2.70, p<0.05$), Q24 ($F=4.40, p<0.001$), and Q26 ($F=2.87, p<0.01$).

Table 4.12

ANOVA Items of Significance ($p < 0.05$), Between Teaching Regions

	Sum of Squares	df	Mean Squares	F	Sig.
Q7. If I had more funding I would access more PD.					
Between Groups	13.99	6	2.33	2.24	0.04
Within Groups	100.77	97	1.04		
Total	114.77	103			
Q14. If I had access to an online PLC, I would be part of this.					
Between Groups	10.79	6	1.79	2.31	0.04
Within Groups	74.03	95	0.78		
Total	84.82	101			
Q16. Although there is a PLC within my own school, I choose not to be part of this.					
Between Groups	6.54	6	1.09	2.40	0.03
Within Groups	42.67	94	0.45		
Total	49.21	100			
Q21. I am confident in using technology and am capable of accessing online PD if required.					
Between Groups	18.41	6	3.07	2.70	0.02
Within Groups	108.88	96	1.13		
Total	127.3	102			
Q24. I have used videoconferencing for PD and this was effective.					
Between Groups	23.87	6	3.98	4.40	0.00
Within Groups	79.43	88	0.9		
Total	103.3	94			
Q26. In my opinion, technology and ICT are making PD more accessible for regional teachers.					
Between Groups	14.01	6	2.34	2.87	0.01
Within Groups	78.18	96	0.81		
Total	92.19	102			

Bonferroni post-hoc tests were used to further analyse the significance of the differences between teaching regions for each of these items. The Bonferroni post-hoc test revealed no notable significance between teaching regions for Q7, Q14 and Q16. However, Q21, Q24 and Q26 showed moderate levels of significance as shown in Table 4.13.

Table 4.13

Bonferroni Post Hoc Items of Moderate Significance ($p < 0.05$)

	Sig.
Q21. I am confident in using technology and am capable of accessing online PD if required.	
Kimberley & Goldfields	0.02
Kimberley & Pilbara	0.01
Q24. I have used videoconferencing for PD and this was effective.	
Pilbara & Goldfields	0.03
Pilbara & Kimberley	0.01
Pilbara & Midlands	0.02
Pilbara & Midwest	0.01
Pilbara & Narrogin	0.01
Q26. In my opinion, technology and ICT are making PD more accessible for regional teachers.	
Pilbara & Narrogin	0.01

In particular Q24 showed the highest level of significance between the Pilbara district and other teaching regions, with the exception of Esperance district. Of teachers within the Pilbara district, 27.3% (n=6) strongly agreed they had used videoconferencing and it was effective. In contrast, no other teaching region responded in the strongly agree scale. Furthermore, no respondents from the Pilbara districts strongly disagreed with the use and effectiveness of videoconferencing, however the Goldfields (22%), Kimberley (37.5%), Midlands (23.5%), Midwest (11.5%) and Narrogin (15.8%) all reported strongly disagree.

In terms of Q21, there were no teachers from the Kimberley district who strongly agreed they were confident in using technology and would be capable of accessing online PD if required, alternatively a large proportion of teachers from the Goldfields (44.4%) and Pilbara (41.7%) strongly agreed with the statement.

The differences in Q26 can be explained by 66.6% (n=16) of teachers from the Pilbara district (1300 to 1900 kilometres from Perth) who strongly agree or agree that technology and ICT are making PD more accessible for regional teachers. In contrast, 19% (n=4) of teachers from the Narrogin district (some 200 kilometres from Perth) agree and none strongly agree.

4.8.2 Agreement by Category

This section presents the data of strong agreement and agreement for each teaching region by category.

Prior to discussing the analysis of the results by district, it is important to note the limited sample size from the Esperance district. There were only three teachers that responded to the survey, hence a large percentage can be attributed to a very small number of participants (for example 33% is only one teacher, 66.7% is only two teachers and 100.0% is three teachers). For this reason, the results from the Esperance district will not be analysed in a comparative manner with other districts.

4.8.2.1 Access to PD

From the *Access to PD* category displayed in Table 4.14, in terms of being notified of PD by the school, 90% of the teachers within this study who were working in the Midlands district strongly agree or agree that their school succeeds at notifying them of PD that is available to them. In contrast, 58.3% of teachers from the Pilbara district strongly agree or agree. When faced with the statement that there is sufficient ways to access PD from their teaching region, again the Pilbara district reported the lowest agreement, with 20.8% of teachers reporting they strongly agree or agree. In terms of being satisfied with the amount of PD they could access, a low

level of satisfaction was reported across all districts, with the exception of teachers in the Midwest district which reported 70.6% of teachers were satisfied with the amount of PD that they could access. Teachers from the Pilbara district again reported the lowest level of satisfaction within this item, with 29.2% of teachers in strong agreement or agreement.

Two further factors, namely items Q3 and Q6 were aimed to elicit teacher perceptions of travel with regard to accessing PD, very high percentages (from 85.7% to 100.0%) of agreement were noted by all districts about significant amounts of personal time being impacted by travelling from their regional location to access PD.

School funding allocations toward PD were explored in items Q4 and Q8. Teacher responses to the statement that “sufficient funding is available from my school to access PD” were very diverse in terms of agreement. Once more, the Pilbara district rated the lowest agreement with 33.3% of respondents strongly agreeing or agreeing. Higher levels of agreement were reported from the Midlands (75.0%) and Midwest (70.6%) districts. Further, the highest level of agreement was reported from the Kimberley (77.8%) and Pilbara district (75%) in relation to item Q8 “if I had more funding I would access more PD”. The lowest levels of agreement for this item were reported by teachers in the Midlands (35%) district.

Access to teacher relief in order to attend PD is addressed in item Q7. Table 4.14 depicts there is low levels of agreement that “there is sufficient access to relief teachers to enable me to access PD” across most teaching regions. The Pilbara district (0%) had the lowest level of agreement where as the Midwest district (41.2%) had the highest level of agreement.

The data indicate that a considerable number of teachers from the Midlands district believe that sufficient funding is available for PD and many would not access further PD if more funding were available. In contrast, teachers from the Pilbara believe there is insufficient funding available from their schools and they would access more PD if more funding were available. Additionally, 100% of teachers in the Pilbara

district believe there is insufficient access to relief teachers to enable them to be released from teaching in order to attend PD away from their classrooms.

Table 4.14

Strong Agreement and Agreement within Access to PD by Teaching Region

	Esperance (n=3)	Goldfields (n=10)	Kimberley (n=9)	Midlands (n=20)	Midwest (n=17)	Narrogin (n=21)	Pilbara (n=24)
Item	%	%	%	%	%	%	%
Q1. My school succeeds at notifying me of PD that is available to me.	66.7	80.0	77.8	90.0	64.7	66.7	58.3
Q2. There are sufficient ways that I can access PD from my region.	66.7	50.0	44.4	65.0	64.7	42.9	20.8
Q3. Travelling to face to face PD takes a significant amount of personal time.	66.7	100.0	100.0	100.0	94.1	85.7	91.7
Q4. I am provided with sufficient funds from my school to access PD.	100.0	50.0	44.4	75.0	70.6	38.1	33.3
Q5. I am satisfied with the amount of PD that I can access.	33.3	40.0	33.3	45.0	70.6	33.3	29.2
Q6. The travel time to access face-to-face PD is insignificant.	0	10.0	0	0	23.5	19.0	4.3
Q7. There is sufficient access to relief teachers to enable me to access PD.	33.3	20.0	11.1	35.0	41.2	23.8	0
Q8. If I had more funding I would access more PD.	33.3	60.0	77.8	35.0	70.6	66.7	75.0
Q9. An incentive based system would encourage me to access more PD.	0	50.0	44.4	65.0	41.2	47.6	43.5

4.8.2.2 Learning Communities

Table 4.15 shows the items within the *Learning Communities* category of the data. These items aimed to ascertain teacher perceptions of the value of professional learning communities, their current membership of any professional learning communities and opinions regarding online communities for professional learning. Agreement with item Q10 “I am part of a PLC within my regional district” ranged from 29.2% (Pilbara district) to 70% (Midlands district). Higher levels of agreement

were reported for Q11 “I am part of a PLC of teachers within my own school” with the lowest agreement reported once again from the Pilbara district (62.5%) and the highest level of agreement reported again from the Midlands district (90%). High levels of agreement were reported from all districts that a PLC is just as important to teacher professional growth as it is to attend formal PD opportunities (from 83.3% to 100.0%).

From Table 4.15, it is evident that Q18, Q19 and Q20 were reported with the highest levels of agreement in the *Learning Communities* category with very high percentages (almost 100% for many teaching regions) of teachers reporting that they value opportunities to share practice, find value in what others are doing in their classrooms and value attending PD with teachers from other schools.

Very low levels of agreement were reported in regard to online PLCs. There were no teachers from the Kimberley who reported they were members of an online PLC. The largest reported numbers were from the Pilbara teaching region (26.1%). Additionally, Q15 asked “if I had access to an online PLC, I would be part of this”, the lowest levels of agreement were reported by those teaching in the Narrogin (19%) and Midlands (20%) districts. Those reporting the highest level of agreement with this item were from the Goldfields (66.7%) and Midwest (58.8%) teaching regions. The data indicates that very few teachers across every district were using an online medium to access PD or PLCs at the time of this study. Of interest is that Pilbara teachers were the highest users of online PLCs within this study and these were also the teachers reporting they needed more funding and more relief teachers.

Table 4.15

Strong Agreement and Agreement within Learning Communities by Teaching Region

	Esperance (n=3)	Goldfields (n=10)	Kimberley (n=9)	Midlands (n=20)	Midwest (n=17)	Narrogin (n=21)	Pilbara (n=24)
Item	%	%	%	%	%	%	%
Q10. Within my regional district I am part of a PLC that fosters my professional growth as a teacher.	66.7	44.4	44.4	70.0	52.9	33.3	29.2
Q11. I am part of a PLC of teachers within my own school.	33.3	66.7	77.8	90.0	76.5	71.4	62.5
Q12. I believe that a PLC is as important to my professional growth as attending formal PD opportunities.	66.7	88.9	100.0	85.0	88.2	90.5	83.3
Q13. I am a member of an online PLC and believe this is highly valuable.	0	11.1	0	17.6	25.0	5.3	26.1
Q14. A PLC does not offer the same professional growth as a structured PD session.	0	11.1	22.2	35.0	37.5	30.0	33.3
Q15. If I had access to an online PLC, I would be part of this.	0	66.7	44.4	20.0	58.8	19.0	47.8
Q16. There is no significant PLC within my regional district.	33.3	33.3	25.0	15.0	52.9	38.1	25.0
Q17. Although there is PLC within my own school, I choose not to be part of this.	33.3	0	0	0	0	0	0
Q18. The PD I value includes opportunities for me to share my practice with other teachers.	100.0	66.7	77.8	94.0	70.6	90.5	87.5
Q19. I find it valuable to learn what other teachers are doing in their classroom.	100.0	100.0	100.0	100.0	100.0	100.0	95.8
Q20. Attending PD with teachers from other schools is highly valuable.	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Q21. Being able to attend PD outside of my regular PLC or school allows me to engage in a more positive experience.	66.7	88.9	62.5	85.0	94.1	90.5	87.5

4.8.2.3 Use of Technology/ICT

The highest levels of agreement relating to items in the *Use of Technology* category are displayed in Table 4.16. High levels of confidence in using technology and accessing PD online (if required) were reported across six out of the seven teaching regions, with 88.9% of Goldfields teachers reporting the highest level of confidence and 33.3% of Kimberley teachers reporting the lowest level of confidence. These results may be linked to the perceptions of support for ICT and technology with 77.8% of Goldfields teachers reporting the highest level of technology support for a district and 22.2% of Kimberley teachers reporting the lowest levels of technology support.

Surprisingly low numbers of respondents in this study had used videoconferencing for accessing PD, with 0% of teachers in the Kimberley and Midwest reporting the use of videoconferencing. The highest reported use of videoconferencing came from the Pilbara district, with 40.9% of teachers responding in agreement. Similarly, very low number of respondents agreed that web conferencing software is an effective way for teachers to access PD. The highest level of agreement was reported from teachers in the Goldfields (22.2%) and the lowest level of agreement was reported from teachers in the Midwest (0%).

The respondents were asked in Q27 whether technology and ICT are making PD more accessible for regional teachers. The highest level of agreement was from the Pilbara district (66.7%) and the lowest level of agreement from the Narrogin district (19.0%). Other districts also reported considerably low levels of agreement ranging from 22.2% to 44.4%.

Table 4.16

Strong Agreement and Agreement within Use of Technology by Teaching Region

	Esperance (n=3)	Goldfields (n=10)	Kimberley (n=9)	Midlands (n=20)	Midwest (n=17)	Narrogin (n=21)	Pilbara (n=24)
Item	%	%	%	%	%	%	%
Q22. I am confident in using technology and am capable of accessing online PD if required.	66.7	88.9	33.3	75.0	70.6	61.0	83.3
Q23. The support for ICT and technology is adequate within my school, so that I would feel confident to access online PD.	66.7	77.8	22.2	55.0	52.9	47.6	66.7
Q24. A blend of face to face and online PD is more effective than in isolation.	100.0	55.6	66.7	80.0	76.5	66.7	79.2
Q25. I have used video-conferencing for PD and this was effective.	0	11.1	0	5.9	0	10.5	40.9
Q26. Web conferencing software is an effective way to access PD for teachers.	33.3	22.2	12.5	10.0	0	5.3	17.4
Q27. In my opinion, technology and ICT are making PD more accessible for regional teachers.	33.3	44.4	22.2	35.0	29.4	19.0	66.7
Q28. I have access to a computer at home.	100.0	100.0	100.0	95.0	94.1	85.0	91.7
Q29. I have fast reliable internet access at home.	0	88.9	66.7	65.0	58.8	65.0	54.2
Q30. My school provides a sufficient number of computers.	100.0	66.7	77.8	65.0	82.4	38.1	70.8
Q31. My school has fast reliable Internet access.	66.7	55.6	77.8	65.0	64.7	47.6	70.8

4.8.2.4 Value of PD Approaches

In Table 4.17, the *Value of PD Approaches* category shows the items of PD that teachers from different teaching regions perceive as being of very high or high value. The respondents from the Goldfields district (n=10) reported Q37 University postgraduate courses as the most highly valued; whereas Q33 Reading professional

literature was displayed as their least valued PD. From the Kimberley district (n=9) and the Midlands district (n=20) teachers believed Q32 Regional workshops were the most valued PD; and in contrast Q33 Reading professional literature was least valued by these teachers. Respondents from the Midwest district (n=17) and Pilbara district respondents (n=24) rated Q34 Learning with and from your work colleagues including mentoring, Q32 Regional workshops and Q35 Conferences or involvement with professional associations as being of highest value. Again, Q33 Reading professional literature was least valued by these teachers. The Narrogin district respondents (n=21) reported Q34 Learning with and from your work colleagues as the highest value of PD and as with most of the regions, Q33 Reading professional literature was least valued by these teachers.

Table 4.17

Items of Very High Value and High Value within Value of PD Approaches by Teaching Region

	Esperance (n=3)	Goldfields (n=10)	Kimberley (n=9)	Midlands (n=20)	Midwest (n=17)	Narrogin (n=21)	Pilbara (n=24)
Item	%	%	%	%	%	%	%
Q32. Regional workshops	100.0	60.0	100.0	90.0	82.3	90.5	83.3
Q33. Reading professional literature	66.7	30.0	33.3	30.0	41.2	14.3	41.7
Q34. Learning with and from your work colleagues including mentoring.	100.0	70.0	88.9	85.0	82.4	95.2	83.3
Q35. Conferences or involvement with professional associations.	66.7	60.0	77.8	75.0	82.3	76.2	83.4
Q36. TAFE courses or other training organisations.	33.3	50.0	37.5	35.0	68.8	50.0	73.9
Q37. University postgraduate courses.	66.7	80.0	66.7	45.0	68.8	45.0	68.1
Q38. DET initiatives (ie. Graduate Teacher, Senior Teacher modules Including face to face and online).	66.7	70.0	44.4	55.0	64.7	61.9	60.9

4.8.2.5 PD Selection

The results in Table 4.18 display the levels of agreement with the items in the *PD Selection* category. Very high levels of agreement were reported from all teaching regions across items Q39, Q40 and Q42 which stated that teachers should be free to select PD based on their perceived needs, teachers should be expected to complete specific amounts of PD in order to ensure teaching and learning practices are updated and that PD should help teachers build new skills and identify strategies to better meet the needs of their students. In item Q41, where teachers were asked whether PD should be connected to their schools priorities and endorsed programs, slightly lower levels of agreement were reported. The lowest level of agreement was reported by 50% of teachers in the Goldfields district and the highest level of agreement was reported by 88.9% teachers in the Kimberley district.

Table 4.18

Strong Agreement and Agreement within PD Selection by Teaching Region

	Esperance (n=3)	Goldfields (n=10)	Kimberley (n=9)	Midlands (n=20)	Midwest (n=17)	Narrogin (n=21)	Pilbara (n=24)
Item	%	%	%	%	%	%	%
Q39. I should be free to select PD based on my perceived needs and time available.	100.0	90.0	100.0	90.0	88.2	95.2	95.8
Q40. All teachers should be expected to complete a specific amount of PD in order to ensure teaching and learning practices are updated.	100.0	80.0	77.8	89.5	94.1	71.4	87.5
Q41. My PD should be connected to my schools priorities and endorsed programs.	66.7	50.0	88.9	73.7	70.6	81.0	75.0
Q42. My PD should help me build new skills and identify strategies to better meet the needs of my students.	100.0	90.0	100.0	100.0	100.0	100.0	100.0

4.9 Summary of Results

This chapter has provided the results of the survey completed by 104 teachers who worked within the Department of Education in Western Australia in 2009. More specifically, 83 were from the Country Teaching Program (referred to as regional in this study) and 21 were from the Remote Teaching Service (referred to as remote in this study). Internal consistencies were determined and confirmed by calculating Cronbach alpha coefficient reliability values for each category within the instrument. The range of reliability values for the categories ranged from 0.32 to 0.75. The outcome of the *PD Selection* category was considered very weak (0.32) for Cronbach's alpha and as a result it these questions were reported individually. The reliability indicators for the other four categories (*Access to PD*, *Learning Communities*, *Use of Technology* and *Value of PD Approaches*) had a level of internal consistency that suggested good reliability and predictive validity.

The data were analysed and presented by total population of survey respondents. In terms of *Access to PD*, there were three significant items of importance. The highest mean recorded for this category (4.22) indicated that travel time to access PD is significant. The second highest mean (3.8), indicated there is not sufficient access to relief teachers that enable teachers to access professional development. The item with the lowest mean (1.49) showed a significant amount of personal time is spent travelling to face-to-face professional development, due to the reverse coding of the question.

In terms of *Learning Communities*, the item with the highest mean (4.22) confirmed that teachers choose to be part of the professional learning community within their school. The lowest mean (1.40) showed teachers believed attending PD with teachers from other schools is highly valuable. Importantly, one item in this category indicated a very high level of uncertainty as to whether teachers would access an online professional learning community if it were available. This item produced a mean of 2.82.

The highest level of uncertainty from the total population statistics, were reported within the *Use of Technology* category. Teachers were uncertain as to whether using videoconferencing for PD was effective. Similarly, teachers were uncertain if utilising web conferencing software was an effective way for teachers to access PD. The item that reported the lowest mean (1.71), from this category, and held almost all of the teachers in agreement (93.1%) was the ability to access a computer within their home environment. The second lowest mean (2.19) is of extreme importance to this study with 73.7% of teachers stating that a blend of face-to-face and online PD is better together than in isolation.

In terms of *Value of PD Approaches* the highest mean reported (3.28) and largest percentage of teachers (42.3%) reporting very high value was found in learning with and from their work colleagues, including mentoring. Reporting the lowest mean (2.22), teachers believed reading professional literature provided the least value in terms of professional development.

With regard to *PD Selection*, the highest mean (2.14) indicated that teachers believed their PD should be connected to the schools priorities and endorsed programs. The lowest mean (1.34), showed teachers believed their PD should help them build new skills and identify strategies to better meet the needs of their students.

In order to understand the differences between regional and remote teachers, the CTP and RTS data was then split into cases and analysed separately. Pearson Chi Square was used to determine statistical significance ($p < 0.05$) between regional and remote teacher responses. From the 42 items within the survey only two items (Q6 and Q7) were significantly different. Item Q6 related to the travel time to access PD face to face and showed a significant difference ($p = 0.02$). The second item (Q7) showing a significant difference ($p = 0.02$) was related to sufficient access to relief teachers to enable them to attend PD. These data indicated that remote teachers have more significant challenges reported in terms of travel time and access to relief teachers, than those in the regional areas.

From these results, it was seminal to the research to build an understanding of the data by teaching region. Teaching regions were commonly called districts within the Department of Education. Seven teaching regions were represented within this study, with the largest percent (23.1%) being from the Pilbara district. Narrogin and the Midlands District were also highly represented with 20.2% and 19.2% respectively. Although low number of respondents were located in the Kimberley (n=9), teachers contributed important viewpoints to the study due to the considerable distance of this region from the metropolitan area. A one way analysis of variance showed six items had low to moderate levels of significant differences between teaching regions. Of these, three showed a low level of significance Q7 (F=2.24, $p<0.05$), Q14 (F=2.31, $p<0.05$), and Q16 (F=2.40, $p<0.05$) and three showed a moderate level of significance Q21 (F=2.70, $p<0.05$), Q24 (F=4.40, $p<0.001$), and Q26 (F=2.87, $p<0.01$). Additionally, Bonferroni post-hoc tests indicated there were no notable differences for Q7, Q14 and Q16; however, the moderate levels of significance in Q21, Q24 and Q26 needed further explaining. In summary, this analysis showed the Pilbara district had the highest percentage of teachers that strongly agreed with the use of videoconferencing for PD and had no teachers that strongly disagreed. This was not the case with any other teaching region and would indicate there might be some innovative strategies for delivering PD already in place in that region. Of interest, the Pilbara district was also the region with the highest number of teachers who strongly agreed or agreed that technology and ICT are making PD more accessible for regional teachers.

Levels of agreement for each teaching region were displayed by category. Within the *Access to PD* category, the teachers in the Midlands district (90%) agreed they were notified of PD by the school, where as teachers from the Pilbara district were not as high in agreement (58.3%). Additionally, the Pilbara district reported the lowest agreement (20.8%) when asked if there were sufficient ways of accessing PD from their teaching region. Low levels of satisfaction were reported across all districts, when asked of the satisfaction related to the amount of PD they could access, with exception of teachers in the Midwest district which reported 70.6% of teachers were satisfied. Teachers from the Pilbara district again reported the lowest

level of satisfaction with the amount of PD they access, where only 29.2% of teachers were in strong agreement or agreement.

The highest levels of agreement were reported in the *Learning Communities* category with very high percentages (almost 100% for many teaching regions) of teachers reporting that they value opportunities to share practice, find value in what others are doing in their classrooms and value attending PD with teachers from other schools. Very low levels of agreement were reported in regard to online PLCs. The Pilbara district reported the highest number of teachers who were members of online PLCs. The data indicated that very few teachers across every district were using an online medium to access PD or PLCs at the time of this study.

Within the *Use of Technology* category, high levels of confidence in using technology and accessing PD online (if required) were reported across six out of the seven teaching regions. Teachers in the Goldfields' district reported highest levels of confidence and Kimberley teachers reported lowest levels of confidence. This may be linked to the perceptions of support for ICT and technology, where Goldfields' district teachers reported the highest perceived support and Kimberley teachers reported the lowest perceived support. When asked about using videoconferencing for accessing PD, 40.9% of Pilbara teachers reported they had used this medium, whereas no teachers from Esperance, Kimberley and Midwest districts had used videoconferencing to access PD. Levels of agreement for using web-conferencing (via Elluminate, Centra7, Skype or the like) were also very low.

In terms of the *PD Selection* category, very high levels of agreement were reported from all teaching regions that teachers should be free to select PD based on their perceived needs, teachers should be expected to complete specific amounts of PD in order to ensure teaching and learning practices are updated and that PD should help teachers build new skills and identify strategies to better meet the needs of their students.

When reporting the *Value of PD Approaches*, the two highest reported approaches from all districts were: Learning with and from your work colleagues and Regional

workshops. University postgraduate courses were ranked highly by the Goldfields' district. The lowest reported PD approach by all districts was reading professional literature and TAFE courses or other training organisations.

4.10 Chapter Summary

This chapter has provided the results from the quantitative data collection in Phase 1 of the study. Firstly, the data collection and response rates were detailed. Next the survey instrument and the Likert scales utilised were explained. Reliability of the quantitative survey conducted within the study was confirmed by calculating Cronbach alpha coefficient reliability. Important demographic statistics of the survey respondents were provided. Results were provided by examining the differences between regional and remote teacher responses; and the data was further reported by teaching district. Finally, this chapter concluded with a summary of the results from the quantitative survey. The synthesis of these results are compiled with the qualitative data and presented as findings in the final chapter.

CHAPTER FIVE

Qualitative Results

5.1 Overview

This chapter presents the results from the detailed analysis of the qualitative data collected from the study. Firstly, participant profiles are explained in terms of their demographic context. The results will then be presented through the five categories identified within the quantitative chapter:

- Access to Professional Development;
- Learning Communities;
- Use of Technology;
- Value of Professional Development Approaches; and
- Professional Development Selection.

These data aims to clarify and expand on the results from the quantitative survey data collection. The researcher invited all respondents from the initial quantitative data collection stage to be part of this study; however a minimum number (10%) were willing to participate. The data were coded into themes as reported in the methodology chapter of this thesis in order to further understand the complexities of each category.

Finally, this chapter concludes with a summary of the results from the qualitative data collection phase.

5.2 Respondent Profiles

The qualitative data for the study were collected over a period of 14 months, from March 2009 through to May 2010. A total of ten teachers were willing to participate in interviews conducted by email, telephone and where possible, in person. Of these ten participants, four identified as classroom teachers and six were administrators in

the role of principal or deputy principal within a school. Six participants were females and four were males. These teachers were employed in schools that ranged from employing a teaching staff of three to thirty staff. Experience working in a regional location ranged from four months to twenty years. Table 5.1 provides a summary of the background of the participant sample within this phase of the study.

Table 5.1

Participant Profiles from Qualitative Data Collection Phase.

Participant	Gender	Years Teaching in Regional Areas	Role	District	Number of Teachers in School	Regional/Remote
T1	F	3 years	Teacher	Pilbara	12	Remote
T2	M	4 months	Teacher	Midwest	4	Regional
T3	F	2 years 4 months	Teacher	Midwest	13	Regional
T4	F	9 years	Teacher	Esperance	30	Regional
P1	M	12 years	Principal	Goldfields	16	Regional
P2	F	10 years	Principal	Midwest	4	Regional
P3	F	10 years	Principal	South West	3	Regional
P4	M	30 years	Principal	Esperance	6	Regional
P5	F	9 years	Principal	Esperance	30	Regional
P6	M	18 years 4 months	Deputy Principal	Midwest	13	Regional

The participants within the study were located over considerable distances and as a result it was necessary for much of the data to be collected through email and telephone interviews. In some cases, where possible, the researcher conducted face to face interviews. Further, Figure 5.1 provides a contextual basis for the participants and their regional location in Western Australia.

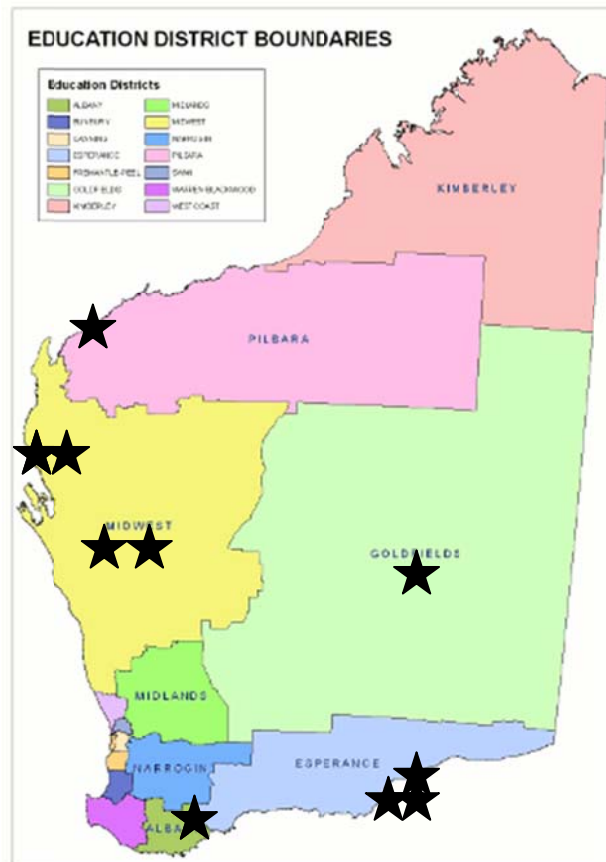


Figure 5.1 Participant locations in relation to DoE former districts.

5.3 Access to Professional Development

With regard to access to PD, it is important to note that all participants referred to the access of face to face PD. The data indicated that all participants considered their teaching positions in regional and remote locations of Western Australia were affecting the amount of professional development they could access. One participant provided a very strong statement at the beginning of the interview:

As a regional teacher I find it extremely difficult to access face to face PD (T1).

Of major consideration for participants were the financial onuses associated with face to face PD attendance and the cost of travel to the PD.

The expense of PD is a major hindrance, not only because of the PD itself but also travel and accommodation expenses. All Perth PD has been in my own holiday time and at my own expense. No relief available therefore I have not been allowed to attend PD in school time (T1).

Often access is reliant upon the school being able to afford to send you. What with costs of fares, petrol, accommodation and relief. Only a few PD providers are prepared to travel to regional locations (T3).

Participants who held administrative roles, such as a principal, were considering the substantial financial cost of PD to the school, but also the importance of their own presence in the school and the impact of their absence if they were to attend PD:

Costs are considerable because most PD requires travel, accommodation and meals which come out of the school's budget (P2).

Budgets provided for this by the employer are inadequate. I need to be able to fly there and back either immediately after a PD or at worst the next morning. If this is not possible, then I will not attend a PD (P6).

Not everyone can go on PDs because there is not enough money in budgets for all staff to attend everything on offer. Someone has to dip out (P6).

Some participants expressed the personal costs associated with accessing face to face PD from regional locations. These personal costs were recognised as not only financial costs but also the cost of personal time:

Often timing is not suitable and I conduct a lot of PD in my own holiday and weekend time as well as footing the bill for my own accommodation and travel (T1).

I do not claim travel and sometimes pay for own PD/PL, particularly if during vacations (P2).

One participant considered the impact of paying for travel in advance and then claiming it back after the travel had occurred:

Travel expenses have been covered by the school. The only effect is that these payments are made after the event, requiring me to be out of pocket for the travel (T2).

In most cases, participants felt the time associated with travelling to PD was a major implication of accessing PD:

Almost all has been a day's drive away (P6).

Travelling to Geraldton took two days by car, and flying to Perth required me to leave the week before as flights were not run on weekends (T2).

Travel to and from PD from where I live, takes a day each way. A PD of one day takes me out of the school for three days when I have to drive (P6).

One participant considered the impact of travel time on their personal lives including their family time:

Driving for 5 hours either way, leaving on a Sunday, being away from my family and having to organise transport for my children to attend their regular events (T3).

Although travel costs were reportedly reimbursed by schools, travelling in personal time was not being reimbursed either by financial means or time in lieu:

We are reimbursed for the majority of our costs, however travel time is not reimbursed, when travelling in our own time (T3).

No time in lieu has ever been granted for time outside of school spent conducting PD (T1).

For some participants, this time to travel was impacting on their attitudes toward attending PD:

You either don't go, or you are tired, you have to leave a day before (P3).

I feel that because I have to travel so far to attend some PD's they become a burden, however once I am there they are informative and interesting (T2).

The impact of having limited teacher relief was expressed by all ten participants as a major factor in accessing PD. From the data it was evident that teacher relief was considered to mean the employment of a casual staff member for the days they were

away but also considered to mean when fellow permanent staff members were covering their teaching role:

So travel and accommodation, coupled with a lack of relief teacher availability, relief teachers and travel and accommodation costs are a HUGE factor for any PD (T1).

PD is carefully considered to determine if it is possible to support students from the school during absences. We are a very small school with extremely limited access to relief teachers. If we couldn't find relief, the whole school had to be shuffled around to allow for the missing teacher (T2).

In all schools teachers are provided with time for Duties Other Than Teaching (DOTT) in which preparation for teaching, assessment of student learning and other important duties are completed. In many small school cases, the administrative team of principals and deputy principals are required to relieve teaching time for their staff. Consideration was given by teachers and principals in this regard.

It has once, but at my new school it affects those left behind as we have no relief available for DOTT (T3).

Considerable forward planning has to be completed to ensure that classes, missed DOTT and duties are covered. I am in a Level 3 school where the principal is the one responsible for plugging gaps (P2).

Where I work there are rarely relief teachers. The majority of relief is covered by the admin or teachers are paid for lost DOTT. So this means Administrators and teachers are reluctant to attend PDs (P6).

The benefits of PD being available within regional districts were recognised by a number of participants, including teachers and principals; however for some schools it is still considerable distance to travel in order to reach the district office:

Midwest District has a very strong focus on relevant PD/PL and has provided exceptional sessions for principals and teachers. This has made attending relatively easy as it does not mean travelling to Perth. Many courses are also made available in the various clusters e.g. Murchison (P2).

My face to face PD has been conducted at our school, in Karratha and in Perth (and surrounds). Some PD was mandated for graduates and in my first two years this was accessible in Karratha on weekends. The school car

was provided for transport and the accommodation was in camp schools or similar budget accommodation (T1).

Travelling to Geraldton took two days by car (T2).

5.4 Learning Communities

As the term “learning community” can mean a variety of things to different teachers it was important to ascertain the perceptions of the ten teachers within the interviews. Teachers were asked “What does the term professional learning community mean to you?”

For many classroom teacher participants the notion of working in groups, supporting each other, sharing PD and learning together was discussed:

A Professional Learning Community is a group of teachers or schools that work together to educate, support and develop one another in the teaching profession (T1).

A professional learning community is a group of staff members who share PD between them. For example, one teacher might complete the PD and then inform other teachers who were unable to attend (T2).

The school community undertaking recognised learning (T3).

The coming together of a variety of services to work together and pursue information towards the betterment of student outcomes (T4).

From the six principals who participated in the interviews, only three responded to the question of “What does the term professional learning community mean to you?” A mixed response was documented from the three respondents with a wide range of interpretation where two principals could see the value in the term and what it means to them and one principal being somewhat more sceptical:

I know when I was a new principal (a hundred years ago) or twenty five actually. Back in the mid 80s, I was in a remote rural primary school, the education department used to encourage principals of remote schools to form mutual aid groups. From memory there were about four or five of us, in about a three hour driving radius and we'd come together once a month, usually on a Saturday. You'd have a meeting in the morning and a BBQ

lunch and you'd alternate the schools so you got to see someone else's school. So something like that was really good and I think there is the capacity to do something like that for remote schools, like ours. But I think there needs to be some level of structure, I think if you just let it happen it probably won't happen (P6).

We have it to some extent already within our school; we have our PLC, our professional learning communities. Again the research says that's how we are able to sustain good teaching and learning in our schools, through these communities of professional practice (P5).

This is a waffle term, and a little insulting for most schools as learning is continuous either with your peers or on your own or in meetings with admin, it happens at all levels and on all occasions. Community is a vague term as are most communities in existence (P1).

When asked what this might look like at the school level, some teachers could see benefits in collaborative planning, moderation of assessment and staff meetings where as others articulated it as groups of people with no explanation to what they would be doing:

Within a school this could be collaborative planning sessions or moderation opportunities possibly even staff meetings (T1).

Shared DOTT time with aides, specialist teachers (literacy/ maths/ behaviour management), Same year level teachers and/or year above/ below teacher to discuss classroom planning, programs, assessment, moderation tasks, samples of work. PD days with the whole staff. Open classrooms (T4).

A group of staff members, such as the principal and colleagues (T2).

The school community undertaking recognised learning (T3).

Similarly, when asked what a professional learning community might be across a regional district, teachers envisaged attending PD with staff from other schools, sharing programs and assessment moderation:

PD with all schools in the area. Open invitations to visit other teacher's classrooms and discuss programs, samples of work, moderation tasks (T4).

Although one teacher had participated in such an initiative through videoconferencing and telephone mediums and discusses the successes of such, data from one principal thought distance was an acceptable reason as to why learning communities across a district would not work:

Within a district this could include video conferencing, phone calls and general getting together. The ALS PD was a wonderful example when it existed. It could certainly be conducted online between schools and districts and would work best with like schools (as defined by the schools and not the Department) (T1).

In practical terms not a lot when most schools are vast distances apart (P1).

To elucidate the teachers general feelings about the notion of a professional learning community hosted in an online environment, the researcher prompted the participants as to whether this could be done across a district. The teachers and principals were generally receptive to this thought, however the logistics of common times to participate were noted by some and the autonomy to select which teachers to work with by others:

It could certainly be conducted online between schools and districts and would work best with like schools (as defined by the schools and not the Department). I don't believe this would work if partnerships were determined by a higher body instead of the teachers of the schools themselves (T1).

There is a possibility to make it work using video conferencing, but there does need to be some face to face contact and then follow-up through on-line services, such as email, skype, yahoo messenger, etc. (T4).

It could, but you need to organise all schools so people have DOTT time off etc at the same time to be truly effective, which has huge implications for timetabling (P1).

In theory yes, I think there is capacity for that, but I think it would depend on how it's structured and how it's managed. Again it's not going to happen if it just becomes adhoc (P6).

5.5 Use of Technology

The use of technology in order to access PD from regional and remote areas was posed to the participants. While many could see potential uses of the technology and thought it may alleviate some of the access issues; there were issues posed by others with regard to costs associated with doing so:

Will be more accessible (T4).

With budget restraints, it is an option but would still involve travel and accommodation as most small schools do not have the conferencing equipment needed (P2).

The question asked how technology might affect the way that regional teachers access PD in the future. It was interesting to note how different teachers used the term technology. While some talked in more broad terms of technology, three discussed videoconferencing and one discussed the social networking site of Facebook. The use of videoconferencing and its effectiveness was posed:

With regard to video conferencing, we recently installed these facilities in our school (in the past 12 months). They have been used for one PD that I was a part of which was mandatory (child protection). I have been offered these facilities for later this year to moderate with like Pilbara schools which I intend to follow through. I think video conferencing has a lot of potential, however, I find it very uncomfortable and face-to-face is still my preference, especially as video conferencing takes away a lot of opportunity to network with teachers from diverse backgrounds (T1).

Video conferencing was good while it worked but start-up time was impacted as the technology failed. There are time delays with speech which can be frustrating. As technology improves video conferencing will continue. I'd like to see videos posted where teachers can access the PD in their own time and view in their own time. With this method there is the opportunity for teacher's to directly contact the PD provider with their questions and the opportunity to discuss ideas with other teachers. This kind of PD should be very practical (i.e. teachers are required to go away and try the idea out and then come back and engage in discussion with the PD provider and other teacher's involved in the PD) (T4).

Yes it could. Technology provides you the opportunity of doing that. If you were using technology it would want to be video conferencing at this point in time. I don't think the online deliveries – you mentioned Elluminate before – and there's a range of them – I don't think that we in Australia have the bandwidth capacity to make them as good as they could be. Probably as they are used more in places like Canada, that have the bandwidth asquillion times the bandwidth that we have and therefore they don't have the issues (P6).

We have discussed what we're going to do in terms of hooking up via videolink for me because I have said that it's ridiculous that I'm travelling. We can do it, but we need to have from my end the infrastructure that we need. Whether its videoconference or through IP, I would do either (P5).

Although technological delivery was considered an option by this principal, the thought of PD through social networking in the online medium was not considered valuable:

It is certainly an option, but the idea of a face book style learning community is I believe a little flawed (P1).

The importance of networking with other professionals during the coffee and lunch breaks at PD, and the loss of this informal professional learning if moving to a technological medium, was raised by one participant:

I personally think it will be limited, as a really important part of PD is building professional relationships with others, and this usually happens during breaks (T2).

The use of technology for accessing PD was discussed by one principal as a generational issue. With a generational divide between her staff, where graduates were considerably more technology savvy than her more experienced teachers she was wary of implementing a technology focussed PD medium:

I would say that if I had a staff of y-genners only, then I would be happier to look at it being done via technology. The fact of the matter is that I don't and I've got to try and get the X-ers and the Boomers on board using this ICT. It's of paramount importance that when we first start that we are all very clear on what it is we are about and then the rest will hopefully flow easier.

There'll be hurdles, there'll be all those sorts of things but we have to be on the same page...and we need face to face for that. If I had a whole staff of y-genners I could say maybe not because I see that they totally operate differently and could quite easily do that, at the same time as checking their mobile phone for text etc.(P6).

As many participants felt strongly about maintaining a face to face PD mode, the notion of a blended approach was raised. Two teachers thought this could be possible:

A mix of face to face and online learning is probably ideal. How it could be structured I'm not really sure. Perhaps a different opportunity each term? (T1).

Perhaps a few intensive days as needed, then all other components on line. With, perhaps, a visit from a specialist to assess the understanding or implementation (T2).

5.6 Value of Professional Development

Within the quantitative data collection, this category measured the value attributed to specific types of PD such as regional workshops, reading professional literature, university postgraduate study and DET modules. Within the qualitative interviews the teachers were asked about their personal value of PD in terms of importance and impact on teaching and learning. The value of PD was described in a very succinct manner by one participant:

It is critical for any profession, we educate thus we need to be educated (P1).

All participants were asked to divulge the importance of PD to them as a teacher. Coding of the data divulged themes such as keeping up with current practice, impact on student learning and networking. For most participants, the notion of keeping up to date with current best practice, learning new skills and the notion of “staying fresh” made PD of great value:

PD is invaluable to teachers because there are so many various areas that need to be taught and teachers need to become skilled in as many areas as possible (T1).

PD is very important to me. I find that it helps you to stay fresh, giving you new tools and concepts that you can implement in your class (T2).

Very important. I like to keep learning myself, about new techniques and to keep my skills fresh and innovative (T3).

The right kind of PD is important. Keep up to date with initiatives in the educational realm. Consolidate current practices. Further ideas for teacher's 'tool kit'. Gives credibility to the idea of being a life-long learner and gives freshness to one's practice (T4).

Professional learning is important to grow and develop and not stagnate (P1).

All staff should have several opportunities a year to attend purposeful PD (P2).

All ten participants believed the impact of PD on teaching and learning was considerable. Teachers linked quality PD to higher standards of teaching, improvement of programs, higher levels of confidence and a positive impact on students.

PD improves teaching and learning because it keeps teachers at the forefront of new developments in programs and education (T2).

It also ensures a high standard/quality of teaching and learning (T1).

I think it is beneficial to both teaching and learning. You attend and then you evaluate how to implement the new ideas into your program (T3).

The importance of PD on student learning was considered by two participants:

When a teacher becomes excited about or from their PD it helps to excite the children about their own learning (T1).

There can be some wonderful shifts in classroom practice and this can impact quite positively on students (T4).

One participant who was in a leadership position within a school considered PD to be of great benefit to “good” teachers, but questioned whether it would be of any assistance to those who are not “good” teachers:

Good PD becomes part of the repertoire of good teachers and helps them to become better at their craft. But good PD can do nothing for teachers who should be in any other industry except teaching (P6).

Similarly, two participants who were classroom teachers described the issue of teachers needing to access PD that is within the teachers “comfort zone” and “relevant”:

However, if a PD is presented in a boring manner or is irrelevant to the needs of that teacher, it can be ineffective and non-beneficial (T1).

However, some PD can confuse teacher’s, particularly if it is outside the teacher’s comfort zone (T4).

5.7 Professional Development Selection

The researcher posed questions in order to understand the context of each participant and how they are alerted to and select their own PD opportunities.

The participants explained mandated PD as PD that was compulsory for them to attend based on the requirements of the school, the district or the Department of Education (WA). Teachers reported they are advised of mandatory PD through their principal and most teachers reported email as the medium:

If we have a mandated PD we are emailed by the Principal (T1).

Usually via email from the Principal (T2).

Morning meetings, staff meetings and emails (T3).

There are emails, a poster of PD offered by Central Office and the Principal or Deputy Principal will approach you or make a general offer at staff meetings (T4).

A significant number of participants recognised the benefit of initiating their own selection of PD and reported a variety of strategies to locate them. These varied between searching websites, reading magazines such as School Matters and contacting the Professional Learning Institute (PLI):

I search for them myself through websites, collaboration with other teachers and Union magazines. PD is not well promoted in my school (T1).

I check the School matters magazine for any close to here (T3).

Web searches or contacting them directly after hearing about it from another teacher (T4).

In the past, have accessed the Leadership Centre and the Professional Learning Institute (P2).

From the interview data it was evident the classroom teachers held very strong opinions about PD being relevant to the individual teacher and the needs of their students.

There is no point in a teacher attending a PD that they are not interested in. It is a waste of time and money and it will not be used in the classroom and will therefore have no learning benefit to the students (T1).

Absolutely. If it isn't relevant to me and my class, I shouldn't be there (T2).

Additionally, one classroom teacher could see that tailoring PD to meet every teachers need at any given time would be difficult:

Yes, but I understand the difficulty this would present. So the material needs to be presented in such a way that each teacher can take what they need, use it and come back to the PD materials when they're ready and gain more knowledge that they can then go back and implement (T4).

In contrast, one participant from the administrative role as a principal believed teachers needed to be extended and challenged by their PD:

Not necessarily as this (tailoring PD for teachers needs) narrows the learning opportunities. Adults need exposure to things outside expertise areas to broaden perspective and learning (P1).

Participants were asked about the benefits of PD being focussed to achieve the broader priorities of the school. Both teachers and principals could see the necessity in this, but also were passionate about the needs of the individual teacher within attending PD that leads to the achievement of school priorities:

I feel that this is often the case and results in a lot of needs of teachers being neglected. I understand some is probably necessary to ensure quality teaching, however, if all is mandated by the school, nobody enjoys it or uses it and discord is created (T1).

I feel it is fine to an extent, but that teachers/principals should be allowed the right to choose some of their developmental courses (T2).

I feel quite strongly about this when teacher's are overlooked for more than a year to be involved in PD. Otherwise I enjoy being involved in PD that is catering to the priorities of the school, because these priorities are focussed around the betterment of student outcomes (T4).

In terms of PD focussed toward successful achievement of school priorities, one principal had a very valid point about his own professional learning which needed to be focussed on improvement of leadership skills. While school priorities may be focussed on curriculum and pedagogical development, these may not be of most benefit to his role as principal:

This is narrow and not in line with developing innovation or a broader perspective on learning. In my own case Leadership is very broad and to be governed by school priorities misses the point and shows a complete disregard for the complexities of the school and community environment. To initiate better educational outcomes I need more on relationships and understanding not pedagogy and syllabus knowledge (P1).

Similarly P6 emphasized the decision to attend PD that would be of most benefit to his role:

I am very choosy about PD's that will not benefit my role in a school. PD's have to be useful to me (P6).

This principal did not consider her own needs of PD but championed the planning of PD around school priorities to ensure staff were best prepared to achieve the school vision:

This has to happen as priorities may not be met if staff are not attending the necessary training (P2).

and;

Generally, staff are released for important PD related to school needs, Operational Plans and DOE initiatives (P2).

Furthermore, this principal was of the opinion that staff could attend PD tailored to their own needs in their own time in a voluntary manner. These data confirms the earlier results within Access to PD and may indicate that some leaders in schools are encouraging this practice:

Staff have the option of attending other training in own time – holidays, weekends. Currently staff in the Murchison Cluster access PD on weekends. In my school, this is a voluntary choice as the school is not able to offer TOIL (time off in lieu) or project payments. There are no repercussions on staff who do not attend. It also tends to become a social opportunity (P2).

An important theme within this category was the quality of PD that participants in this study could access. Whilst there were many instances that quality of teaching and learning were mentioned within the interviews, only one classroom teacher mentioned quality in terms of PD:

I would also like to see schools pooling resources together to bring quality PD into the town (T4).

Furthermore, two principals indicated the importance of quality PD being accessible to their teachers. Whilst P6 was discussing the lack of quality available to the

teachers in the town; P1 was concerned with school based PD and questioning the effectiveness of such an approach:

In the two years I have been here, there has been a lack of quality PD opportunities for teachers in a small, fairly remote town, like (name) (P6).

Professional learning tends to be school based and I think this is creating an inbred culture, as ideas and innovation are not being pollinated from outside (P1).

5.8 Final Thoughts and Teacher Recommendations

This section reports on the participants final thoughts from their interviews and proposed recommendations from the coalface of teaching in regional and remote schools. Teachers were asked to place themselves in a position of power, in that they could make changes to the current policies and strategies for teachers in regional areas to access PD. The data from this question show the following key points would be addressed: increases in PD budget, additional relief teachers, greater accessibility to PD in local contexts, introduction of online PD and PD being initiated from a school level rather than an organisational level.

Three participants indicated an increase of relief teachers within their recommendations for improvements:

More relief teachers. That is the only thing that would make it easier for my school (T2).

We would like more school grant so we can place more into travel, accommodation and relief (P3).

One of the teachers proposed the idea of a roving remote teacher; it is interesting to note this has recently become a strategy within the Department of Education entitled Teacher Flying Squad established to provide state wide teacher relief:

If this is like a genie wishlist, I would wish for a roving remote relief teacher for the Pilbara (T1).

One participant indicated the recent government funding initiative (Building the Education Revolution) where millions of dollars were poured into building school halls, libraries and new classrooms; might have been more useful within their PD budget, for their particular school context:

More money for this instead of a new library, which is actually going to cost the school money, would be more positive (P3).

The desire for PD to be delivered within their local context was discussed by two teachers:

I would also like to see schools pooling resources together to bring quality PD into the town (P3).

As we are so isolated and there is a few of us it would be nicer for the PD's to come to us on our student free days, as not to interfere with the students classes. Even after school, would be better than driving so far to attend the PD's. We are in a big state and keeping teachers up to date is important to student learning (P4).

One principal expressed the idea that planning and policies relating to PD needed to be made at the school level, as those from within an organisational level (such as the DoE) were not equipped with an understanding of the challenges and issues faced at the local level:

The biggest problem in the system is that those who develop learning for staff and schools actually are not involved in working or running them, thus they have limited understanding of how they work or what can make them better. A top down approach is not creating better schools, I would go so far as to suggest as those responsible for professional learning have got no idea what makes a good school. Understanding school complexity and what works will go a long way to improving appropriate and targeted professional learning as a system (P1).

These data exemplifies that respondents feel strongly about their professional learning being designed to meet the needs of their students and their school.

5.9 Summary of Results

Ten participants were interviewed in the qualitative data collection phase of this study. Four identified as classroom teachers, one as a deputy principal and five as principals of the schools in which they were working. It was important to note the roles of the participants as this influenced the way they looked at professional learning. Five of the six principals, would switch between focussing on professional learning practices of their staff and focussing on their own professional learning within their administrative roles.

In terms of *Access to PD*, all teachers and principals considered that teaching in a regional and remote area affects the quantity and quality of PD that is available to them. The financial implications of attending PD was discussed by all participants including not only registration costs, but travel, accommodation and relief teaching costs. The data identified costs were an implication for multiple levels including the participant personally, the school budget and the impact on those staff expected to cover the absence at the school level. Not only did participants discuss financial costs, but costs associated with personal time in order to access PD. The impact of these costs were, in some cases, impacting on the attitudes toward PD attendance.

To further unpack the notion of *Learning Communities*, participants were initially interviewed in relation to their understanding of the term. All classroom teachers provided themes related to working in groups, supporting each other and learning together. A mixed response was received from the three principals who responded to this question. One principal provided a rich account of past experiences as a beginning principal in a remote school where he who would drive considerable distances to meet with other principals and share practice. Another discussed the success of the PLC's already occurring within her school, whilst the third found the notion of a PLC insulting to schools. Teachers provided initiatives about what a PLC looks like across a school, a district and within an online environment. Whilst all four teachers were receptive to the notion of the online environment, some were concerned with the logistics of finding common times across schools to participate in

synchronous modes while others felt strongly about the teachers' choice of who might join their communities.

Under the theme of *Use of Technology*, all participants could see some potential of bridging the gap through this medium. Initial responses showed that some teachers responded to the term technology in differing ways. Videoconferencing was a common technology discussed; however, one participant discussed the social networking site Facebook. Although all teachers could see potential in using technology, the deficits of such an approach were noted such as the loss of informal networking opportunities held by face to face PD and the logistical issues of sufficient bandwidth to support the technology. The generational impact of using technology to access PD was noted by one principal who believed her staff of generation Y would be more adaptable and competent than her staff of "X-ers and Boomers." The notion of a blended approach to PD by attending face to face PD and then continuing the learning and support for implementation through an online component was raised by two teachers, which indicates that teachers are thinking creatively about better ways of using the technology to support their learning.

Teachers were asked to share their personal *Value of PD* in terms of importance and impact on teaching and learning. Terminology associated with up skilling, keeping up to date, staying fresh, learning new skills and being innovative emerged as key concepts of this category. All ten participants believed the impact of PD on quality teaching and learning was considerable. Quality PD was linked to higher standards of teaching, improvement of programs, higher levels of teacher confidence and ultimately, a positive impact on student learning.

Teachers reported being advised of mandatory PD by their schools, however, many also recognised the benefits of initiating their own *PD Selection* and reported a variety of strategies used to locate them. These strategies included website searches, School matters magazine, discussion with other staff members and the Professional Learning Institute. Very strong views were noted by teachers in terms of the PD being relevant to the individual teacher and the needs of their students, however one principal believed teachers needed to be challenged and extended to broaden

perspective and learning. Mixed views were held on whether PD should be linked to school priorities or not. Of great concern, was the importance of regional teachers being able to access quality PD.

The final section of the results proposed recommendations from the participants of the study. These can be summarised as increase of relief teaching staff, larger PD budget, PD delivered in the local context and planning and policies related to PD being made at the school level rather than the system level.

5.10 Chapter Summary

This chapter presented the results from the analysis of the qualitative data collection from the study. Profiles of the participants were explained in terms of their demographical context. The results were presented through the five categories identified within the quantitative chapter (Access to PD; Learning Communities; Use of Technology; Value of PD Approaches; and PD Selection). The results from the quantitative survey data in Chapter 4 and the qualitative data in Chapter 5 will be triangulated and presented in greater detail within Chapter 7 – Findings, Discussion and Conclusions.

CHAPTER SIX

Investigation of Current Practice

6.1 Overview

The previous chapters have presented findings from the survey (Chapter 4) and the interviews and e-interviews (Chapter 5). This chapter will present the findings of an investigation into the practices currently occurring in terms of technology enabled professional development. This study focuses on teachers working in regional and remote areas of the Department of Education in Western Australia. As a result it is imperative to document the current practices that are occurring within this system. Secondly, the role of higher education and professional associations in providing teacher professional learning has been documented. This documentation, along with the quantitative and qualitative data collected in this study will inform the discussion, conclusions, recommendations and future research discussed in Chapter 7.

6.2 Department of Education Context

In order to interpret the findings of this study and apply them to the context of the employment system in which the teachers work, it is important to document the current practices available to these teachers in terms of accessing professional learning within the Department of Education context. This section will give the background of the portal environment in which teachers are expected to operate. It will document online professional development modules available within the portal and within the Professional Learning Institute's separate events management system. The physical infrastructure of networking and internet connections will also be addressed.

6.2.1 E-Learning Portal

In recent years, the Department of Education (DoE) developed an e-learning strategy with Oracle Corporation. This was trialled in 2006 and is aimed to be fully rolled out to around 800 schools within Western Australia by 2012. The aim of the project was to “increase education across the board and reduce the disparity between remote areas and metropolitan Perth” (Oracle Corporation, 2008, p. 1). The solution consists of five tools connected within an online curriculum service that links into a portal environment for students, teachers, administrators and parents (see Figure 6.1). The portal environment is a gateway customised to the requirements of the individual user. Katz (2002) consider portal environments are designed to provide power and authority to the individual use of a learning community. Unlike a regular webpage or site, a portal requires authentication of the user to gain access. On successful authentication, a default view of the web-based information appropriate to the individual user is built (Lightfoot & Ihrig, 2002). Each user with access to the DoE portal offered is attributed a designated role by the administrator of the system which then defines what each user can see, and have access to, within the portal.

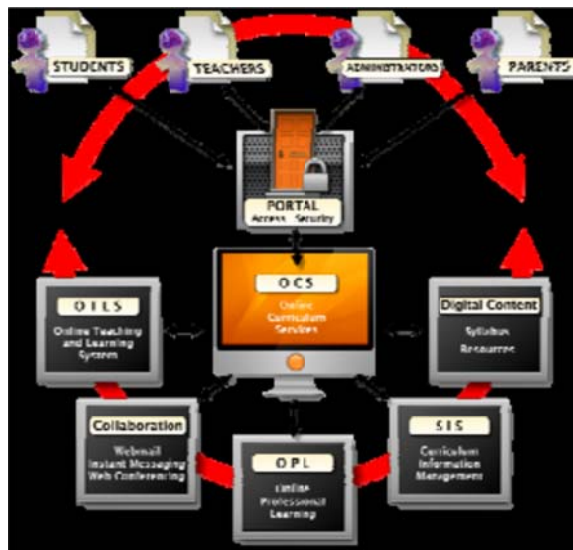


Figure 6.1 Conceptual framework of DoE portal system (DoE, 2009).

Figure 6.1 displays the users of the system as students, teachers, administrators and parents. Through the portal these stakeholders are able to access only the system

they require for their purpose. The suite of tools available through the portal includes the Online Teaching and Learning System (OTSL); Collaboration; Online Professional Learning (OPL); School Information System: Curriculum Information Management (SIS); and Digital Content.

In terms of a learning management system, the OTSL provides an online environment to plan, deliver, monitor and evaluate online and blended learning programs. In relation to regional and remote education; this might be used to provide online curriculum to small schools that do not have access to a specialist teacher in the area. Bevan Doyle, Chief Information Officer (CIO), at DoE states this proposition within a metropolitan context:

ICT is providing a significant point of difference in the way children live and makes changes. If only two students in a school in Perth wanted to learn Mandarin, we could not justify allocating teaching resource to enable them to do so. But if we can get a virtual class together across several schools, then it becomes a different proposition (Oracle Corporation, 2008, p. 3).

Communication tools are housed in the collaboration suite within the portal and include email, instant messaging and web conferencing. The vast distance between schools in Western Australia was recognised as a challenge by Bevan Doyle, CIO, who includes “building the skills of teachers at schools in remote areas of the state” as one of those challenges (Oracle Corporation, 2008). This collaboration system aims to enable teachers to share resources, ideas and experiences, allow communications with students and foster online communities. The user interface for the web conferencing tool can be seen in Figure 6.2.

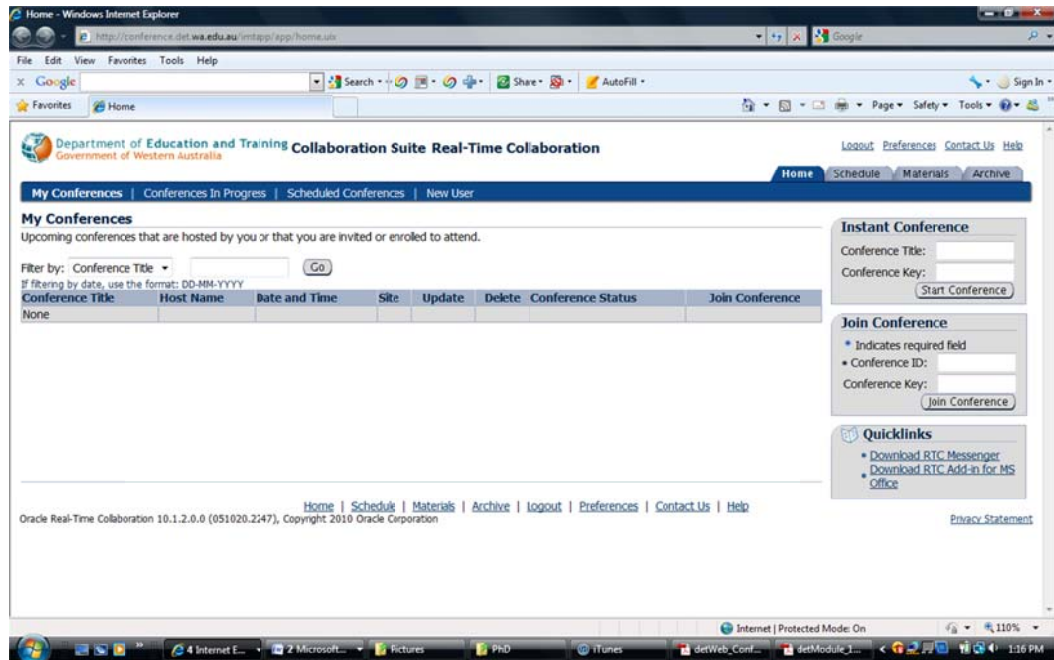


Figure 6.2 Synchronous web conferencing collaboration tool.

Online professional learning is hosted within the portal to deliver flexible professional learning – anytime, anywhere (DoE, 2009). It aims for teachers to expand their professional knowledge, share ideas and gain practical skills that impact on their teaching programs. This is where mandatory professional development is placed for teachers to undertake in their own time. Professional development available to users in late 2010 shows mandatory professional development such as child protection professional learning program, copyright for teachers and students online policy course.

Furthermore, the OPL section of the portal houses a link to the voluntary professional development available through Teachers Have Class housed in School KiT's pd21 program. This program, initially started in 2004 to trial online professional learning as a strategy to support ICT co-ordinators in the *100 Schools Project*, was to develop the technology skills of teachers using Microsoft Office applications in the classroom (Microsoft PiL National Evaluation Team, 2007). It was designed to build teacher capacity in order to assist with engaging students in ICT. Further, a reflective strategy of questioning after each module aimed to give

teachers a medium to explain how they would apply these new skills into classroom integration.

Two sections of the portal, whilst important to teachers and schools on many levels, are not of particular relevance to the study. The School Information System – Curriculum Information Management (SIS) provides important administrative information including enrolment information of students, attendance information and more recently is being used for centrally managed reporting. Digital content provides access to endorsed curriculum and syllabuses and offers an evolving content repository which has 27,000 approved resources for teachers to use in their curriculum development. Whilst some are available digitally, including The Learning Federation objects (digital curriculum resources), others are physical resources where the user is told to look in their school resources.

6.2.2 Professional Learning Institute (PLI) Enrolment System

In order to access the PLI online calendar and enrolment system, which sits independently of the portal system described in 6.2.1, a teacher is required to navigate through the PLI website to find the login page. At the time of this study, it does not appear within the portal login, but is a separate entity. The PLI provides a regular e-newsletter through the portal to employees of DoE highlighting the latest professional development opportunities available through the Institute.

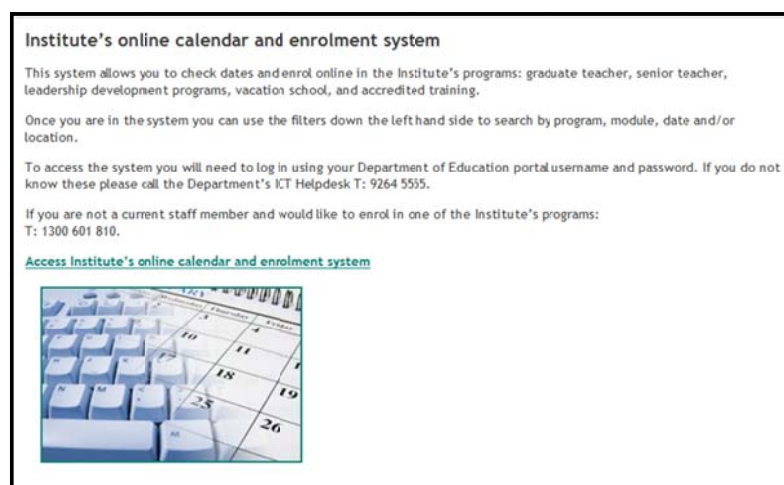


Figure 6.3 PLI online calendar and enrolment system login page.

To login to the PLI events management system, an employee uses the same user ID login and password required to access the portal, however, the two systems did not appear to connect in any way at the time of this study. Within the events management system, teachers can source professional development and workshops that are offered over the next calendar year. An example of how the calendar looks to an individual user is evident in Figure 6.4.

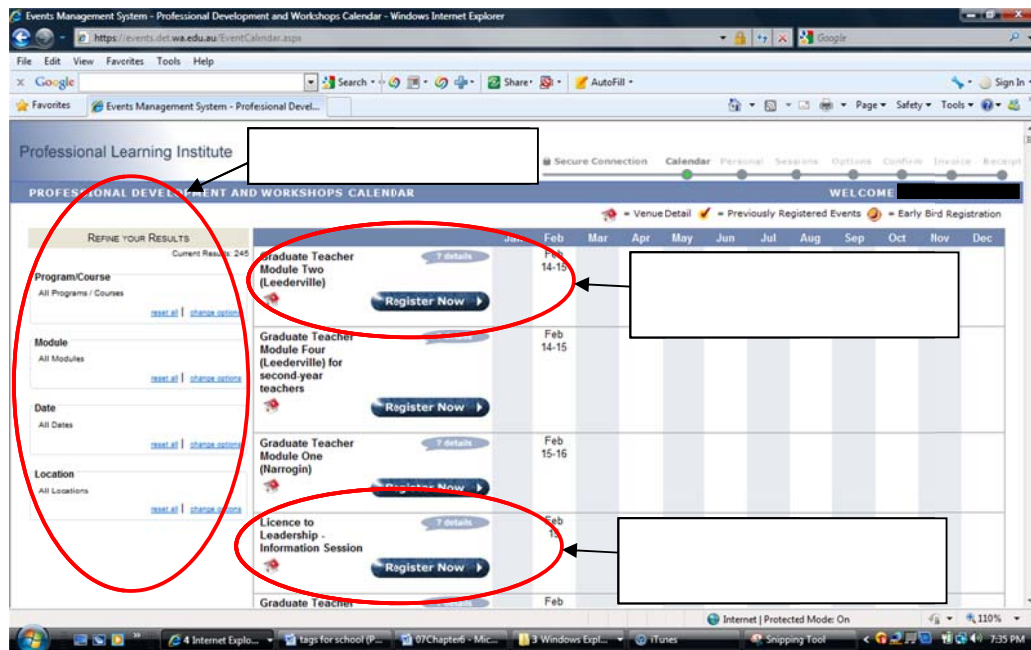


Figure 6.4 PLI workshop calendar.

Both online and face to face professional development is listed within the calendar. A user has the ability to refine their results by course, by module, by date or by location using the filter as shown in Figure 6.4. For this study it was necessary to refine by location and by online to ascertain what professional development was available for teachers in regional areas.

Firstly, a filter was applied to refine the professional development by a distinctive regional location. This revealed a very limited amount of professional development was available face to face in the local context. Findings from this filter revealed that both graduate teacher and senior teacher modules were being offered face to face in the town of Geraldton in the Midwest district and the town of Narrogin in the

Narrogin district. In contrast, Newman (Pilbara district), Port Hedland (Pilbara district), Broome (Kimberley), Kununurra (Kimberley district) and Esperance (Esperance district) were only able to access graduate teacher modules in the face to face medium within the local context.

Further, a filter was applied to refine the online courses and modules that were available in the online medium. This medium provided enrolment availability for both graduate teacher and senior teacher modules. Enrolling in the online medium for both courses required the participant to commit to a four week time period, which was considered to equate to two days of face to face instruction. It could be done at the participants' own pace within the four week time period. In the online medium teachers were required to contribute to online discussion forums and share opinions, reflections and ideas with other teachers. Interestingly, course materials were sent in paper based format to all participants within the online course prior to commencement of the study period.

Modules 1 and 4 are facilitated asynchronously within an edna.edu.au platform where participants are required to conduct readings, undertake activities and contribute to the discussion board. Enrolments are capped at 15 for Module 1 and 20 for Module 4. There is no assessment linked to the modules; however, participants are expected to engage with the course materials and be performance managed by their school leaders. No participant of the course will fail until a change in the Enterprise Bargaining Agreement (EBA) allows for assessment to be linked to the course materials.

Modules 2 and 3 are not facilitated learning experiences, these modules require evidence of completing 2 days of professional development for each module. Teachers are encouraged to complete the accreditation for Senior Teacher within 24 months of enrolment, however, there are some teachers who have completed the process within 8-10 weeks (M.Webb, personal communication, January 31, 2011).

6.2.3 Networking and Internet Capabilities

The Department of Education aims to roll out their e-learning project, based on the Oracle L360 application, to all schools in the state by 2012. The importance of upgrading and maintaining the infrastructure, including the network and internet connections, to those schools has been addressed within their partnership with Cisco Systems.

In 2007, three-quarters of the schools in the DoE network had 10 megabytes per second (Mbps) broadband service. Others were between 1Mbps and 10Mbps, with 37 schools using satellite links (Cisco Systems, 2007). These schools using satellite connections are in the remote communities, which is of importance to this study.

The large numbers of users in the DoE network has been a challenge in terms of managing high volume bandwidth and traffic flow being pushed through a single core. In 2007, internet traffic downloads were between 11 and 17 terabytes of data and around 122 million inbound emails per month (Cisco Systems, 2007). The upgrade of the networking system is allowing DoE to look at “peer to peer network traffic between schools rather than the hub and spoke system that pushes everything through a single core” (Cisco Systems, 2007, p. 3).

6.3 The Role of Higher Education in PD

In order to provide learning environments that offer the flexibility required by students, more higher education providers are turning toward the notion of e-learning. The use of asynchronous communication in distance learning is certainly not new, however, the idea of engaging students in a real-time environment to enhance their learning is less well documented.

Broadley and Pelliccione (2010) described the challenges and solutions relating to regional students within the School of Education at Curtin University in Western Australia. Prior to 2010, regional undergraduate students accessed the Bachelor of Education degree through the Centre for Regional Education (a centre within Curtin

University co-ordinating regional students). These were delivered at physical campus locations around the state of Western Australia, with some units being offered through flexible delivery within a multipoint videoconferencing solution, a learning management system or a web conferencing solution.

Although this served the purpose for the time, it restricted enrolling in the degree to those regional students who were able to access a physical campus. In 2010, the Centre for Regional Education was disbanded and the School of Education moved to flexible delivery of a fully online Bachelor of Education degree to cater for the regional students. The new model allowed access for students in any regional area who have a computer and an Internet connection, regardless of their geographical location. As a result enrolments have seen a positive increase in new students for regional areas.

The successes of online education (including K-12, undergraduate and postgraduate) where web conferencing and virtual classroom software considerably enhanced the learning experiences of distance students has been document in recent literature (Broadley & Pelliccione, 2010; Crump & Boylan, 2008; Crump, Twyford & Littler, 2008; Devlin, Feraud & Anderson, 2008; Lonie & Andrews, 2009; Munsch, 2008). Further, Broadley and Pelliccione (2010) found that regional pre-service and inservice teachers were enthusiastic about participating in collaborative, interactive, synchronous learning environments. The software used were real-time virtual classroom environments that allowed for communication through Voice over Internet Protocol (VoIP) and web conferencing, along with a large number of collaboration tools to engage learners (see Figure 6.5). Students could access the online environment from any location that had a computer and an Internet connection either through physical cable or satellite connections. Broadley and Pelliccione's (2010) study indicated that the synchronous software provided a supportive environment through lecturer/student relationships, enhanced learning experiences and positive impact on assessment that were not found in a purely asynchronous environment. A survey of the regional students showed that 87.1% believed the synchronous software enhanced the quality of their online learning experience. Similarly, Lonie and Andrews' (2009) study found that web

conferencing enhanced learning experiences of regional students and this learning approach provided an active learning experience that potentially reduced the discrepancy between regional and metropolitan student access to a collaborative learning environment.

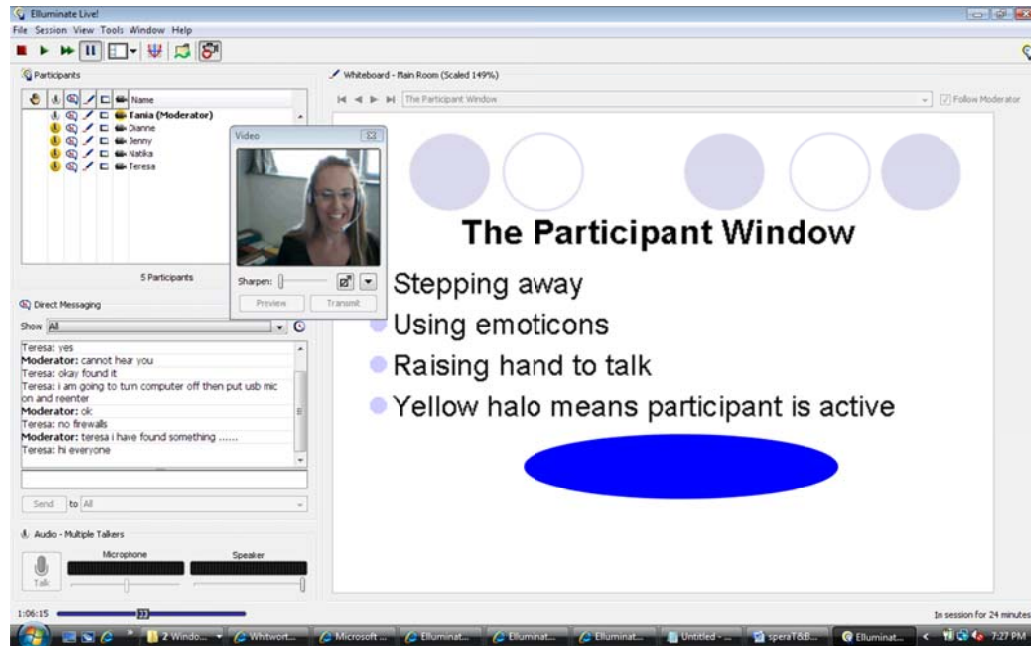


Figure 6.5 Elluminate synchronous software user interface.

Broadley and Pelliccione's (2010) work highlighted the role of synchronous technologies in undergraduate courses, however, it is of importance to this study as higher education institutions are also providers of professional development for teachers in terms of postgraduate study. Lonie and Anderson's study (2009) supports the notion of postgraduate education courses being provided through these technologies. Teachers (60%) within this study have indicated the value of university postgraduate courses as a professional development opportunity and as a result the trial of synchronous software within the undergraduate course might inform the delivery of postgraduate units.

6.4 The Role of Professional Associations In PD

The role of education professional associations is predominantly to enhance quality teaching and learning within the education profession. Some associations focus on particular disciplines of curriculum, others are bound by year levels of teaching, whilst others are broader across the teaching profession. Many offer professional development opportunities to their members in order to promote excellence in the teaching profession.

The aims, objectives, visions and goals of professional associations within Western Australia include statements such as:

- Provide professional development for teachers of science (Science Teachers Association of Western Australia, n.d.);
- Provide access to networking and professional learning opportunities for teachers of Mathematics (Mathematics Association of Western Australia, n.d.);
- Provide professional development which will endeavour to include workshops, lectures and support material for the implementation of changes in education relevant to the Curriculum Framework, Student Outcome Statements and Post-Compulsory Education (Arts Educators Association of Western Australia, n.d.);

There is no evidence within the aims, objectives, visions and goals of how these associations will cater for their members living in regional and remote areas of the state. At the time of this study, it was noted that all professional development opportunities for 2011 were being offered face to face in the metropolitan area, which would incur significant travel and accommodation costs for any regional or remote teachers who were planning to attend.

In 2008, a study by Broadley, Boyd and Terry (2009) aimed to document the vision of a partnership through professional associations attempting to deliver professional learning at a distance. The key personnel within this initiative included the President

of the Australian College of Educators (WA Branch), the President of the Society for the Provision of Education in Rural Australia and the Director of the Rural and Remote Education Advisory Council. These key people joined together with the intent of ensuring that teachers located in regional and remote regions of Western Australia had equitable access to the professional development being offered by those associations within the Perth metropolitan area. Two professional development opportunities were video conferenced to Albany, Bunbury, Esperance, Manjimup, Perth and Wyndham. While the paper documents the successes and challenges that were encountered; more importantly it highlights the significance of partnerships and the vision of improving access to professional learning through the use of technology.

6.5 Chapter Summary

This chapter has highlighted the current practice being undertaken by the DoE to provide professional learning to their teachers. It attempts to explain the e-learning portal environment and the separate events management system hosted by the PLI (a department of DoE). The networking and internet capabilities within the DoE schools around Western Australia have been discussed in order to understand the proficiency of the communications system to schools around the state. Further, technologies being used to deliver professional development to regional areas in Western Australia have been provided through documentation of initiatives within higher education providers and professional associations. The results from this chapter will enable triangulation of the data that has been presented in Chapter 4 and Chapter 5 and synthesized to inform the findings presented in Chapter 7.

CHAPTER SEVEN

Findings, Discussion and Conclusions

7.1 Overview

At the heart of this study was the aim of understanding teachers' perceptions of professional learning and the technologies currently available for regional and remote schools to access professional learning in Western Australia. This chapter restates the research aims and objectives and reviews the methodology used within the study. The major sections of this chapter discuss the findings from the study and their implications according to the theoretical framework underpinning the study. Further, the researcher presents a conceptual framework through the development of a model, where community cohesion underpins a professional learning community through the application of synchronous and asynchronous technologies.

7.2 Research Aims and Objectives

The primary aim of this research was to develop a conceptual framework that would facilitate improving the amount and variety of professional learning available to regional and remote teachers.

The following objectives assisted in achieving the research aim:

- 1) Examine the existing strategies in place to provide professional learning to regional and remote areas of Western Australia.
- 2) Investigate regional and remote teachers' perceptions of their access to professional learning in Western Australia.
- 3) Describe current practice and technologies available to support a professional learning community over a geographically dispersed distance.
- 4) Devise a conceptual framework to facilitate a professional learning community through the application of synchronous and asynchronous technologies.

The primary research question “*In what ways might technology be used to support professional learning of regional and remote teachers in Western Australia?*” was answered through analyses of the data and key findings were determined which concur with the literature and previous studies in this area.

7.3 Research Overview

The literature review highlighted impending changes in Australian education with the expected transformation of teachers working in schools. Gillard (2008b) stated three key points for transforming our schools which included the improvement of quality teaching, ensuring every child benefits and mandating transparency and accountability. A number of initiatives were considered to assist with such reform including the implementation of a Digital Education Revolution, the move to a National Curriculum and the implementation of a National Framework for Professional Standards for Teaching. As these transformative initiatives are rolled out to teachers across Australia, the equitable access to professional learning to support all teachers, regardless of their geographical location, is in question.

The notion of a learning community has been widely researched and cited as an effective form of professional development (PD) as the focus is placed on teachers as members of a wider community of learners (DuFour & Eaker, 2009; Henderson, 2006; Joyce, Weil & Calhoun, 2000; Lloyd & Cochrane, 2005; Newmann, King & Youngs, 2000; Wenger, 1998).

Teachers working in regional and remote areas often experienced a strong sense of geographic and social isolation from peers, colleagues and appropriate support mechanisms due to huge distances between towns and communities. Increasingly, the literature referred to the notion of a professional learning community within an e-learning environment, where teachers have convenient access to ongoing support, collaborative learning, and meaningful and stimulating discussion (Davies, Ramsay, Lindfield & Couperthwaite, 2005; Henderson, 2006; Herrington & Herrington, 2002; Rablin, 2007). The aim of this study thus became to examine current practices undertaken by teachers in Western Australia, to understand their perceptions of

professional learning and identify a conceptual framework to facilitate a professional learning community using both synchronous and asynchronous technologies.

A mixed method research approach was used in this study in order to attend to the research objectives appropriately. The overall research design is depicted in Figure 3.1 provided in Chapter 3. The data were collected in phases, referred to as an explanatory mixed methods design. Quantitative survey data collected in the first stage of Phase Two provided a general picture of the research problem, followed by qualitative interview data to further refine the general picture. The quantitative survey comprised 42 items structured into five categories. A total of 718 paper based surveys were sent to teachers in 50 Department of Education schools within Western Australia. Overall, 104 teachers responded to the survey which represents a response rate of almost 15%. Qualitative data collection, primarily through interviews and e-interviews, was used to generate more in-depth understandings to further inform the findings.

The second stage of data collection in Phase Two consisted of an investigation to ascertain the current practices being undertaken by the Department of Education in Western Australia to provide professional learning for their teachers. Technologies available to support such initiatives were documented. Analyses of the results for all stages of data collection were reported and displayed in Chapter 4, Chapter 5 and Chapter 6 of this thesis.

It was initially proposed that Community of Practice theory could provide a preliminary theoretical framework to this research. By applying Henderson's (2006) Model of Community Cohesion to the blended environment of asynchronous and synchronous technologies the researcher believed it could establish an understanding of how teachers' professional learning could be enhanced through this mode of delivery. Henderson's (2006) model along with the findings of the study was used to conceptualise a framework for implementation and is further explained in Section 7.5 of this chapter.

The results of this mixed-method research have provided a better understanding of the research problem than either approach alone. The findings indicated that the research methodology was well suited to meet the objectives of the study. The discussion of these findings is reported in Section 7.4 of this chapter.

7.4 Key Findings

The results from the data analysis were presented under the broader categories (*Access to PD, Learning Communities, Use of Technology, Value of PD Approaches and PD Selection*) within Chapter 4 and Chapter 5. A number of key findings emerged from the research through the process of triangulation of the data collected within this study in Phase 2 and the literature review. The key findings draw upon the results from within the broader categories. The discussion of results in this final chapter will be reported under the key findings that emerged as these included links between categories.

The following key findings will be described:

- travel time is significant and impacts on teachers' personal time;
- limited availability of relief teachers impact on access to PD;
- promotion and teacher registration is explicitly linked to PD;
- professional learning communities are valued but often limited by small staff numbers;
- professional learning conducted in the local context is preferred;
- professional learning established at the teacher and school level is desirable;
- teachers were confident in using technology and accessing PD online if required; and
- social cohesiveness is valued and often limited by isolation.

7.4.1 Travel time is significant and impacts on teachers' personal time

This finding is consistent with previous studies that have investigated challenges faced by regional and remote teachers in a number of states in Australia (Boylan, 2003; HREOC, 2000a; Lyons et. al., 2006). At the same time, this study provides insights not investigated previously on the impact of traveling on the personal time of teachers, along with impact on their absence from the school.

Boylan (2003) identified many disadvantages faced by teachers working in rural schools which included having to travel long distances. The quantitative data from this current study strongly indicated that both regional and remote teachers (84.5% of total population) perceive the time taken in travelling to access face to face PD is significant. Further analysis of the data revealed that there was significance ($p < 0.05$) between those teachers working in the CTP (regional) and the RTS (remote). It is pertinent to note that regional areas are generally less isolated and located physically closer to regional centres or the metropolitan area, whereas, remote locations are significantly isolated meaning travel time is far greater.

Qualitative responses within the interviews indicated that often the travelling time was greater than the time spent attending the actual PD. With teachers explaining that one to two days in a car to a major regional centre, in order to catch a flight to Perth often required them to be out of their school for up to week in order to attend a PD opportunity.

Whilst the focus on travel time within the Access to PD category was not surprising, the impact on a teachers' personal time was considered to be of particular importance to the teachers in this study. The quantitative survey revealed a large number of the teachers in this study (93.3%) believed that personal time was impacted if they were to access face to face PD. This was further discussed in the qualitative interviews, where one teacher described travelling on a weekend to be able to attend PD that started on the Monday. Being away from her children on the weekend and needing to organise someone to care for them and transport them to

their sporting events was of great significance to her personal life. This was supported by a graduate teacher who reported the need to travel 200km to a major regional centre from her remote community on a Friday after school in order to attend mandated graduate PD modules being offered on a weekend in order to not interrupt the school staffing. This, however, impacted on her personal time. A common theme was the impact of attending PD on fellow teaching staff as many teachers were often not replaced with a substitute teacher. The importance of substitute teachers is discussed further under 7.4.2. This finding has suggested a need to explore ways of presenting professional learning opportunities that limit the necessity of travel.

7.4.2 Limited availability of relief teachers impact on access to PD

Lyons et al. (2006, p. 31) proposed the “greatest needs of teachers in Remote Areas appeared to be for the mentoring of new staff, and for relief from face-to-face teaching to access professional development opportunities”. In order to gain relief from face to face teaching, there must be suitably qualified people within the local context to provide relief. A lack of sufficient relief staff in many rural and remote communities has been reported by ICPA (2005, p. 17) as making it “very difficult for these teachers to attend training and development days and forces teachers to continue working when ill.” This is particularly true for teachers in one, two or three teacher schools where relief teachers are difficult to find (Lyons et.al, 2006).

The item on access to relief teachers was not rated considerably highly by the total population of the study (Q7); however, qualitative data revealed this to be of great impact on teachers gaining leave of absence from their teaching in order to attend PD. Further, this question appeared to have more relevance to the remote teachers. This is supported by the quantitative data where there was a statistically significant difference ($p < 0.05$) reported between those teachers working in the CTP (regional) and the RTS (remote). This indicates that regional teachers have better access to relief teachers which might be explained by RTS schools generally being located in predominantly indigenous communities. From the qualitative data it was evident that teacher relief was considered to mean the employment of a casual staff member

for the days they were away, but also considered to mean when fellow permanent staff members were covering their teaching role. In very small schools, where no teacher relief was available within the community, the absence of a teacher on PD meant they would need to reshuffle the students into other classes which then impacted on the student teacher ratios for that time. When school leaders left the school to access PD, this often meant DOTT relief was not available to the entire teaching staff as this was often covered by the school leaders. Therefore, the data indicated that teachers and school leaders considered the variable associated with PD attendance carefully prior to making the decision to attend.

7.4.3 Promotion and teacher registration is explicitly linked to PD

Apart from the benefits to teacher professionalism and student learning that PD offers, there is also an extrinsically motivating factor offered to teachers working in the Department of Education schools of this state. Teachers are required to provide evidence of approved professional learning in order to gain promotion and renew teacher registration. This brings to the fore the importance of access to professional learning for teachers who are working outside of the metropolitan area.

The most significant finding from this study in terms of promotion is attributed to Level 3 classification. This classification is given to teachers who demonstrate exemplary teaching practices with a commitment to ongoing professional learning. Rigorous assessment criteria are applied to the application process whereby five competencies must be met, two of which are of significance to this study: “Enhance teachers’ professional knowledge and skills through employing effective development strategies” and “Engage in a variety of self-development activities, including a consistently high level of critical reflection on your teaching practice and teacher leadership, to sustain a high level of ongoing professional growth.” The rubrics depicted in Appendix K provide more depth as to the criteria applied to such promotion. The impact of limited access to professional learning might explain the smallest group of respondents (n= 6, representing 5.8% of all respondents) were those who had successfully completed the Level 3 Classroom Teacher process. Further, within this study, no remote teachers identified as having Level 3

classification, all six were from the CTP cohort. This might indicate that teachers in regional and remote areas are disadvantaged in terms of promotion within the department due to their challenges associated with accessing professional learning.

7.4.4 Professional learning communities are valued; but often limited by small staff numbers

For many participants in this study, a professional learning community was underpinned by the notion of working in groups, supporting each other, sharing PD and learning together. The value of professional learning communities was demonstrated through item Q17 of the quantitative data where the highest mean (4.22) was reported. This item indicated that 81.5% of teachers from the quantitative data chose to be part of the professional learning community within their school. Similarly, item Q34 Learning with and from your work colleagues (including mentoring) and Q32 Regional workshops were the two highest valued approaches to PD by teachers across all seven districts. This result supports that teachers in this study believed a professional learning community is one of the most valuable forms of PD approaches available to them. In terms of teaching in a very small school with sometimes very inexperienced teachers, this could provide a number of limitations.

Two studies conducted by Leonard and Leonard (2001, 2003) into professional collaboration among teachers found logistical structure and size of the school was an integral reason as to why professional collaborations did not occur or were not sustained. The respondents from this study were employed within schools that ranged from a staff of two qualified teachers to 65 qualified teachers, showing a large variance in staff numbers which could possibly impact on the respondents' view of learning communities, networking and collegiality. A large proportion (45.3%) of respondents reported being employed within a school that had less than ten teachers employed. This indicates the survey data is representative of teachers who work not only in geographical isolation but also with a limited number of colleagues. The need for teachers to collaborate with others outside of their schools was recognised by many participants with 100% strongly agreeing or agreeing that attending PD with teachers from other schools was highly valuable and 86.3%

stating that this allowed them to engage in a more positive PD experience. From the qualitative data, the notion of school based PD and the questioning of the effectiveness and quality of such an approach was raised by one principal: “I think this is creating an inbred culture, as ideas and innovation are not being pollinated from outside (P1).” As the numbers of staff in schools are affected by student enrolment, in many regional and remote schools there will often be teachers facing limitations in the choice of face to face collaboration.

Online communities could alleviate the issue of small schools that provide limited collegiality with other teachers. Prior research reported the successes of an online postgraduate program where web conferencing and virtual classroom software considerably enhanced the learning experiences of distance students (Lonie & Andrews, 2009). In the study within this thesis, a high level of uncertainty was reported in the quantitative data as to whether teachers would access an online professional learning community. This might be explained by teachers being unsure of the many factors such as increase in workload to learn the software or impact on DOTT time attributed to doing so. In contrast, the qualitative data in this study indicated teachers and principals were generally receptive to this thought, however the logistics of common times to participate were noted by some and the autonomy to select which teachers to work with by others. Increasingly, the literature refers to the notion of a professional learning community within an e-learning environment, where teachers have convenient access to ongoing support, collaborative learning, and meaningful and stimulating discussion (Davies, Ramsay, Lindfield & Couperthwaite, 2005; Henderson, 2006; Herrington & Herrington, 2002; Rablin, 2007). Unlike one-off skills based professional development, these communities aim for sustained professional learning over time and encourage teachers to share and negotiate ideas to work together toward a common goal.

7.4.5 Professional learning conducted in the local context

Professional learning delivered in the context of the workplace has been documented as most successful (Billett, 1998; DuFour & Eaker, 2009; Steketee & MacNaught, 2007; Zmuda, Kuklis & Kline, 2004). DuFour and Eaker (2009) found that

professional learning was most effective when it engaged the entire staff of a particular school and was provided at the local school site. Billett's (1998) study proposed that by engaging in authentic activities and a framework of guided learning in the workplace, the knowledge of construction occurs in context and is not then tested by transfer between learning place and work place. In the present study, under the broader category of *Value of PD Approach*, item Q32 asked teachers to rate the value of regional workshops. Regional workshops were those held within their school or local regional district and, therefore, are considered in the local context. Teachers (from 82.3% to 100%) reported regional workshops as very high and high in value across all teaching districts with exception of the Goldfields district where 60% of teachers reported very high or high value for regional workshops. Item Q34 asked teachers to rate the value of learning with and from your colleagues, including mentoring. This item received very high and high value reported (from 82.4% to 100%) across all teaching districts with exception of the Goldfields district where 70% of teachers reported very high or high value. These two items were the only items that were explicitly linked to professional learning in the local context, and were also the two highest valued across all regions apart from the Goldfields district who reported university postgraduate courses as most valued. From the qualitative data, the desire for PD to be delivered in the local context was raised voluntarily by two teachers who discussed schools collaborating in local areas to bring quality PD into the town or district. Therefore, the present study provided further support to previous findings that professional learning in the local context is preferred by many teachers and possibly more effective as a result.

7.4.6 Professional learning established at the teacher and school level

Staff development programs of professional learning are best based on gathering relevant background information that will benefit students, teachers and the wider school community (DuFour & Eaker, 2009). The *PD Selection* category of the survey contained items that gathered perceptions on why and how teachers might choose to undertake professional learning. Two items within this category revealed that teachers strongly believed their professional learning must be linked to their own needs and the needs of their students. Very high levels of agreement were reported

from all teaching regions across items Q39 and Q42 which stated that teachers should be free to select PD based on their perceived needs and that PD should help teachers build new skills and identify strategies to better meet the needs of their students. Similarly, the total population data indicated 99% of teachers believed PD should help teachers build new skills and identify strategies to better meet the needs of their students (Q42) and 93.3% of teachers believed they should be free to select PD based on their perceived needs (Q39). McWilliam (2002) and more recently, Parr (2004) posed the argument against a bureaucratic approach to professional development where policy makers convey single-solutions to skill development. These approaches are often not truly reflective of the needs of teachers at the coalface and research shows that on return to the classroom have not informed teaching practice or improved student learning (Anderson & Henderson, 2004; Trinidad, 2004). Professional learning needs to be driven from the teachers and school level and then facilitated and supported by those at the organisational level, not delivered from a top down approach.

It was found that teachers in this study could see value in school priorities and programs influencing their professional learning to some extent, however, at the system level where policies were made, were not included in this sentiment. In contrast, Timperley and Robinson (2000) conducted a study in a large high school and found that teachers expressed concern that the shared vision of the school restricted their professional development autonomy. In the total population data, the highest mean (2.14) indicated that teachers believed their PD should be connected to the school's priorities and endorsed programs. There were no teachers who strongly disagreed with this statement. Further qualitative data revealed that both teachers and principals could see the necessity in this with one commenting that she enjoyed being involved in PD that was focussed on the priorities of the school because "these priorities are focussed around the betterment of student outcomes (T4)". These teachers were also passionate about the needs of the individual teacher that leads to the achievement of school priorities.

Working toward a shared vision allows staff to be active participants of a continuous improvement journey who see the value of innovation and how this translates to

student achievement (Zmuda, Kuklis & Kline, 2004). Teachers in this study preferred to undertake professional learning in the local context of their district, school or classroom and this professional learning must be established at the need of the individual teacher in line with the school priorities.

7.4.7 Teachers confident in using and accessing technology

The HREOC Bush Talks study in 1999 found “the quality of telecommunications technology is inadequate for teaching and learning in many parts of Australia.” (HREOC, 1999, p. 11). With the onset of the digital education revolution and the promise to turn ‘every secondary school in Australia into a digital school within four years’ (ALP, 2007) came the promise of a laptop for every child, along with the networking infrastructure to connect with the ‘information superhighway’ and online teaching materials relevant to the curriculum within each state. Although this project is still being rolled out, along with the National Broadband Network (NBN), 66% of teachers in this study reported having a sufficient number of computers in their schools and 63.1% reported having fast, reliable internet access at their schools. Similarly, when asked about their home environments, 93.1% of teachers had access to a computer at home and 61.7% reported fast, reliable internet access in their homes. In 2007, three-quarters of the schools in the Department of Education network had 10 megabytes per second (Mbps) broadband service. Others were between 1Mbps and 10Mbps, with 37 schools using satellite links (Cisco Systems, 2007). These schools using satellite connections would be in the remote communities, which might explain the statistics for the total population.

Within the *Use of Technology* category, high levels of confidence in using technology and accessing PD online (if required) were reported across six out of the seven teaching regions. Teachers in the Goldfields reported highest levels of confidence and Kimberley teachers reported lowest levels of confidence. This may be linked to the perceptions of support for ICT and technology, where Goldfields teachers reported the highest perceived support and Kimberley teachers reported the lowest perceived support. When asked about using videoconferencing for accessing PD, 40.9% of Pilbara teachers reported they had used this medium, whereas no

teachers from Esperance, Kimberley and Midwest districts had used videoconferencing to access PD. Levels of agreement for using web-conferencing (via Elluminate, Centra7, Skype or the like) were also very low. Teachers within this study reported their highest levels of uncertainty as to whether using videoconferencing for PD was effective. Similarly, teachers were uncertain if utilising web conferencing software was an effective way for teachers to access PD. This can be explained by only 13.7% of the total population in this study having ever used videoconferencing. The researcher proposes that this might also be the case for web conferencing software, although the question was not asked in the survey items. Teachers might be uncertain as they have not had the opportunity to engage in successful synchronous communication sessions and therefore don't actually know what possibilities and opportunities such technology might offer them. Steketee and MacNaught (2007) offered professional learning in the mathematics curriculum area to graduate teachers in regional and remote areas via videoconferencing. Findings from that study indicated that although videoconferencing was able to replicate the social constructivist learning environment; the commitment of others within the school had a major impact on the participation from the graduate teacher. For example, where the principal was required to act as a mentor and project leader within the local context, it was found lack of commitment on his behalf led to the teacher withdrawing from the project. A similar study by Annetta and Dickenson (2006) also found that the level of interaction between principals and participants had a substantial impact on the success achieved in using the technology. Broadley (2007) highlights the importance of leadership, a whole school approach and a vision from school leaders to enable successful implementation in e-learning and any technology implementation process within schools.

From the qualitative data, a number of teachers had used videoconferencing, but none reported using the collaboration software within the Department of Education portal environment. Of particular interest, the analysis of the quantitative survey revealed the Pilbara district had the highest percentage of teachers that strongly agreed with the use of videoconferencing for PD and had no teachers that strongly disagreed. This was not the case with any other teaching region and would indicate there might be some innovative strategies for delivering PD already in place in that

region. Additionally, the Pilbara district was also the region with the highest number of teachers who strongly agreed or agreed that technology and ICT are making PD more accessible for regional teachers. This finding indicates there are teachers willing to undertake professional learning through technology, there is technological infrastructure in many regional and remote areas to support this, and the value on learning as a community could indicate an online community, established at the need of the teacher and the school, would be more successful.

7.4.8 Social cohesiveness is valued and often limited by isolation

Many teachers moving to regional and remote areas find the feeling of isolation detrimental to their social networks they may have had prior to relocating. This can impact considerably on the retention of teachers in these communities. In her study of first-year rural teachers, Sharplin (2008) found that lack of contact with other teachers in their subject area was of major concern. At a more collegial level, it was found that many teachers suffered professional isolation as did other service professionals in regional areas and were “equally at risk of leaving their profession in those first critical years in country placements” (Herrington & Herrington, 2001, p. 1). The current study extended this research as the qualitative data collection provided evidence that teachers felt professional networking was often conducted during breaks in informal situations and this was highly valued within the teaching community. This notion of social cohesiveness, being an explicit issue for regional and remote teachers, links very clearly to the community cohesion model explained in 7.5.

7.5 Application of the Community Cohesion Model

Previous research by Henderson (2006) focused on asynchronous communications in a blended learning postgraduate environment. Building on Henderson’s study, the outcome of this research aimed to propose a conceptual framework through the development of a model that would focus on both synchronous and asynchronous communication. It was proposed at the beginning of this study that the community

cohesion model designed to sustain professional development over time would be the basis for developing a model of professional learning in this study.

According to Wenger (1998) the formation of a community of practice is dependent on three key dimensions. Firstly, the participants doing things together and forming a sense of belonging, coined as *mutual engagement*. Teachers in this study valued mutual engagement in their school communities by learning with and from their colleagues and valued collaborating and engaging with teachers at other schools. Mutual engagement is much more than merely being a member of the group, it is based on interaction. Teachers in this study showed evidence of valuing interaction through language such as working together, coming together, collaborative planning and sharing practice. Secondly, *joint enterprise* refers to the common purpose found in negotiating shared values and visions within the community and developing an understanding of what is important and what should be done. Within this study much of the data exemplified that teachers understand the link between school vision, school priorities and the improvement of student learning. Furthermore, their professional learning and how it fits into that wider picture of values and visions at the school level is implicit. In addition, the impact of being absent from their schools to attend PD opportunities was often at the consequence to other teachers. This reflected another aspect of *joint enterprise* where teachers used language to show they were affecting others and reshuffling the school. Being part of a community of practice is having an understanding of joint enterprise of that community, and these teachers clearly were community members. The third aspect of community in Wenger's community of practice theory is that of *shared repertoire*. This is the negotiated purpose, goals and accountability that are constructed through the members of the community being mutually engaged in a joint enterprise. In this study, the unique understanding of routines, words, ways of doing things and actions of the community exemplify shared repertoire between teachers in their schools.

Teachers from this study indicated they valued the three key dimensions (mutual engagement, joint enterprise and shared repertoire). This suggests the community cohesion model has indeed been an effective platform to build on. The new model,

presented in Section 7.6, is grounded in these three tenets and offers an effective form of professional learning for teachers located vast distances from where traditional professional development opportunities commonly occur.

7.6 Recommendations and Model

The notion of professional development in education is grounded in a historical perspective that may provide a nuance of negativity for some experienced teachers. For many teachers, they may recall a day out of their school context where a knowledgeable other up skilled them with new ideas and practices. They returned to their classroom only to be too busy in their teaching role to implement these new skills learnt outside of the teaching context. Finally, there was not any follow up on the success of the implementation and as a result the PD may not have stood the test of transfer between learning place and workplace. In line with previous literature, the researcher proposes this model is antiquated and requires a major paradigm shift (Billett, 1998; Desimone, 2009; DuFour & Eaker, 2009; Sparks, 1994).

This chapter has provided a discussion of the findings, which have addressed the original objectives of the research and have contributed to answering the primary research question:

“In what ways might technology be used to support professional learning of regional and remote teachers in Western Australia?”

Technology offers a medium to connect teachers regardless of their geographical location, where a community of practice can provide a collegial support network that offers not only professional learning but the social cohesiveness not always available to teachers in their schools or local context.

In line with the literature, the researcher proposes the concept of delivering PD and accessing PD from regional and remote areas be reconsidered. Hence the title of this thesis: *“Rethinking Connectedness”*. This research lies at the nexus of one key issue. Teachers as professionals must adopt a continuous cycle of improvement within their workplace and thus require a learning support network that underpins that cycle. In the case of regional and remote teachers, the only logistical possibility

is to provide this through technology that offers synchronous and asynchronous communication.

In this study, the learning support network has been referred to as a professional learning community (PLC). Hence the PLC terminology was posed in the literature review and data collection. For regional and remote teachers to gain access to such a rich sharing environment, technology offers the most convenient and affordable option to do so. The findings have provided evidence that teachers find it difficult to leave their school to attend PD, they value the notion of collaboration and sharing in professional learning communities and although uncertain about online communities, many are confident with using technology. The culture of an online professional learning community is not simply a network of teachers who can communicate over distances. It needs to fundamentally provide a dialogue between professionals of curriculum, teaching, learning and assessment. However, as discussed in the findings, there also needs to be an element of social cohesion. Teachers value the informal networking opportunities that are presented in face to face PD and therefore would benefit from opportunities to develop those social connections in an online environment.

The model in Figure 7.1 provides a conceptual framework for facilitating teacher professional learning through an online learning community to deliver just-in-time (JIT) and individualised support to teachers in their local context. The teacher is the key element at the core of the model and understanding their individual professional needs is essential. In line with the findings, the second layer ensures the professional learning allows teachers to be situated in their local context; yet engage with other professionals within their schools, within their districts and across boundaries of districts. Ideally, a variety of learning opportunities would be made available that include just-in-time (JIT) support and meetings that are planned on a regular basis. For this to occur, the third layer of the model requires a vision from the principal at the school level to ensure the professional learning, although catering for teachers professional needs, is ultimately linked to the school priorities and the student needs within the individual school. The fourth layer of the model provides the technology that is available to support such an initiative. The use of both asynchronous and

synchronous technologies is necessary to cater for those who prefer to collaborate and learn within a real-time environment. Those who are unable to join at specified times in the synchronous environment would access asynchronous communication tools.

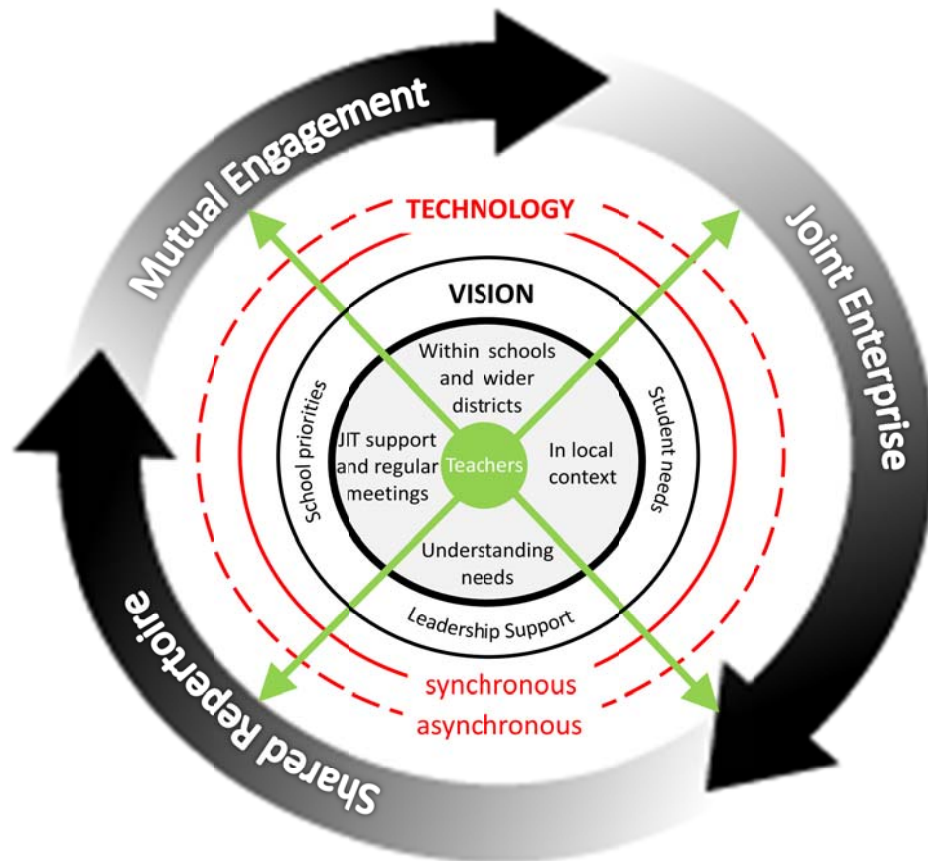


Figure 7.1 Rethinking Connectedness Model.

Building on the notion of situated practice and community cohesion, using both synchronous and asynchronous technologies, teachers have access to a purposeful learning community where they can share practice, engage in collegiality and develop knowledge. It is envisaged the community be established by the need of the teachers and include other professionals that would value-add to the community. These professionals might include curriculum consultants from district or central offices, university lecturers in the specific field of expertise, industry experts if applicable to that field of expertise and others as required by the teachers within that

community. Community cohesion (*mutual engagement, joint enterprise and shared repertoire*) would underpin the construct of the online community, and ultimately guide its purpose for existing. Through *mutual engagement* teachers would be sharing practice, collaborating on curriculum planning and supporting each other in a social environment which is not always found in very small remote schools. *Joint enterprise* may be negotiated and built around the common purposes shared by teachers working in regional and remote areas. *Shared repertoire* may be developed as the community matures and teachers progress toward a unique routine, understanding of common terminology and their actions within their online community.

In the context of this model, learning is embedded in the teaching environment at the classroom and school level, so there is no boundary between working and learning. The aim in developing an online professional learning community of teaching professionals is to assist teachers in becoming more individually and collectively effective in their positions; which in turn should positively impact on student learning outcomes. The implementation of a rich sharing and learning environment located in the local context of the workplace should allow for professional learning to be implemented more successfully than if teachers were to be removed from their school and professionally developed through the traditional forms of PD that are currently available.

This model has implications for a range of stakeholders involved with professional learning for teachers in regional and remote areas. Those in educational governance, including, but not limited to the Department of Education in WA, may find this model beneficial to inform policy changes in professional learning at the system level. Providers of professional learning, including, but not limited to the PLI and a wide range of professional associations, will find implementing the model will ensure the needs of teachers in regional and remote areas are considered at the planning stages of professional learning scheduling. Principals and school leaders are encouraged to apply the model when planning school vision, school priorities and professional learning of all teaching staff, to ensure a more collegiate approach to professional learning has been applied. This will assist in the move toward a

holistic approach to professional learning and one that moves away from one-off skill development.

7.7 Limitations of the Study

Validity and reliability are potential limitations of any research. This aspect of the limitations has been addressed in Chapter 3. This current section will address more specific limitations that are of interest to this study.

It was recommended by executive staff in the Department of Education (WA) that paper based surveys were sent through the traditional mail service rather than emailed to teachers within this study. The researcher believes it may have been a potential limitation to the study, as surveys were sent to the principal of the school who were asked to disseminate and promote participation within their staff. Ultimately, this method of survey collection allowed the principal of the school to become the gatekeeper to the study. If the surveys were electronic and an invitation to attend had been emailed directly to staff in the schools, there may possibly have been a higher return rate as the researcher cannot be sure all teachers in all schools were given opportunity to respond.

The numbers of participants in this study were low in relation to the overall number of teachers employed within the CTP and RTS. In order to address this, the researcher has attempted to ensure a proportionate sample was provided by undertaking a stratified sample of both the CTP and RTS which is relative to the total number of employees in each program.

Another possible limitation to any study is that of researcher bias. The study was conducted by one researcher in one educational system (the Department of Education WA), in one state of Australia. It was acknowledged that this could potentially be a limitation, however, was also perceived as beneficial in terms of consistency within the data analysis. Further the research design, including both quantitative and qualitative data, enabled this limitation to be minimised. This mixed method approach provided a better understanding of the research problem

than either approach alone. Greene and Caracelli (1997) propose when used in combination, quantitative and qualitative methods complement each other and allow for a more robust analysis, taking advantage of the strengths of each.

In line with the key findings of this study, another limitation was the vast geographical dispersment of teachers and schools in the CTP and RTS. This meant the qualitative interviews were often done using telephone or email due to the logistics attached to face to face interviewing. Ironically, time for travel and costs of travel were key limitations to the researcher being able to attract more participants within the qualitative data collection phase.

7.8 Considerations for Future Research

This study has identified the challenges being faced by regional teachers in terms of accessing PD and suggests the impact on their professional and personal lives is significant. The research has also generated a conceptual framework that will facilitate a professional learning community using synchronous and asynchronous technologies. The data collected in this study, although specific to educational contexts could be extended to consider similar challenges faced by other professionals working in regional and remote locations. This research has also identified several topics that could be investigated in future research into professional learning for regional and remote teachers.

Further research could be carried out to assess the robustness of the survey instrument utilised in the quantitative data collection. This could be replicated through other education sectors and systems that employ professionals in regional and remote areas of any state in Australia.

The perceptions of teachers in relation to the value of professional literature as a means of professional learning could be explored. This study showed that not many teachers consider reading professional literature as a form of professional learning. Possible research questions could include: Why do teachers not see value in

professional literature? How can the value of science informing practice be renewed in teachers' minds?

Within this study, teachers working in the Pilbara district reported initiatives for using videoconferencing in teacher professional learning. It would be of great interest to document these practices within a case study. The effectiveness of this initiative could be analysed and then used as a model for implementation through other districts.

Due to the considerable number of small schools with limited teaching staff in Western Australia, it would be of great benefit to conduct a needs analysis to ascertain teachers' collegial requirements. The development of an online professional learning community to suit their needs (whether it be science based, early childhood based, integrating technologies enthusiasts etc.) based on the implementation framework in this study could be undertaken to establish a collaborative and purposeful learning community. Research could then be conducted to evaluate the associated successes and challenges.

Finally, an important consideration for teachers in terms of professional learning is the affordance of mobile learning. Research into how mobile learning could be implemented into teacher professional learning is an area that has yet to be addressed and could be a potential consideration for future research.

7.9 Conclusions

This research aimed to address the primary research question of how technologies might be used to support professional learning of teachers in regional and remote areas. The findings from the study included travel time being significant and impacting on teachers' personal time; limited access to relief teachers impacting on access to PD; promotion and teacher registration being explicitly linked to PD; professional learning communities being valued, but often limited by small staff numbers; professional learning conducted in the local context being preferred; professional learning established at the teacher and school level being desirable;

teachers being confident in using technology and accessing PD online if required; and social cohesiveness being valued and often limited by isolation.

The study aimed to provide an understanding of the current practice in the Department of Education to provide professional learning to teachers in the County Teaching Program and the Remote Teaching Service. Furthermore, perceptions of these current initiatives were collected from the teachers at the coalface. The implications of these findings according to the theoretical framework underpinning the study were discussed. Further, this research has presented a model of “*Rethinking Connectedness*”, where community cohesion underpins a professional learning community through the application of synchronous and asynchronous technologies.

Although the Department of Education in Western Australia has some aspects of technology available within their current infrastructure, not all characteristics of the model presented in Figure 7.1 have been considered in order to ensure cohesive professional learning is available for teachers in regional and remote schools. This model has been developed to assist teachers, principals and those at the system level to consider the key elements that are required to provide meaningful professional learning for teachers working in regional and remote areas.

This research has added to the growing body of knowledge for using ICT to bridge the tyranny of distance often faced by professionals working in regional and remote areas. The “*Rethinking Connectedness*” model has been developed from the findings of the study in order to assist teachers, principals and those at the system level to consider what is critical in order to implement such an initiative.

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Note: Every reasonable effort has been made to acknowledge the owners of copyright material. I would be pleased to hear from any copyright owner who has been omitted or incorrectly acknowledged.

APPENDIX A:

List of CTP and RTS Schools from 2008



Country Teaching Program

The following schools are part of the Country Teaching Program.

- | | | |
|------------------------------------|----------------------------------|----------------------------------|
| ← Babakin PS 7 | Jerramungup DHS 12 | Norseman DHS 18 |
| Badgingara PS | ← Kalannie PS 5 | North Kalgoorlie PS |
| ← Baker PS 32 | ← Kalgoorlie PS 31 | ← North Merredin PS 12 |
| Ballidu PS 3 | Kalgoorlie School of the Air 9 | North Tom Price PS 15 |
| ← Beacon PS 5 | Kalgoorlie-Boulder Middle School | Northam SHS 57 |
| ← Bencubbin PS 7 | ← Kambalda PS 13 | Nungarin PS 2 |
| Boulder PS 25 | Kambalda West DHS 30 | O' Connor ESC |
| Broome PS 27 | Karratha ESC | O' Connor PS |
| Broome SHS 24 | ← Karratha PS 26 | ← Ongerup PS 5 |
| Bunline PS 3 | Karratha SHS 53 | ← Pannawonica PS 9 |
| Cable Beach PS 30 | ← Katanning PS 21 | Paraburdoo PS 18 |
| Cadoux PS 3 | Katanning SHS 40 | ← Pegs Creek PS 19 |
| ← Carnarvon PS 15 | Kellerberrin DHS 19 | ← Perenjori PS 6 |
| Carnarvon School of the Air 4 | Kimberley School of the Air | Port Hedland PS 22 |
| Carnarvon SHS 38 | Koorda PS 6 | Port Hedland School of the Air 6 |
| Cascade PS 4 | Kununurra DHS 65 | ← Ravensthorpe DHS 15 |
| Cassia ESC 4 | ← Lake Grace DHS 19 | Roebourne PS |
| Cassia PS 19 | Lake King PS 4 | Roebuck Bay PS 29 |
| Condingup PS 6 | Latham PS 5 | ← Salmon Gums PS 3 |
| Coolgardie PS 6 | ← Leinster PS 10 | Sandstone PS |
| ← Cue PS 5 | ← Leonora DHS 16 | Scaddan PS |
| Dalwalinu DHS | Manjimup ESC | Shark Bay PS |
| Darriper PS 15 | Meekathara School of the Air | ← South Merredin PS 14 |
| Dandargan PS 7 | Meekatharra DHS 19 | South Hedland PS 20 |
| Derby District High 45 | Menzies RCS | South Kalgoorlie PS |
| East Carnarvon PS 20 | ← Merredin SHS 32 | South Newman PS 33 |
| East Kalgoorlie PS 9 | Miling PS | Southern Cross DHS |
| Eastern Goldfield College 48 | Millars Well PS | Tambrey PS |
| Eastern Goldfields SHS ESC 2 | Mingenew PS | Tincurrin PS |
| ← Eneabba PS 6 | ← Moora PS 8 | ← Tom Price PS 20 |
| Esperance SHS ESC 5 | Morawa Agricultural College 9 | Tom Price SHS 27 |
| ← Exmouth DHS 35 | Morawa DHS 22 | Trayning PS |
| ← Gairdner PS 5 | Mt Magnet DHS | Watheroo PS |
| Gnowangerup Agricultural School 24 | ← Mukinbudin DHS 11 | Wellstead PS |
| Gnowangerup DHS 24 | ← Mullewa DHS 15 | ← Westonia PS 2 |
| Grass Patch PS 4 | Munglinup PS 5 | ← Wickham PS 24 |
| Hannans PS 27 | ← Narrogin SHS 59 | Wubin PS |
| Hedland SHS 55 | ← Newdegate PS 7 | ← Yalgoo PS 5 |
| Hopetown PS 8 | ← Newman PS 20 | ← Yuna PS 5 |
| Jerdacuttup PS 4 | Newman SHS 34 | |

A range of financial incentives are offered to teachers in these schools.

KEY

PS – Primary School

DHS – District High School

SHS – Senior High School

ESC – Educational Support Centre

More information about all these schools can be found at Schools Online at det.wa.edu.au



The following schools are part of the RTS.

GOLDFIELDS DISTRICT

- Laverton PS 7
(includes Mulga Queen annex)
- Mt Margaret RCS 3
- Tjuntjunjara RCS 5
- Wiluna RCS 9
- Yintarri RCS 2
- Ngaanyatjarra School*** 1
- Blackstone RCS*
- Cosmo Newberry RCS*
- Jameson RCS*
- Kiwirrkurra RCS*
- Tjirrkarli RCS*
- Tjukurla RCS*
- Wanarn RCS*
- Warakurna RCS*
- Warburton Range RCS
(includes Patjarr annex)*
- Wingellina RCS*

KIMBERLEY DISTRICT

- Bayulu RCS 9
- Dawul RCS 5
- Djugerari RCS 2
- Fitzroy Crossing DHS 30
- Halls Creek DHS 35
- Jungdranung RCS 2
- Kalumburu RCS 13
- La Grange RCS 17
- Looma RCS 10
- Muludja RCS 2
- Ngalapita RCS 4
- One Arm Point RCS 11
- Oombulgurri RCS 4
- Wananami RCS 3
- Wangkatjunka RCS 8
- Wyndham DHS 17

MIDWEST DISTRICT

- Burringurrah RCS 5
- Gascoyne Junction RCS 2
- Sandstone PS 3
- Pia Wadjari RCS 3
- Useless Loop PS 3
- Yulga Jinna RCS 3

PILBARA DISTRICT

- Jigalong RCS 11
- Marble Bar PS 7
- Ngurrawaana RCS 3
- Nullagine PS 5
- Onslow PS 14
- Yandeyarra RCS 4

* NB. The Ngaanyatjarra school operates as one worksite with 10 different campuses providing flexibility in staff appointments.

For further location information visit MAPS on the Department of Indigenous Affairs website at dia.wa.gov.au/.

A number of RTS schools also have their own websites. Visit Schools Online at det.wa.edu.au

APPENDIX B:
Quantitative Survey

PROFESSIONAL DEVELOPMENT SURVEY FOR REGIONAL TEACHERS

Please circle/highlight the appropriate answer, or write in numbers where required.

Gender:	Male		Female		
Number of years teaching:	years		months		
Qualifications gained?	Bach of Ed	Grad Dip		Other:	
How long have you been teaching in a regional area?	years		months		
What were you originally trained to teach?	ECE	Primary	Secondary	Other	
What are you currently teaching?	ECE	Primary	Secondary	Other	
Current employment status (circle the status that applies to you – if part time then tick the fractional amount)	Fulltime, ongoing	Fulltime, fixed term contract	Part-time	Relief	
			0.1		
			0.2		
			0.3		
			0.4		
			0.5		
			0.6		
			0.7		
			0.8		
			0.9		
Current teacher status	Graduate Teacher - in his/her first two years of teaching				
	Teacher - taught for more than 2 years				
	Senior Teacher 1 or 2 – has successfully completed the process				
	Level 3 – has successfully completed the process				
Number of teachers employed within your current school (WACOT teachers only)					
Are you employed in any of the following programs through DET?	Remote Teaching Service	Country Teaching Program		Other/No	
What district is your current school within?	Albany	Bunbury	Esperance	Goldfields	Kimberley
	Midlands	Midwest	Narrogin	Pilbara	Warren-Blackwood

Please read each statement and indicate your answer by circling/highlighting the number of the response which corresponds most closely to your experiences as a regional teacher.

A. Access to Professional Development (PD)

		Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
1	My school succeeds at notifying me of professional development that is available to me.	1	2	3	4	5
2	There are sufficient ways that I can access PD from my regional teaching location.	1	2	3	4	5
3	Travelling to face-to-face PD takes a significant amount of personal time.	1	2	3	4	5
4	I am provided with sufficient funding from my school to access PD.	1	2	3	4	5
5	I am satisfied with the amount of PD that I can access.	1	2	3	4	5
6	The travel time to access PD face-to-face is insignificant.	1	2	3	4	5
7	There is sufficient access to relief teachers to enable me to access PD.	1	2	3	4	5
8	If I had more funding I would access more PD.	1	2	3	4	5
9	An incentive based system would encourage me to access more PD.	1	2	3	4	5

B. Professional Learning Communities (a collegial group who are united in their commitment to student learning – can be formal or informal).

		Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
10	Within my regional district I am part of a professional learning community that fosters my professional growth as a teacher.	1	2	3	4	5
11	I am part of a professional learning community of teachers within my own school.	1	2	3	4	5
12	I believe that a professional learning community is as important to my professional growth as attending formal PD opportunities.	1	2	3	4	5
13	I am a member of an online professional learning community and believe this is highly valuable.	1	2	3	4	5
14	A professional learning community does not offer the same professional growth as a structured PD session.	1	2	3	4	5
15	If I had access to an online professional learning community, I would be part of this.	1	2	3	4	5
16	There is no significant learning community within my regional district.	1	2	3	4	5
17	Although there is a professional learning community within my own school, I choose not to be part of this.	1	2	3	4	5
18	The PD I value includes opportunities for me to share my practice with other teachers.	1	2	3	4	5
19	I find it valuable to learn what other teachers are doing in their classroom.	1	2	3	4	5
20	Attending PD with teachers from other schools is highly valuable.	1	2	3	4	5
21	Being able to attend PD outside of my regular professional learning community or school allows me to engage in a more positive experience.	1	2	3	4	5

C. Use of Technology/ICT (includes the use of computers, the internet, videoconferencing, web conferencing etc).

		Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
22	I am confident in using technology and am capable of accessing online PD if required.	1	2	3	4	5
23	The support for ICT and technology is adequate within my school, so that I would feel confident to access online PD.	1	2	3	4	5
24	A blend of face to face PD and online PD is more effective than in isolation.	1	2	3	4	5
25	I have used videoconferencing for PD and this was effective.	1	2	4	4	5
26	Web conferencing software (such as Elluminate, Wimba, Webex, Centra7, etc) is an effective way to access PD for teachers.	1	2	3	4	5
27	In my opinion, technology and ICT are making PD more accessible for regional teachers.	1	2	3	4	5
28	I have access to a computer at home.	1	2	3	4	5
29	I have fast reliable internet access at home.	1	2	3	4	5
30	My school provides a sufficient number of computers.	1	2	3	4	5
31	My school has fast reliable internet access.	1	2	3	4	5

D. Value of PD approaches (in your opinion, please indicate the value of various approaches to PD)

		Little or No Value	Moderate Value	High Value	Very High Value
32	Regional workshops.	1	2	3	4
33	Reading professional literature.	1	2	3	4
34	Learning with and from your work colleagues including mentoring.	1	2	3	4
35	Conferences or involvement with professional associations.	1	2	3	4
36	TAFE courses or other training organisations.	1	2	3	4
37	University postgraduate courses.	1	2	3	4
38	DET initiatives (ie. Graduate Teacher, Senior Teacher modules including face to face and online).	1	2	3	4

E. Mandatory vs Self-initiated PD

		Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
39	I should be free to select PD based on my perceived needs and time available.	1	2	3	4	5
40	All teachers should be expected to complete a specific amount of PD in order to ensure teaching and learning practices are updated.	1	2	3	4	5
41	My PD should be connected to my schools priorities and endorsed programs.	1	2	3	4	4
42	My PD should help me build new skills and identify strategies to better meet the needs of my students.	1	2	3	4	5

Professional Development Undertaken in 2009

Thinking about the first half of this year, what professional development (PD) opportunities did you attend or participate in?

Job-embedded PD (includes PD held in school time eg. school development days, meetings etc)

Content of PD (what was it about?)	Access (was it face to face, video conference, web conferencing?)	Mandated or Self initiated

Job-related PD (includes teaching related PD held out of school hours eg. district office workshops, staff meetings, collaboration meetings, school committee meetings etc)

Content of PD (what was it about?)	Access (was it face to face, video conference, online, web conferencing?)	Mandated or Self initiated

Credential orientated PD (includes university, TAFE or other recognised courses that contribute to further qualifications (eg. diploma's, Masters, PhD etc)

Content of PD (what was it about?)	Access (was it face to face, video conference, online, web conferencing?)	Mandated or Self initiated

Professional Association PD (includes workshops, meetings, conferences provided by specific professional associations such as Australian College of Educators -ACE, Educational Computing Association - ECAWA, Science Teachers Association - STAWA, Mathematical Association – MAWA, Early Childhood Association – ECA etc)

Content of PD (what was it about?)	Access (was it face to face, video conference, online, web conferencing?)	Mandated or Self initiated

THANK YOU FOR YOUR TIME.....Please feel free to attach another page if necessary.

Electronic copy is available at

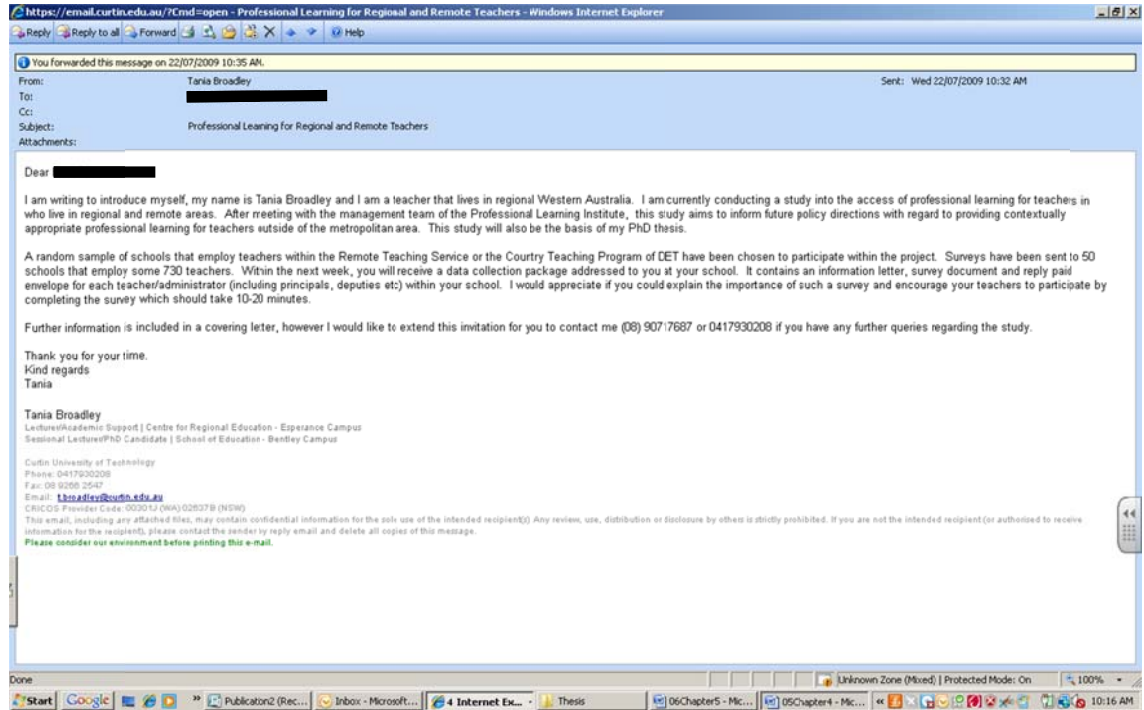
<http://www.box.net/shared/8th77intkf>

Join us on Facebook at Professional Learning Perspectives of Country Teachers

<http://www.facebook.com/home.php?#/group.php?gid=92877467534&ref=mf>

APPENDIX C:

Email to Principals for Stage 1 Quantitative Data



Dear *****

I am writing to introduce myself, my name is Tania Broadley and I am a teacher that lives in regional Western Australia. I am currently conducting a study into the access of professional learning for teachers in who live in regional and remote areas. After meeting with the management team of the Professional Learning Institute, this study aims to inform future policy directions with regard to providing contextually appropriate professional learning for teachers outside of the metropolitan area. This study will also be the basis of my PhD thesis.

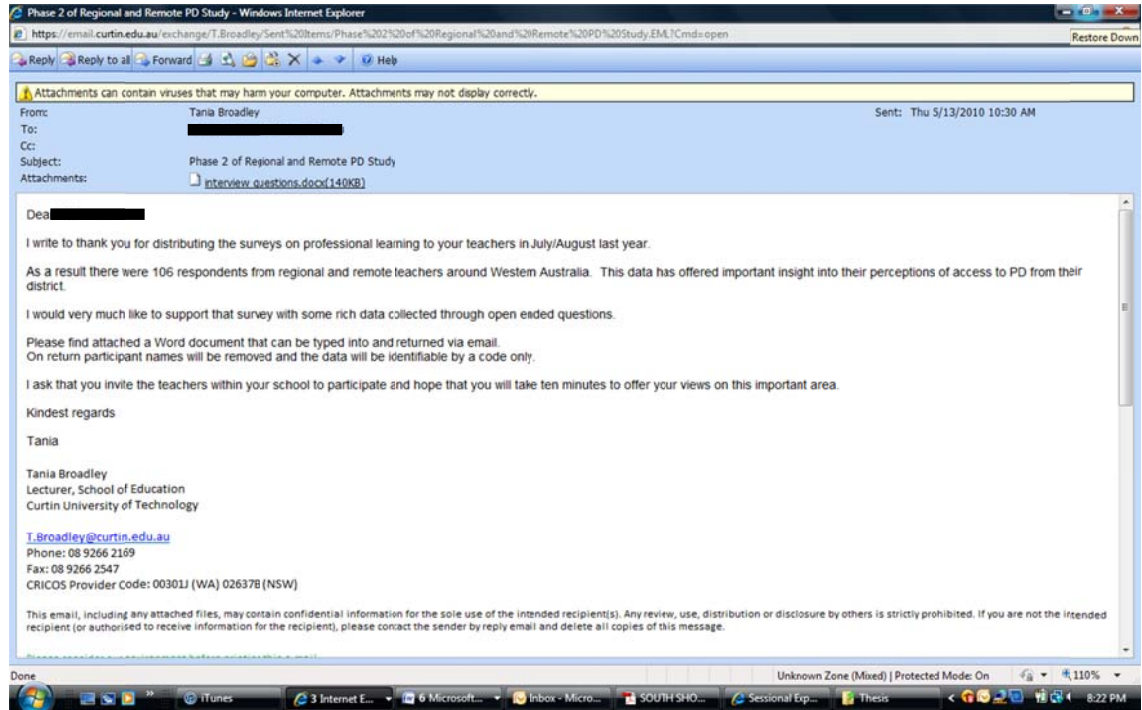
A random sample of schools that employ teachers within the Remote Teaching Service or the Country Teaching Program of DET have been chosen to participate within the project. Surveys have been sent to 50 schools that employ some 730 teachers. Within the next week, you will receive a data collection package addressed to you at your school. It contains an information letter, survey document and reply paid envelope for each teacher/administrator (including principals, deputies etc) within your school. I would appreciate if you could explain the importance of such a survey and encourage your teachers to participate by completing the survey which should take 10-20 minutes.

Further information is included in a covering letter, however I would like to extend this invitation for you to contact me (08) 90717687 or 0417930208 if you have any further queries regarding the study.

Thank you for your time.
Kind regards
Tania

APPENDIX D:

Email to Principals for Stage 2 Qualitative Data



Dear *****

I write to thank you for distributing the surveys on professional learning to your teachers in July/August last year.

As a result there were 106 respondents from regional and remote teachers around Western Australia. This data has offered important insight into their perceptions of access to PD from their district.

I would very much like to support that survey with some rich data collected through open ended questions.

Please find attached a Word document that can be typed into and returned via email. On return participant names will be removed and the data will be identifiable by a code only.

I ask that you invite the teachers within your school to participate and hope that you will take ten minutes to offer your views on this important area.

Kindest regards

Tania

APPENDIX E:
Information Sheet for Principals

Dear Principal Name,

ACCESS TO TEACHER PROFESSIONAL LEARNING IN REGIONAL AND REMOTE WA.

I am conducting a research project that aims to investigate the current practices for teachers to access professional learning in regional and remote areas of Western Australia, the efficiencies of this approach (including teacher perceptions) and possible opportunities for improvement.

The participation of the teachers within your school is extremely important. Included within this pack are 14 surveys with reply paid envelopes which have been provided for the number of teachers recorded by DET within your school (including administrators and teaching staff). The findings from this study will be used to influence future policy directions with regard to professional learning for regional and remote teachers. **I would appreciate if you would explain the importance of this study to your staff and encourage them to complete the survey.**

What does participation involve?

In this study, I am asking 1000 teachers working for Department of Education and Training (DET) within regional and remote areas of Western Australia to participate in a survey that will take approximately 20 minutes. This survey will provide a clearer understanding of teacher perceptions into access and opportunities for professional learning. Following this survey, there is an opportunity to be involved in a follow up interview which can be conducted by phone or email at the teachers' convenience. There will be no involvement of your schools administration required within the research procedures, as teachers will receive an individual survey with reply paid envelope.

To what extent is participation voluntary, and what are the implications of withdrawing that participation?

Participation in this research project is entirely voluntary. Teachers are free to withdraw from the project at any time. If they wish to do so, any information gathered within that time will be immediately destroyed. At the end of the research project teachers are invited to contact me if they would like to share in the findings.

What will happen to the information collected, and is privacy and confidentiality assured?

In asking your teachers to take part in this project, I assure you that whatever is written, said or transcribed from the survey and interview will remain strictly confidential. Teachers who choose to participate will be identified by codename such as T1, T2 etc. After completing the data analysis, any identifying names will be destroyed. Total anonymity of participants is assured at all times. The data will be destroyed after five years. The identity of participants and the school will not be disclosed at any time. Consistent with Department of Education and Training policy, a summary of the research findings will be made available to the participating site(s) and the Department. You can expect this to be available by December 2010.

Is this research approved?

This research project has received ethics approval from the Curtin University Human Research Ethics Committee. Approval Number: **HR 09/2009**. The project has met the policy requirements of the Department of Education and Training. Approval Number: **D09/0247641**.

Who do I contact if I wish to discuss the project further?

If you would like to discuss any aspect of this study, please contact me at t.broadley@curtin.edu.au or on 0417930208. If you wish to speak with an independent person about the conduct of the project, please contact Professor Sue Trinidad on email at s.trinidad@curtin.edu.au or by phone on 08 9266 2552.

Once again I thank you for your valuable time and encourage you and your staff to participate.

Yours sincerely

Tania Broadley (PhD Candidate)
School of Education
Curtin University of Technology

APPENDIX F:

Information Sheet & Consent Form for Participants

INFORMATION SHEET FOR PARTICIPANTS

I invite you to participate in an educational research project, which I am conducting as part of my studies toward my Doctor of Philosophy degree under the supervision of Professor Sue Trinidad at Curtin University of Technology, Western Australia.

Your participation in this research will provide useful information and contribute to the field of professional development for teachers working outside of the metropolitan area. I aim to investigate the current practices for teachers to access professional learning in regional and remote areas of Western Australia, the efficiencies of this approach including teacher perceptions and possible opportunities for improvement through the application of technology. The findings from this study will add to the growing body of knowledge and understanding about using online technology and its contribution to professional learning for teachers.

In this study, I am asking 1000 teachers working for Department of Education and Training (DET) within regional and remote areas of Western Australia to participate in a survey that will take approximately 20 minutes. This survey will provide a clearer understanding of teacher perceptions into access and opportunities for professional learning. Following this survey, there is an opportunity to be involved in a follow up interview which can be conducted by phone or email at your convenience. Please email me your contact details if you would like to be part of the follow up interviews.

In asking you to take part in this project, I assure you that whatever is written, said or transcribed from the survey and interview will remain strictly confidential. Teachers who choose to participate will be identified by codename such as T1, T2 etc. After completing the data analysis, any identifying names will be destroyed. Total anonymity of participants is assured at all times. The only person who will have access to the collected data will be my supervisor and myself.

You are free to withdraw from the project at any time. If you wish to do so, any information gathered within that time will be immediately destroyed. At the end of the research project you are invited to contact me if you would like to share the findings.

This research project has received ethics approval from the Curtin University Human Research Ethics Committee. Approval Number: **HR 09/2009**. Participants wishing to make a complaint or query on ethical grounds should contact the Human Research Ethics Committee (Secretary) via phone: 9266 2784, email: hrec@curtin.edu.au or in writing C/-Office of Research and Development, Curtin University of Technology, GPO Box U1987, Perth WA 6845. Ethics approval has also been approved from the Department of Education and Training. Approval Number: **D09/0247641**.

If you have any questions about the research, please contact me on 0417930208 or email at t.broadley@curtin.edu.au. Alternatively, my supervisor's contact details are s.trinidad@curtin.edu.au or 08 9266 2552.

Yours sincerely

Tania Broadley (PhD Candidate)
School of Education
Curtin University of Technology

CONSENT FORM FOR INTERVIEW PARTICIPANTS

I,

Hereby consent to participating in the research study, 'Rethinking connectedness: An investigation into the access of teacher professional learning in regional and remote Western Australia'; being undertaken by Mrs Tania Broadley.

I confirm that I have read and understood the statement for participants and understand that the purpose of the research is to investigate the current practices for teachers to access professional learning in regional and remote areas of Western Australia, the efficiencies of this approach including teacher perceptions and possible opportunities for improvement through the application of technologies.

I acknowledge:

1. That my participation is voluntary and that I am free to withdraw at any time, without reason.
2. That research data will be gathered for the study and may be published within the final thesis, providing that no names of teachers or schools will be used.
3. That should any information regarding the study change, so that it differs from the Information Sheet for Participants, I will be provided with an additional information sheet containing these details and a revised Consent Form for Participants.

I have had the opportunity to read this consent form, ask questions about the research project and am prepared to participate in this study.

Signature

Date

Please complete this consent form and return in the reply paid envelope to:
Mrs Tania Broadley, Curtin University of Technology, School of Education, PO BOX
U1987, Perth, 6845.

APPENDIX G:
Qualitative Interview Schedule

INTERVIEWS WITH INDIVIDUAL TEACHERS/PRINCIPALS

How long have you been a teacher/principal within a regional location?

How important is PD to you as a teacher/principal?

- Why?

How do you think PD impacts on teaching and learning?

Being a regional teacher/principal, has this affected the way in which you access professional development?

- How?
- Why?

With regard to face to face PD you have undertaken.....

- Was this in your regional area or did you travel?
- If you travelled, what were the constraints of attending?
- How did cost or funding affect your travel or PD experience?
- Did finding relief teachers/staff affect your ability to access PD at all?

With regard to online PD.....

- What technology did you use to access this?
- Have you accessed videoconferencing for PD?
- Have you used or seen a web conferencing software used for PD?
- How effective do you think this was?

What does the term “professional learning community” mean to you?

- What might this be within a school?
- What might this be within a district?
- Could this be done online between schools/districts?

How are you alerted to PD opportunities within your school?

How do you locate PD opportunities that are of interest to you?

How do you think technology might affect the way that regional teachers access PD in the future?

How might a blended approach be offered?

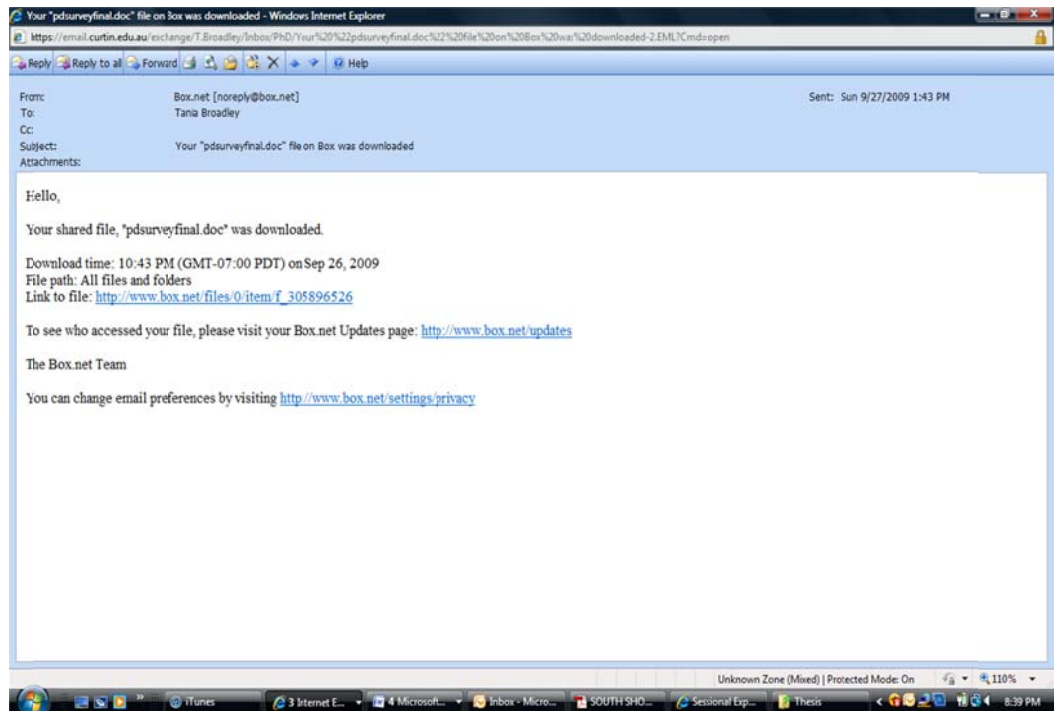
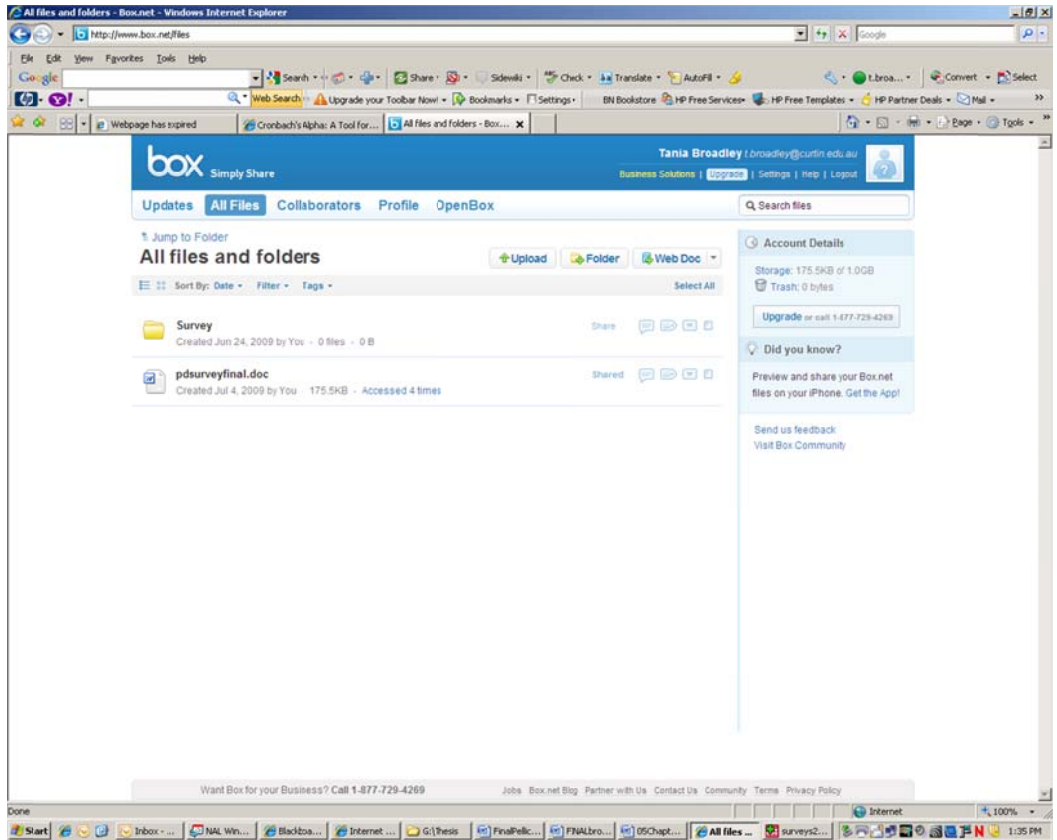
Do you believe that PD should be tailored to a teachers needs and the needs of their students? Why?

How do you feel about a teachers/principals PD being governed by the priorities of the school?

If you had the power to change the way that PD is accessed by regional teachers/principals, what recommendations would you make?

APPENDIX H:

Electronic Copy of Survey on Web 2.0 File Sharing Site



APPENDIX I:

Social Networking Group for Participants

Facebook (16) | Professional Learning Perspectives of Country Teachers - Windows Internet Explorer

http://www.facebook.com/#1/group.php?gid=9287747534

facebook

Professional Learning Perspectives of Country Teachers

Wall Info Discussions Photos +

Write something...

Attach:

Options

Tania Broadley

Perceptions of Regional Teachers

I invite you to participate in an educational research project that will contribute to the field of professional development for teachers working outside of the metropolitan area. This information will inform and guide policy directions with respect to accessing PD, etc...

See More

July 5, 2009 at 1:31pm · Participate

Tania Broadley Download the survey here!

[pdsurveyfinal.doc - File Shared from Box.net - Free Online File Storage](#)

[www.box.net](#)

Free online file storage and sharing from Box.net! Our internet storage service enables you to store, browse, share, & retrieve files, photos, and documents from any computer or mobile device. Signup and receive 1GB for free, or 5GB for only \$7.95/mo.

July 5, 2009 at 1:26pm · Comment · Like · Share

Tania Broadley Thanks Tess - that sounds great - I am doing a mass mailout of surveys also - but thought it might be good to have a group as well. There is a link to the survey underneath - so they can fill out electronically and return by email to me.....

June 30, 2009 at 11:15am · Flag

Teresa Cinnari Hey Tan,

I've shared this group with friends of mine who are working in the country with an invitation to share it with other teachers. Hope you get good results :o)

June 27, 2009 at 11:45am · Flag

Professional Learning Perspectives of Country Teachers has no more posts.

Information

Category: Organizations - Academic Organizations

Description: There are many challenges facing the education workforce in regional and remote areas. Access to professional learning is fraught with complexity. This group is formed to support teachers and gather their perspectives on being a teacher in these areas.

Privacy Type: Open All content is public.

Admins

- Tania Broadley (creator)

Members

3 members See All

Message All Members

Promote Group with an Ad

Edit Group Settings

Edit Members

Invite People to Join

Create Group Event

Write something about Professional Learning Perspectives of Country Teachers.

Create an Ad

FREE Samples Oct.

topr.com

Hurry, these will go fast! Top brands giving away free samples. Enter your email to qualify.

crossroads

LADIES

SIZES 8-22

Find the perfect outfit at crossroads today. Great range of ladies fashion for every occasion.

Like

3 Foods Never to Eat

thedetoxsolutionprogram...

Watch out for seemingly "healthy" foods that can actually increase abdominal fat.

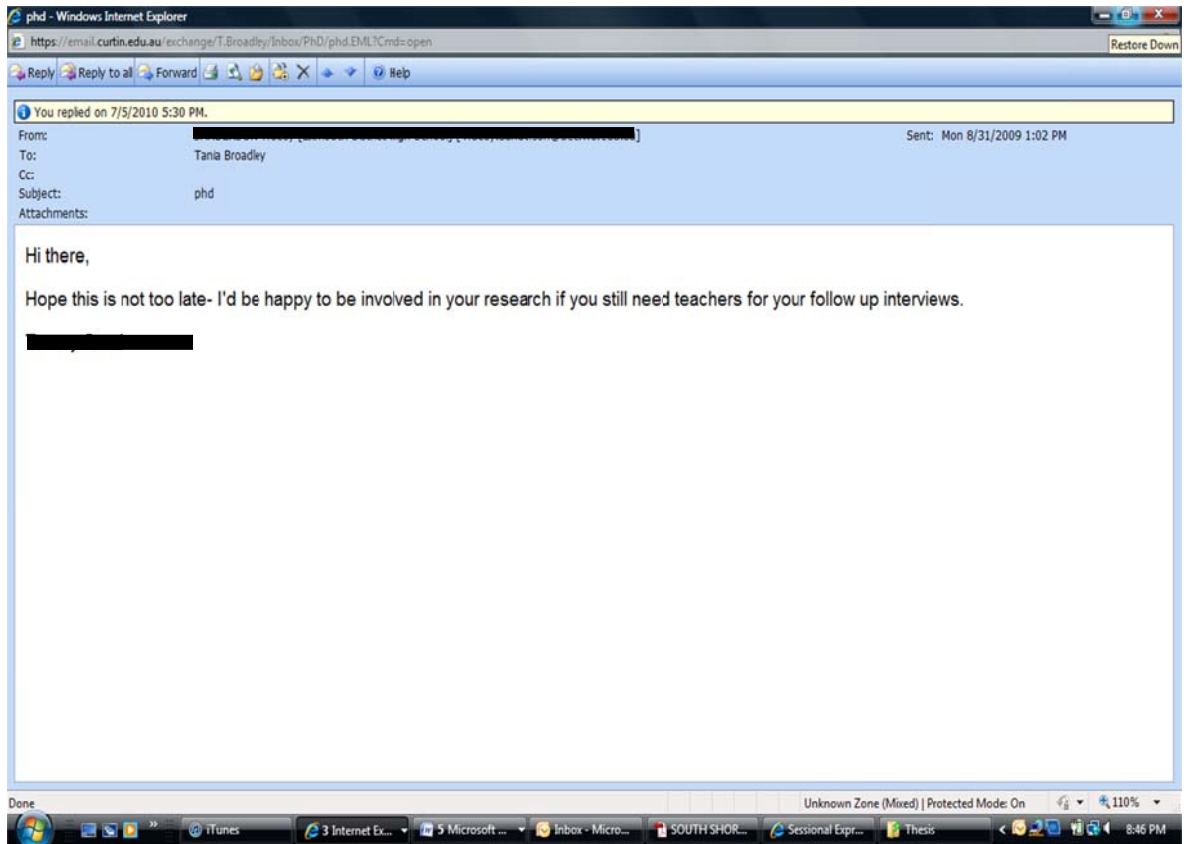
\$500 MAC Giveaway

Caitlin Broadley o Chat (3)

Start | Internet Explorer | 100%

APPENDIX J:

Example of Teacher Reply to Participate



APPENDIX K:

Level 3 Classroom Teacher Competency Rubrics

Competency 3

Engage in a variety of self development activities, including a consistently high level of critical reflection on your teaching practice and teacher leadership, to sustain a high level of ongoing professional growth.

Assessment rubric

You must score at least three or four for each of the indicators, and at least one indicator must have a score of four. The shaded areas explain what is expected of you for each indicator.)

INDICATORS	RATING SCORES			
	1	2	3	4
Participates in ongoing critical self reflection	Reflects on own actions and experiences to identify areas for personal growth	Critically reflects on own actions and experiences to identify areas for personal growth and professional development	Engages in ongoing critical reflection to create and implement professional development action plans	Engages in ongoing critical reflection to generate and apply new ideas that contribute to improvement in relation to teaching and leadership practice
Plans and implements personal and professional growth through a range of activities and opportunities	Identifies professional development needs in a learning and teaching context	Identifies professional development needs and implements a plan of action	Identifies professional development needs, plans for and engages in work place and external professional development	Identifies professional development needs, plans for and engages in a range of professional development opportunities that demonstrably enhance both teaching and leadership practice
Applies knowledge and skills gained through improvement opportunities	Applies aspects of knowledge gained to adapt teaching practice	Demonstrates willingness to experiment, modify, and evaluate when applying newly acquired knowledge and skills	Applies current teaching and leadership practices gained through professional growth opportunities	Applies current teaching and leadership practices gained through a variety of professional growth opportunities and shares this knowledge
Seeks and acts upon feedback	Responds to unsolicited feedback on teaching practice	Modifies own professional approach based on unsolicited feedback	Seeks feedback to inform current professional practice. Feedback information is utilised to further personal and professional development	Actively and consistently seeks feedback for areas of self-development from the school community. Uses information to further develop their own and others' professional practice

Competency 4

Enhance teachers' professional knowledge and skills through employing effective development strategies.

Assessment rubric

You must score at least three or four for each of the indicators, and at least one indicator must have a score of four. The shaded areas explain what is expected of you for each indicator.

INDICATORS	RATING SCORES			
	1	2	3	4
Plans and develops meaningful professional learning to support the individual needs of staff	Engages in dialogue and offers support and advice to colleagues with a view to enhance professional effectiveness	Encourages and facilitates collegial partnerships to cater for their colleagues' needs in order to enhance their professional knowledge	Plans, designs and implements formal and informal professional development focusing on colleagues' professional development needs and interests	Demonstrates an ability to develop initiatives with colleagues in the planning, design and application of professional development opportunities catering for varying needs and interests of teachers
Uses a range of professional development strategies to facilitate the professional growth of others	Provides professional support to colleagues across a range of professional issues	Facilitates professional discussions and acts as a 'critical friend' to colleagues to enhance their professional effectiveness	Facilitates purposeful and relevant learning opportunities building on colleagues' experience and expertise	As a researcher, presenter, facilitator, coach and mentor provides appropriate and varied opportunities for colleagues to build on experience and expertise
Encourages and promotes continual learning to support change	Engages others in professional dialogue and shares own classroom work with colleagues	Initiates school based action learning on teaching and learning to enhance professional knowledge and promote continuous learning with their colleagues	Is a model and mentor for colleagues in managing the process of identifying opportunities and challenges to enhance personal performance	Initiates, promotes and leads change in teaching and learning approaches and will trial new approaches to address changing issues, concerns, problems and challenges
Applies understanding of current system initiatives and wider educational perspectives in facilitating and promoting professional learning	Demonstrates an understanding of system level initiatives	Facilitates the professional development of others based upon knowledge and understanding of system level initiatives	Demonstrates an understanding of a wide educational perspective as the basis for facilitating and promoting the professional learning of others	Incorporates the understandings of wider educational perspectives on system initiatives when motivating, facilitating and enhancing the professional growth of others

APPENDIX L:
SPSS Variables Screen Shot

	Name	Type	Width	Decimals	Label	Values	Missing	Columns	Align	Measure	Role
1	id	Numeric	8	2		None	None	10	Right	Scale	Input
2	gender	Numeric	8	0	Gender	{1, Male}...	999	8	Right	Nominal	Input
3	yearsteaching	Numeric	8	0	Number of Year...	None	999	8	Right	Scale	Input
4	monthsteac...	Numeric	8	0	and Months	None	999	8	Right	Scale	Input
5	qualsgained	Numeric	8	0	Qualifications ...	{1, Bach of ...	999	8	Right	Nominal	Input
6	regionalyears	Numeric	8	0	Number of Year...	None	999	8	Right	Scale	Input
7	regionalmon...	Numeric	8	0	and Months	None	999	8	Right	Scale	Input
8	originaltraining	Numeric	8	0	Original Training	{1, ECE}...	999	8	Right	Ordinal	Input
9	currentlytea...	Numeric	8	0	Currently Teach...	{1, ECE}...	999	8	Right	Ordinal	Input
10	employment...	Numeric	8	0	Current Employ...	{1, Fulltime,...	999	10	Right	Nominal	Input
11	teacherstatus	Numeric	8	0	Current Teache...	{1, Gradu...	999	8	Right	Ordinal	Input
12	numbeteac...	Numeric	8	0	Number of Teac...	None	999	8	Right	Nominal	Input
13	employment...	Numeric	8	0	Employment Pr...	{1, Remote ...	999	8	Right	Nominal	Input
14	schoolistrict	Numeric	8	0	District of Curre...	{1, Albany ...	999	8	Right	Nominal	Input
15	qa1	Numeric	8	0	My school suc...	{1, Strongly ...	999	8	Right	Ordinal	Input
16	qa2	Numeric	8	0	There are suffici...	{1, Strongly ...	999	8	Right	Ordinal	Input
17	qa3	Numeric	8	0	Travelling to fac...	{1, Strongly ...	999	8	Right	Ordinal	Input
18	qa4	Numeric	8	0	I am provided w...	{1, Strongly ...	999	8	Right	Ordinal	Input
19	qa5	Numeric	8	0	I am satisfied w...	{1, Strongly ...	999	8	Right	Ordinal	Input
20	qa6	Numeric	8	0	The travel time ...	{1, Strongly ...	999	8	Right	Ordinal	Input
21	qa7	Numeric	8	0	There is suffice...	{1, Strongly ...	999	8	Right	Ordinal	Input
22	qa8	Numeric	8	0	If I had more fu...	{1, Strongly ...	999	8	Right	Ordinal	Input
23	qa9	Numeric	8	0	An incentive ba...	{1, Strongly ...	999	8	Right	Ordinal	Input
24	qb10	Numeric	8	0	Within my regio...	{1, Strongly ...	999	8	Right	Ordinal	Input
25	qb11	Numeric	8	0	I am part of a P...	{1, Strongly ...	999	8	Right	Ordinal	Input
26	qb12	Numeric	8	0	I believe that a ...	{1, Strongly ...	999	8	Right	Ordinal	Input
27	qb13	Numeric	8	0	I am a member ...	{1, Strongly ...	999	8	Right	Ordinal	Input
28	qb14	Numeric	8	0	A PLC does no...	{1, Strongly ...	999	8	Right	Ordinal	Input
29	qb15	Numeric	8	0	If I had access ...	{1, Strongly ...	999	8	Right	Ordinal	Input
30	qb16	Numeric	8	0	There is no sig...	{1, Strongly ...	999	8	Right	Ordinal	Input
31	qb17	Numeric	8	0	Although there i...	{1, Strongly ...	999	8	Right	Ordinal	Input
32	qb18	Numeric	8	0	The PD I value i...	{1, Strongly ...	999	8	Right	Ordinal	Input
33	qb19	Numeric	8	0	Ifnd it valuable...	{1, Strongly ...	999	8	Right	Ordinal	Input
34	qb20	Numeric	8	0	Attending PD w...	{1, Strongly ...	999	8	Right	Ordinal	Input
35	qb21	Numeric	8	0	Being able to at...	{1, Strongly ...	999	8	Right	Ordinal	Input
36	qc22	Numeric	8	0	I am confident i...	{1, Strongly ...	999	8	Right	Ordinal	Input
37	qc23	Numeric	8	0	The support for ...	{1, Strongly ...	999	8	Right	Ordinal	Input
38	qc24	Numeric	8	0	A blend of face ...	{1, Strongly ...	999	8	Right	Ordinal	Input

APPENDIX M:
SPSS Raw Data – Access to PD

	Item	Min	Max	Mean	SD
1	My school succeeds at notifying me of professional development that is available to me.	1	5	2.37	1.19
2	There are sufficient ways that I can access PD from my regional teaching location.	1	5	3.06	1.23
3	Travelling to face-to-face PD takes a significant amount of personal time.	1	4	1.49	0.76
4	I am provided with sufficient funding from my school to access PD.	1	5	2.78	1.34
5	I am satisfied with the amount of PD that I can access.	1	5	3.13	1.24
6	The travel time to access PD face-to-face is insignificant.	1	5	4.22	1.11
7	There is sufficient access to relief teachers to enable me to access PD.	1	5	3.80	1.19
8	If I had more funding I would access more PD.	1	5	2.20	1.06
9	An incentive based system would encourage me to access more PD.	1	5	2.76	1.15

APPENDIX N:
SPSS Raw Data – Learning Communities

Item	Min	Max	Mean	SD
10 Within my regional district I am part of a PLC that fosters my professional growth as a teacher.	1	5	2.95	1.14
11 I am part of a PLC of teachers within my own school.	1	5	2.25	1.02
12 I believe that a PLC is as important to my professional growth as attending formal PD opportunities.	1	4	1.83	0.82
13 I am a member of an online PLC community and believe this is highly valuable.	1	5	3.65	1.05
14 A PLC does not offer the same professional growth as a structured PD session.	1	5	3.11	0.97
15 If I had access to an online PLC, I would be part of this.	1	5	2.82	0.92
16 There is no significant learning community within my regional district.	1	5	3.12	1.09
17 Although there is a PLC within my own school, I choose not to be part of this.	2	5	4.22	0.70
18 The PD I value includes opportunities for me to share my practice with other teachers.	1	5	2.00	0.86
19 I find it valuable to learn what other teachers are doing in their classroom.	1	4	1.44	0.55
20 Attending PD with teachers from other schools is highly valuable.	1	2	1.40	0.49
21 Being able to attend PD outside of my regular PLC or school allows me to engage in a more positive experience.	1	4	1.77	0.78

APPENDIX O:
SPSS Raw Data – Use of Technology/ICT

	Item	Min	Max	Mean	SD
22	I am confident in using technology and am capable of accessing online PD if required.	1	5	2.21	1.12
23	The support for ICT and technology is adequate within my school, so that I would feel confident to access online PD.	1	5	2.69	1.21
24	A blend of face to face PD and online PD is more effective than in isolation.	1	5	2.17	0.88
25	I have used videoconferencing for PD and this was effective.	1	5	3.43	1.05
26	Web conferencing software (such as Elluminate, Wimba, Webex, Centra7, etc) is an effective way to access PD for teachers.	1	5	3.04	0.74
27	In my opinion, technology and ICT are making PD more accessible for regional teachers.	1	5	2.83	0.95
28	I have access to a computer at home.	1	5	1.71	0.86
29	I have fast reliable internet access at home.	1	5	2.66	1.41
30	My school provides a sufficient number of computers.	1	5	2.54	1.31
31	My school has fast reliable internet access.	1	5	2.51	1.15

APPENDIX P:

SPSS Raw Data – Value of PD Approaches

Item	Min	Max	Mean	SD
32 Regional workshops.	1	4	3.13	0.67
33 Reading professional literature.	1	4	2.22	0.71
34 Learning with and from your work colleagues including mentoring.	2	4	3.28	0.70
35 Conferences or involvement with professional associations.	1	4	2.90	0.76
36 TAFE courses or other training organisations.	1	4	2.50	0.70
37 University postgraduate courses.	1	4	2.68	0.76
38 DET initiatives (ie. Graduate Teacher, Senior Teacher modules including face to face and online).	1	4	2.60	0.84

APPENDIX Q:
SPSS Raw Data – PD Selection

Item	Min	Max	Mean	SD
39 I should be free to select PD based on my perceived needs and time available.	1	5	1.65	0.80
40 All teachers should be expected to complete a specific amount of PD in order to ensure teaching and learning practices are updated.	1	5	2.04	0.98
41 My PD should be connected to my schools priorities and endorsed programs.	1	4	2.14	0.98
42 My PD should help me build new skills and identify strategies to better meet the needs of my students.	1	5	1.34	0.50

APPENDIX R:
Qualitative Raw Data

Teachers	Principals
<p>██████████ – T1 – 3 years</p> <p>██████████ – T2 – 4 months</p> <p>██████████ – T3 – 2.4 years</p> <p>██████████ – T4 – 9 years</p>	<p>██████████ – P1 – 12 years</p> <p>██████████ – P2 – 10 years</p> <p>██████████ – P3 – 10 years</p> <p>██████████ – P4 – 30 years</p> <p>██████████ – P5 – 9 years</p> <p>██████████ – P6 – 18.4 years</p>

Teacher	Response
How long have you been a teacher/principal within a regional location?	
T1	3 years
T2	4 months
T3	2 years and 4 months
T4	9 years
P1	My current stint is eight years, but twelve in total in a 25 year career.
P2	This is my fifth year at ██████████ ipal.
P3	10 years
P4	30 years
P5	9 years
P6	18 years and 4 months (85-91) and (97-10)
How important is PD to you as a teacher?	
T1	<p>PD is invaluable to teachers because there are so many various areas that need to be taught and teachers need to become skilled in as many areas as possible. Student learning is constantly being examined and reviewed which also contributes to a need for PD to ensure longer term and older teachers remain abreast of current trends in education</p>
T2	<p>PD is very important to me.</p> <ul style="list-style-type: none"> Why? <p>I find that it helps you to stay fresh, giving you new tools and concepts that you can implement in your class.</p>
T3	<p>Very Important</p> <ul style="list-style-type: none"> Why? I like to keep learning myself, about new techniques and to keep my skills fresh and innovating. I like to explore new ideas that can make learning more stimulating for the students.
T4	<p>The right kind of PD is important, it has to be pertinent to my work.</p> <ul style="list-style-type: none"> Why? Several reasons. Keep up to date with initiatives in the educational realm. Consolidate current practices. Further ideas for teacher's 'tool kit'. Gives credibility to the idea of being a life-long learner. Gives freshness to one's practice.
P1	Professional learning is important to grow and develop and not stagnate. Even learning associated with current practice is important in terms of reflecting.

P2	<p>PD/PL is absolutely essential. All staff should have several opportunities a year to attend purposeful PD/PL. Why? Networking opportunities Development of new skills Keeping up to date with current trends</p>
P3	<p>Extremely</p> <ul style="list-style-type: none"> Why? We are 3 hours from our district office and 6 hours from Perth and 2 from Albany. PD keeps us up to date, but it is difficult to access due to money, time and what is on offer.
P4	
P5	<p>Obviously due to isolation it's really important that as a principal I make sure we try and link as much as we can with the surrounding schools to look at what are the things that they are doing and how we might work together. That's why when [redacted] me last year, I put it out to all the schools in the area within a hundred km of town, and I had one. Which was [redacted]mm one school. I will do it again when [redacted] comes, I will put it out there, I really don't think there's a culture in this community of those schools working across sector. In fact I don't know what goes on here sector wise.</p>
P6	<p>PD is important when it leads to professional growth of the individual that enhances their capacity to make a difference in their class, school or community. That which serves the needs of the employer; that is mandated; that is policy driven so the employer can tick boxes in its own accountability cycle, is not PD. It does not lead to professional growth of individuals and is therefore a misnomer.</p>
	How do you think PD impacts on teaching and learning?
T1	<p>When a teacher becomes excited about or from their PD it helps to excite the children about their own learning. It also ensures a high standard/quality of teaching and learning. However, if a PD is presented in a boring manner or is irrelevant to the needs of that teacher, it can be ineffective and non-beneficial.</p>
T2	<p>PD improves T&L because it keeps teachers at the forefront of new developments in programs and education.</p>
T3	<p>I think it is beneficial to both teaching and learning. You attend and then you evaluate how to implement the new ideas into your program.</p>
T4	<p>It can impact quite strongly, as long as it is used immediately (during or after the PD). There can be some wonderful shifts in classroom practice and this can impact quite positively on students. However, some PD can confuse teacher's, particularly if it is outside the teacher's comfort zone.</p>
P1	<p>It is critical for any profession, we educate thus we need to be educated.</p>
P2	<p>PD/PL benefits teaching and learning in many ways. If linked to Operational Plans, provides the impetus/knowledge to implement strategies outlined in curriculum areas. It gives struggling teachers, extra opportunities to develop their repertoire of skills. If the school structure is appropriate, allows for sharing with other staff which in turn can enhance a teacher's self worth.</p>
P3	<p>You might be away from school, but the outcome is higher skills and more confidence as a teacher/principal.</p>
P4	
P5	

P6	Good PD becomes part of the repertoire of good teachers and helps them to become better at their craft. But good PD can do nothing for teachers who should be in any other industry except teaching.
	Being a regional teacher/principal has this affected the way in which you access professional development?
T1	As a regional teacher I find it extremely difficult to access face to face PD. The expense of PD is a major hinderance, not only because of the PD itself but also travel and accommodation expenses, So travel and accommodation, coupled with a lack of relief teacher availability. Often timing is not suitable and I conduct a lot of PD in my own holiday and weekend time as well as footing the bill for my own accommodation and travel. As I have had no previous experience in a non-remote school I cannot say how this differs. However, as a university student I was attending PD on a regular basis in Perth that was either free or very easy to access.
T2	Yes. <ul style="list-style-type: none"> • How? PD is carefully considered to determine if it is possible to support students from the school during absences. • Why? We are a very small school with extremely limited access to relief teachers.
T3	I feel that because I have to travel so far to attend some PD's they become a burden, however once I am there they are informative and interesting.
T4	<ul style="list-style-type: none"> • How? Limited access to a variety of PD that is of interest/ concern to individual teacher's. • Why? Often access is reliant upon the school being able to afford to send you (fares/ petrol, accommodation, relief). Only a few PD providers are prepared to travel to regional locations. Number of teachers interested in a particular PD (i.e. not of interest/ pertinent to whole staff).
P1	It has dried up as the District office role has diminished. Professional learning tends to be school based and I think this is creating an inbred culture, as ideas and innovation are not being pollinated from outside.
P2	<ul style="list-style-type: none"> • How? <ul style="list-style-type: none"> ○ [REDACTED] District has a very strong focus on relevant PD/PL and has provided exceptional sessions for principals and teachers. This has made attending relatively easy as it does not mean travelling to Perth. ○ Many courses are also made available in the various clusters e.g. [REDACTED] • Why? <ul style="list-style-type: none"> ○ Considerable forward planning has to be completed to ensure that classes, missed DOTT and duties are covered. I am in a Level 3 school where the principal is the one responsible for plugging gaps. ○ Costs are considerable because most PD/PL requires travel, accommodation and meals which comes out of the school's budget. ○ Generally, staff are released for important PD/PL related to school needs, Operational Plans and DOE initiatives.
P3	Well yes: what you need is not always there, more money is used to get to

	Perth and often we don't claim travel!!!!
P4	
P5	<p>Travel costs and presenter fees are costly. We've tried to find money from elsewhere, we haven't had a lot of success, you know about the ACE situation. And hopefully we can use the SEED money if we can create a regional group, SPERA hasn't come good with any money – but I don't think I actually did contact them. I contacted ACE and AISWA. AISWA have said if we get stuck they will make a small contribution but it's relatively small. It was really as a help you out type thing. I think it's disappointing actually, the AISWA response. I, as you know, come from another state where the independent schools association used to regularly provide funding, not so much for you to hold your own, but they would provide funding to send one or two teachers from remote independent schools to the capital for in-service, but that's doesn't happen in Western Australia. I think that's a big disappointment. We're constantly getting flyers through for PD that AISWA are holding, a lot of them are 2 or 3 hours sessions. We can't spend a thousand dollars to send someone for a three hour session to Perth. I don't believe there is a lot of consideration for meeting the needs of remote independent schools. I think Catholic education do it better. Just from the number of people that have come through from the local catholic school in the two years that I've been here. They've certainly had a lot of people doing PD there. Possibly its part that the current principal is very proactive in sourcing dollars, but it was happening with the previous principal as well. In my other state I never saw it happening in Catholic schools as much, but that's not to say it wasn't, I just might not have been aware of it. But certainly the independent schools association was far more proactive and supportive of the non-metropolitan schools. Consultants will come but they won't fund anyone to go to PD.</p>
P6	<ul style="list-style-type: none"> • How? I am very choosy about PDs that will not benefit my role in a school. PDs have to be useful to me. • Why? Travel to and from PD from where I live, takes a day each way. Budgets provided for this by the employer are inadequate. I need to be able to fly there and back either immediately after a PD or at worst the next morning. If this is not possible, then I will not attend a PD. A PD of one day takes me out of the school for three days when I have to drive.
	<p>With regard to face to face PD you have undertaken.....</p> <ul style="list-style-type: none"> • Was this in your regional area or did you travel? • If you travelled, what were the constraints of attending? • How did cost or funding affect your travel or PD experience? • Did finding relief teachers/staff affect your ability to access PD at all?
T1	<p>My face to face PD has been conducted at our school, in ██████████ d in Perth (and surrounds). The majority has been conducted in school development days at our school and organised by the Principal with little to no input from staff. The PD in Perth was all expenses paid for ALS training for Pilbara schools but since that has failed. All Perth PD has been in my own holiday time and at my own expense (no relief available therefore disallowed to attend PD in school time). Some PD was mandated for graduates and in my first two years this was only accessible in ██████████ weekends. The school car was provided for transport and the accommodation was in camp schools or similar budget accommodation. No time in lieu has ever been granted for time outside of school spent conducting PD. Relief teachers and travel and accommodation costs are a HUGE factor for any PD.</p>

T2	<p>Both. Some at my own school, one in [REDACTED] and one in Perth.</p> <ul style="list-style-type: none"> • If you travelled, what were the constraints of attending? <p>Travelling to Geraldton took two days by car, and flying to Perth required me to leave the week before as flights were not run on weekends.</p> <ul style="list-style-type: none"> • How did cost or funding affect your travel or PD experience? <p>Travel expenses have been covered by the school. The only effect is that these payments are made after the event, requiring me to be out of pocket for the travel.</p> <ul style="list-style-type: none"> • Did finding relief teachers/staff affect your ability to access PD at all? <p>Absolutely! And if we couldn't find relief, the whole school had to be shuffled around to allow for the missing teacher.</p> <ul style="list-style-type: none"> •
T3	<ul style="list-style-type: none"> • Was this in your regional area or did you travel? Some have been but the majority I have had to travel. • If you travelled, what were the constraints of attending? Driving for 5 hours either way, leaving on a Sunday, being away from my family and having to organise transport for my children to attend their regular events. • How did cost or funding affect your travel or PD experience? We are reimbursed for the majority of our costs, however travel time is not reimbursed, when travelling in our own time. • Did finding relief teachers/staff affect your ability to access PD at all? It has once, but at my new school it affects those left behind as we have no relief available for DOTT. •
T4	<ul style="list-style-type: none"> • Was this in your regional area or did you travel? Both. • If you travelled, what were the constraints of attending? Leaving the day before and returning immediately after the PD or leaving a few hours early from the PD. • How did cost or funding affect your travel or PD experience? None. • Did finding relief teachers/staff affect your ability to access PD at all? Yes. •
P1	<ul style="list-style-type: none"> • I personally travelled to Melbourne for this. • Price and budget, but it was payed for by Teaching Australia. • Yes this does impact as does the lack of budget resources to provide the professional learning.
P2	<ul style="list-style-type: none"> ○ Both ○ Approval of Director Schools – not an issue. ○ Appointment of Teacher in Charge while principal is absent – difficult as all staff are inexperienced. ○ Ensuring school operations were not affected by my absence ○ I do not claim travel and sometimes pay for own PD/PL, particularly if during vacations. ○ There are no Relief Teachers available. ○ Work with staff to cover classes – at Yalgoo, classes are combined – staff knows that they will all get their opportunity to attend relevant courses.
P3	<ul style="list-style-type: none"> • Was this in your regional area or did you travel? Travel • If you travelled, what were the constraints of attending? Money e.g. accommodation, payment for travel, finding relief • How did cost or funding affect your travel or PD experience? You either don't go, or you are tired, you have to leave a day before. • Did finding relief teachers/staff affect your ability to access PD at all? Ofcourse

	○
P4	
P5	
P6	<ul style="list-style-type: none"> • Was this in your regional area or did you travel? Almost all has been a day's drive away. • If you travelled, what were the constraints of attending? See comment above. • How did cost or funding affect your travel or PD experience? Not everyone can go on PDs because there is not enough money in budgets for all staff to attend everything on offer. Someone has to dip out. • Did finding relief teachers/staff affect your ability to access PD at all? Where I work there are rarely relief teachers. The majority of relief is covered by the admin or teachers are paid for lost DOTT. So this means Administrators and teachers are reluctant to attend PDs. • •
<p>With regard to online PD.....</p> <ul style="list-style-type: none"> • What technology did you use to access this? • Have you accessed videoconferencing for PD? • Have you used or seen a web conferencing software used for PD? • How effective do you think this was? 	
T1	<p>I have conducted very little online (Internet) PD. The only online PD I am aware of is available through the Department of Education portal and I have had no training with this and am still experimenting with the system.</p> <p>With regard to video conferencing, we recently installed these facilities in our school (in the past 12 months). They have been used for one PD that I was a part of which was mandatory (child protection). I have been offered these facilities for later this year to moderate with lik [REDACTED] schools which I intend to follow through. I think video conferencing has a lot of potential, however, I find it very uncomfortable and face-to-face is still my preference, especially as video conferencing takes away a lot of opportunity to network with teachers from diverse backgrounds.</p>
T2	I haven't completed any.
T3	<ul style="list-style-type: none"> • What technology did you use to access this? Desk top computer • Have you accessed videoconferencing for PD? No • Have you used or seen a web conferencing software used for PD? No • How effective do you think this was? Okay however when I changed school I was no longer involved in it, which was disappointing.
T4	<ul style="list-style-type: none"> • What technology did you use to access this? Video conferencing. • Have you accessed videoconferencing for PD? Yes. • Have you used or seen a web conferencing software used for PD? No • How effective do you think this was? Video conferencing was good while it worked but start-up time was impacted as the technology failed. There are time delays with speech which can be frustrating.
P1	We have not used any of this yet.
P2	<ul style="list-style-type: none"> ○ Computers – school and personal ○ No ○ No

	<ul style="list-style-type: none"> ○ Cannot comment
P3	<ul style="list-style-type: none"> ○ Oh really: we only have computers ○ In another town only once ○ No
P4	<p>I've attended the ACE hot topics with videoconferencing, I've done some online pd not real-time, that discussion board type of thing and we use some online pd with teachers. We get them to work through modules.</p> <p>Is it group or individual PD?</p> <p>Pretty well one on one, and look it only has moderate success. Because the theory of that says you schedule it when you've got time. it's a wonderful theory but most teachers are so busy. If you put a PD on like Jamie Mackenzie type PD and you block out that time, then people know they've got to come. If you say to them you've got to do this module or that module during Term 1, invariably it doesn't get done. It's not necessarily because the person is slack it's just that there's competing demands. I can certainly relate to it because it's something that you just put off because it's not the immediate need to do it. I think that's a real weakness with asynchronous PD, I don't know what the answer is except to do synchronous PD.</p>
P5	<p>Really it's been limited to dataprojecters and interactive whiteboards. Nothing over Centra7? – No.</p> <p>We as in me and Judy Hearn as in the director of Bunbury have discussed what we're going to do in terms of hooking up via videolink for me because I have said that it's ridiculous that I'm travelling to Perth and then getting a hire car and driving to Bunbury. when we can do it but we need to have from my end we have what we need.</p> <p>Videoconference or through IP?</p> <p>I would do either.</p> <p>I would say that if I had a staff of 'y genners' only I would be happier to look at it being done via technology. the fact of the matter is that I don't and I've got to try and get the xers and the boomers on board using this ICT. It's of paramount importance that when we first start that we are all very clear on what it is we are about and then the rest will hopefully flow easier. there'll be hurdles, there'll be all those sorts of things but we have to be on the same page...and we need face to face for that. If I had a whole staff of y genners I could say maybe not because I see that they totally operate differently and could quite easily do that, whilst checking their mobile phone for text etc.</p> <p>Look I think eventually they will look at how they will deliver it via computers because funding is really limited now because we have such cutbacks. I know that funding has been a problem and that people didn't want to do it.</p>
P6	<ul style="list-style-type: none"> • What technology did you use to access this? The internet at work • Have you accessed videoconferencing for PD? The school has not got this technology nor the money to install it. Additionally, most schools lack personnel qualified or experienced in maintaining IT equipment. • Have you used or seen a web conferencing software used for PD? I haven't used this technology and would be reluctant to invest in it without adequate budgetary support from central office to maintain it.
	<ul style="list-style-type: none"> ○
<p>What does the term “professional learning community” mean to you?</p> <ul style="list-style-type: none"> • What might this be within a school? • What might this be within a district? 	

	<ul style="list-style-type: none"> • Could this be done online between schools/districts?
T1	<p>A Professional Learning Community is a group of teachers or schools that work together to educate, support and develop one another in the teaching profession. Within a school this could be collaborative planning sessions or moderation opportunities possibly even staff meetings. Within a district this could include video conferencing, phone calls and general getting together. The ALS PD was a wonderful example when it existed. It could certainly be conducted online between schools and districts and would work best with like schools (as defined by the schools and not the government). I don't believe this would work if partnerships were determined by a higher body instead of the teachers of the schools themselves.</p>
T2	<p>A professional learning community is a group of staff members who share PD between them. For example, one teacher might complete the PD and then inform other teachers who were unable to attend.</p> <ul style="list-style-type: none"> • What might this be within a school? <p>A group of staff members, such as the principal and colleagues.</p> <ul style="list-style-type: none"> • What might this be within a district? <p>Colleagues from other schools.</p> <ul style="list-style-type: none"> • Could this be done online between schools/districts? <p>I'm not sure.</p> <ul style="list-style-type: none"> •
T3	<ul style="list-style-type: none"> • What might this be within a school? The school community undertaking recognised learning. • What might this be within a district? All of our schools in the district offered learning. • Could this be done online between schools/districts? I suppose.
T4	<ul style="list-style-type: none"> • The coming together of a variety of services to work together and pursue information towards the betterment of student outcomes. • What might this be within a school? Shared DOTT time with aides, specialist teachers (literacy/ maths/ behaviour management), same year level teachers and/or year above/ below teacher to discuss classroom planning, programs, assessment, moderation tasks, samples of work. PD Days with the whole staff. Open classrooms. • What might this be within a district? PD with all schools in the area. Open invitations to visit other teacher's classrooms and discuss programs, samples of work, moderation tasks. • Could this be done online between schools/districts? There is a possibility to make it work using video conferencing, but there does need to be some face to face contact and then follow-up through on-line services, such as email, skype, yahoo messenger, etc. •
P1	<ul style="list-style-type: none"> • This is a waffle term, and a little insulting for most schools as learning is continuous either with your peers or on your own or in meetings with admin, it happens at all levels and on all occasions. Community is a vague term as are most communities in existence. • In practical terms not a lot when most schools are vast distances apart. • It could, but you need to organise all schools so people have DOTT time off etc at the same time to be truly effective, which has huge implications for timetabling.
P2	<ul style="list-style-type: none"> ▪ I know the term but do not understand its meaning. •

P4	I think that's certainly something that I want to try and encourage through this program (refers to the PD about to start). We have it to some extent already within our school; we have our PLC, our professional learning communities. Again the research says that's how we are able to sustain good teaching and learning in our schools, through these communities of professional practice. So with our [REDACTED] groups, we have trained up people that are coordinators and they have an online bank of ideas, questions, resources and I know that the teachers use it, so that a positive thing. I know that [REDACTED] has been a wonderful thing for people to tap into, you see many a time questions go up and then all these answers come through. It just brings everything close.
P5	In theory yes, I think there is capacity for that, but I think it would depend on how it's structured and how it's managed. Again it's not going to happen if it just becomes adhoc. I think there would be potential particularly for schools like ours that are small rural/remote schools. I know when I was a new principal (a hundred years ago) or twenty five actually. Back in the mid 80s I was in a remote rural primary school, the education department used to encourage principals of remote schools to form mutual aid groups. From memory there were about four or five of us, in about a three hour driving radius and we'd come together once a month, usually on a Saturday. You'd have a meeting in the morning and a BBQ lunch and you'd alternate the schools so you got to see someone else's school. So something like that was really good and I think there is the capacity to do something like that for remote private schools, like ours. But I think there needs to be some level of structure, I think if you just let it happen it probably won't happen. I don't know how you actually initiate that, again it's a timing thing and getting two or three schools to be able to sync when all the teachers are available would be pretty tricky.
How are you alerted to PD opportunities within your school?	
T1	If we have a mandated PD we are emailed by the Principal.
T2	Usually via email from the Principal. Other times, I have contacted the owners of different programs.
T3	Morning meetings, staff meetings and emails.
T4	There are emails, a poster of PD offered by Central Office and the Principal or Deputy Principal will approach you or make a general offer at staff meetings.
P1	
P2	<ul style="list-style-type: none"> ▪ Email
P6	
P3	<p>Email, at times district office, WAPPA newsletter</p> <ul style="list-style-type: none"> ▪ ▪
How do you locate PD opportunities that are of interest to you?	
T1	I search for them myself through websites, collaboration with other teachers and Union magazines. PD is not well promoted in my school.
T2	Usually by contacting program organisers, such as SDERA.
T3	I check the School matters magazine for any close to here.
T4	Web searches or contacting them directly after hearing about it from another teacher.

P1	Seek them out and actively support staff in the pursuit of growth opportunities.
P2	<ul style="list-style-type: none"> ▪ In the past, have accessed ▪ Leadership Centre ▪ Professional Learning Institute
P4	
P5	
P6	<ul style="list-style-type: none"> ▪
How do you think technology might affect the way that regional teachers access PD in the future?	
T1	I think it has a lot of potential but a lot of people are intimidated by it. More training and familiarity is required.
T2	I personally think it will be limited, as a really important part of PD is building professional relationships with others, and this usually happens during breaks.
T3	Will be more accessible.
T4	As technology improves video conferencing will continue. I'd like to see videos posted where teachers can access the PD in their own time and view in their own time. With this method there is the opportunity for teacher's to directly contact the PD provider with their questions and the opportunity to discuss ideas with other teachers. This kind of PD should be very practical (i.e. teachers are required to go away and try the idea out and then come back and engage in discussion with the PD provider and other teacher's involved in the PD).
P1	It is certainly an option, but the idea of a face book style learning community is I believe a little flawed.
P2	<ul style="list-style-type: none"> ▪ With budget restraints, it is an option but would still involve travel and accommodation as most small schools do not have the conferencing equipment needed.
P4	<p>Yes it could technology provides you the opportunity of doing that. If you were using technology it would want to be video conferencing at this point in time. I don't think the online deliveries – you mentioned illuminate before – and there's a range of them – I don't think that we in Australia have the bandwidth capacity to make them as good as they could be. Probably as they used more in places like Canada that have the bandwidth asquillion times the bandwidth that we have and therefore they don't have the issues.</p> <p>There's nothing that creates more frustration and disinterest from teachers and they've taught all day and the technology doesn't work. So that would be one reason – yes the technology's there and yes it could have been done by video. In this case I could have employed [REDACTED] to deliver it from Washington, where he lives in the US or we could have done it from Perth. We could have done it anywhere – our costs wouldn't have been much cheaper. He would have still been charging his speaking fee or his facilitation fee for the day, we would have had the cost of the technology on top of that which is still significant. We wouldn't have had the same capacity to create that rich level of interaction that you can do in the informal times like the morning tea the lunches where not only the teachers are talking to each other, they're talking to him.</p> <p>I do think as technology continues to improve and bandwidth continues to improve there will be more capacity for schools to do things online. I would prefer video delivery rather than online because it's a specific time and it brings people together. I am not yet convinced individual PD at your own</p>

	<p>pace necessarily is effective because of the demands of staff. I think there will certainly be a capacity for videoconferencing as it becomes more affordable and higher quality. Simple example is the (name of school) and us are doing a joint PD for the mandatory reporting, well there's really no need for the consultant for something like that to come to (name of town). An hour and a half that's something that could have been done through videoconference but at the moment neither school has the technology to host that, and I am not sure that [REDACTED] as either, they may. Smaller things I think yes in the future.</p> <p>I would always put a caveat on the technological delivery, about losing the human interaction, so even when technology gets better and better, I don't think it should replace the human PD contact in all cases. A [REDACTED] type day I think is far better done face to face, but the shorter sessions where there might be someone running an hour and half on some maths or reading strategy.</p> <p>Subject specific? Part of it depends on what the PD is on and the length of the PD.</p>
P5	
P6	
	<ul style="list-style-type: none"> ▪ ▪
How might a blended approach be offered?	
T1	A mix of face to face and online learning is probably ideal. How it could be structured I'm not really sure. Perhaps a different opportunity each term?
T2	Not sure.
T3	Perhaps a few intensive days as needed, then all other components on line. With perhaps, a visit from a specialist to assess the understanding or implementation.
T4	I guess the above idea could be termed 'blended'.
P1	Not sure.
P2	
P4	<p>In theory yes, I think there is capacity for that, but I think it would depend on how it's structured and how it's managed. Again it's not going to happen if it just becomes adhoc. I think there would be potential particularly for schools like ours that are small rural/remote schools. I know when I was a new principal (a hundred years ago) or twenty five actually. Back in the mid 80s I was in a remote rural primary school, the education department used to encourage principals of remote schools to form mutual aid groups. From memory there were about four or five of us, in about a three hour driving radius and we'd come together once a month, usually on a Saturday. You'd have a meeting in the morning and a BBQ lunch and you'd alternate the schools so you got to see someone else's school. So something like that was really good and I think there is the capacity to do something like that for remote private schools, like ours. But I think there needs to be some level of structure, I think if you just let it happen it probably won't happen. I don't know how you actually initiate that, again it's a timing thing and getting two or three schools to be able to sync when all the teachers are available would be pretty tricky.</p>
P5	
P6	

Do you believe that PD should be tailored to a teachers needs and the needs of their students? Why?	
T1	YES, YES, YES!! There is no point in a teacher attending a PD that they are not interested in. It is a waste of time and money and it will not be used in the classroom and will therefore have no learning benefit to the students.
T2	Absolutely. If it isn't relevant to me and my class, I shouldn't be there.
T3	Ideally yes however, I think more to the school environment or to the students attending the school. Why? You are supplied the basics at Uni, but this does not prepare you for the way your appointed school is run.
T4	Yes, but I understand the difficulty this would present. So the material needs to be presented in such a way that each teacher can take what they need, use it and come back to the PD materials when their ready and gain more knowledge that they can then go back and implement.
P1	Not necessarily as this narrows the learning opportunities. Adults need exposure to things outside expertise areas to broaden perspective and learning.
P2	
P3	If we don't do this then we are attending PD as an outing!!!!
P4	
P5	
P6	
How do you feel about a teachers/principals PD being governed by the priorities of the school?	
T1	I feel that this is often the case and results in a lot of needs of teachers being neglected. I understand some is probably necessary to ensure quality teaching, however, if all is mandated by the school, nobody enjoys it or uses it and discord is created.
T2	I feel it is fine to an extent, but that teachers/principals should be allowed the right to choose some of their developmental courses.
T3	Yes they know their school if they have been there a little while.
T4	I feel quite strongly about this when teacher's are overlooked for more than a year to be involved in PD. Otherwise I enjoy being involved in PD that is catering to the priorities of the school, because these priorities are focussed around the betterment of student outcomes.
P1	This is narrow and not in line with developing innovation or a broader perspective on learning. In my own case Leadership is very broad and to be governed by school priorities misses the point and shows a complete disregard for the complexities of the school and community environment. To initiate better educational outcomes I need more on relationships and understanding not pedagogy and syllabus knowledge.
P2	<ul style="list-style-type: none"> ▪ This has to happen as priorities may not be met if staff is not attending the necessary training. ▪ Staff have the option of attending other training in own time – holidays, weekends. Currently staff in the ██████████ Cluster access PD/PL on weekends. In my school, this is a voluntary choice as the school is not able to offer TOIL or project payments. There are no repercussions on staff who do not attend. It also tends to become a social opportunity.

P3	Our PD or professional learning is organised for teacher need not school priorities. ▪
P4	
P5	
P6	
If you had the power to change the way that PD is accessed by regional teachers/principals, what recommendations would you make?	
T1	A larger budget for accommodation and travel, more power for teachers to decide what they need to help their students and less focus on data interpretation and more focus on learning. If this is like a genie wishlist, I would wish for a roving remote relief teacher for the Pilbara ☺.
T2	More relief teachers. That is the only thing that would make it easier for my school.
T3	As we are so isolated and there is a few of us it would be nicer for the Pd's to come to us on our Student free days, as not to interfere with the students classes. Even after school, would be better than driving so far to attend the PD's. We are in a big state and keeping teachers up to date is important to student learning.
T4	I would like to see access being made available through on-line resources. I would also like to see schools pooling resources together to bring quality PD into the town. I would also like the opportunity for teachers to go to PD in Perth and they bring back their knowledge gained and resources from the PD which they then present to the staff, but time would need to be provided for this to occur and that time would need to be fairly immediate after the teacher has been to the PD.
P1	The biggest problem in the system is that those who develop learning for staff and schools actually are not involved in working or running them, thus they have limited understanding of how they work or what can make them better. A top down approach is not creating better schools, I would go so far as to suggest as those responsible for professional learning have got no idea what makes a good school. Understanding school complexity and what works will go a long way to improving appropriate and targeted professional learning as a system.
P2	▪ Closing schools a few days early at the end of Terms 1, 2 and 3 so that schools can meet for combined PD/PL. There are still issues of travel and accommodation and the school day would need to be lengthened during the term to ensure that students are getting 310 minutes per day. ▪ Similar to above, two days available, at the beginning of each term for PD/PL.
P3	We would like more school grant so we can place more into travel, accommodation and relief. We asked for 10years and still have to struggle to get professional learning than we can afford to attend. More money for this instead of a new library, which is actually going to cost the school money would be more positive.
P4	I think it's very very important that teachers in regional areas have access to good current professional development and practice. I think it is happening,

	<p>now, but you can come into a place where you wonder what has happened for the last 8 years. When you start to get people networking and talking current practice with others, it lifts their self esteem it makes them look at things like a professional rather than someone that lives in a place miles away from Perth and it's got really nice beaches. That this is a place of professional practice and so we need to practice in that manner, rather than it being a nice little thing (job) to have. I think it's really really important that we need to keep that happening. If I had to compromise anything on a budget professional development would be the very last thing that I would look at. I would look at less TA support if I had to, that would come before professional development. because we know, anything you read, the very first thing that is the most important influence on children's learning is the teacher and so they need to be kept updated, they need to be challenged, they need to know that there is monitoring and they also need to know that they are the most important thing and not to look externally for other factors. We say that when it's all nice and lovely but we've got to say it too when things perhaps aren't going right. That teacher is number one, so we need to do what we can to empower them and support them but I think there has to be that element of challenge as well. That it's not enough just to say well you doing ok, you'll get by, because those kids only have that one chance for that year.</p>
P5	
P6	