External influencers of school leaders in rural Australia deploying and integrating ICT

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ABSTRACT – This paper reviews the literature on primary and secondary school leadership prior to, during and after the national Digital Education Revolution. Various authors indicated that ICT would impact school leaders, while others looked at school leadership without highlighting ICT as significant. From an initial analysis of literature using an ecological model, key concepts are raised across bureaucratic, political, professional and commercial categories relative to school leaders and ICT in rural schools. A method for identifying who school leaders perceive externally influence their decisions in deploying and integrating ICT is also presented. The findings of the proposed study should both be, useful for future research and, of interest for ICT and education professionals in the ecological environment of schools.

Keywords — school leaders, primary school, secondary school, deploy ICT, integrate ICT, schools ecology, influence.

INTRODUCTION

In 2009 the Council of Australian Governments (COAG) agreed to implement a national Digital Education Revolution (DER) based on an Australian Government investment of more than $2 billion over six years. They aimed to impact teaching and learning in Australian schools to prepare students to live and work in a digital world [1]. The increased Information and Communication Technology (ICT) rolled out between 2009 and 2014, to Year Nine students across Australia under the DER program, required secondary school leaders to have a greater role in decision making for integrating the technology in their schools [2]. The finding was in line with some literature on leadership in primary and secondary schools, but superficial in others.

A. Before the DER

Various authors indicated that ICT would impact school leaders, while others considered school priorities without highlighting ICT as significant. For example:

- Gurr concluded that work practices for principals would change due to ICT [3], and
- Moyle reported that principals and school leaders were considered central for integrating ICT in school environments [4].
- Internationally, the analysis of data from the 2006 Program for International Student Assessment (PISA) implied that a comprehensive policy covering ICT in education was needed, amongst other policies, as both, learning material designed with ICT and school leaders committed to teaching with ICT, had a significant impact [5].

On the other hand, authors such as, Wildy & Dimmock who wrote on instructional leadership [6], Dempster, Carter, Freakley, & Parry on the contextual influences on decisions [7], and Halsey on sustainability [8] did not highlight ICT in their works.

B. During and since the DER

During and since the DER different authors went on to portray the role of school leadership in deploying and integrating ICT as changing in importance or not needed at all. For example:

- The Australian Institute of Teaching and School Leadership (AITSL) in their Australian Professional Standard for Principals [9] considered integrating ICT as a practical part of leading improvement, innovation and change, but did not detail how this was to be done.
- A review of the DER [10] found that, school leadership for managing ICT was required during the implementation but would be less so, for the future, as the skills and responsibilities would be shared with teachers and others in the community.
- Lovett, Dempster & Flückiger did not mention ICT when looking at leadership learning [11].

In light of the literature portraying the role of school leaders deploying and integrating ICT not important to important, this study aims to understand what role school leaders perceive they have on deploying and integrating ICT and who they say influences their decisions.

Consequently, this research intends to investigate:

- What role do school leaders in rural Australian primary and secondary schools perceive they have, if any, in deploying and integrating ICT in schools?, and
- Who externally influences their decisions?

The remainder of this paper begins by further reviewing the relevant literature, describing the proposed methodology to collect and analyse the data, and concluding that the proposed study will assist the research community, as well as ICT and education professionals, by providing a better understanding of who externally influences school leaders deploying and integrating ICT in schools.

LITERATURE

Literature considered relevant for this research comes from a variety of sources because schools exist in a complex ecosystem. Davis considered the relationships between a school and its ecosystem for adopting and integrating ICT as layered [12]. The school and classroom were in the centre, surrounded by its local district, region, nation and global environments. Organisations, within each layer that could potentially impact schools were also categorised as: bureaucratic (school governance), political (government based legislation and policies), professional (professional...
development) and commercial (commercial and open educational resources) [13].

Davis, Eickelmann, & Zaka [13] highlighted that leadership, teachers and shared resources between schools were important factors for schools that successfully changed to blended and online learning. They concluded that teachers in roles ranging from managing classes, interpreting curriculum, assessing student work and contributing to course design influenced the education of K-12 students. Additionally they explained that leaders with vision who distributed leadership of ICT could impact their school by influencing the behaviour of teachers. However, they also indicated that educational leaders were slow to recognise significant changes where ICT provided benefits regionally and nationally. Variations between schools in New Zealand and the USA were linked to the culture and conditions of the local and regional environments. Furthermore, they explained that schools in their ecosystem: firstly, stayed relatively stable when changes in their layers and categories were not sustainable; and secondly, changed when change was maintained in one or more layers or categories. Subsequently, the understanding of what organisations are perceived to influence school leaders deploying and integrating ICT might provide useful insight for targeting organisations that directly influence the deployment and integration of ICT in schools.

The key concepts arising from an initial review of the literature across the four layers of categories from the perspective of school leaders deploying and integrating ICT in rural Australian schools were: Bureaucratically, principals and school leaders were an important influence on schools; Politically, there was potential to regulate the growing area of knowledge; Professionally, that firstly, there was research on principals and school leaders and secondly, that research from non-school sectors into leadership and the deployment and integration of ICT might be useful in schools education; and Commercially, business websites were showing commercial interests in the education sector.

RESEARCH APPROACH & METHODOLOGY

A qualitative approach is considered appropriate for this study because knowledge about the role of school leaders is known by the school leaders and would be subjective and complex relative to their beliefs, background and school environment. Also, to construct the knowledge gained into useful information the study has to take into account their views and experiences that might be, in some cases, unique to each person and in others, shared amongst them. A positivist approach was not considered appropriate, because of the complex and subjective nature of the views and experiences that will be studied. Generally, a positivist approach, within information systems research, is better suited to studies where evidence, facts, measures and samples within a population are available [14].

A. Sample

In order to gather the knowledge about the role of school leaders this study will investigate school leaders in diocesan primary and secondary schools within a regional centre of a rural Catholic Diocese. This centre has two secondary schools and nine primary schools. In order for the sample to be representative, the research aims to survey and interview approximately 30 school leaders. Generally, in schools, school leaders are made up of the principal, the vice principal, head teachers and senior school administrators. However, because the number of leaders could vary at each school, school leaders from surrounding regional centres could be included, if needed, to reach the preferred sample size.

B. Data collection

To collect the subjective and complex information from schools leaders in context of their individual beliefs, background and school environment participation will be carried out on a voluntary basis. There will be three phases. Firstly, to contact schools, secondly, to survey school leaders and thirdly, use follow-up interviews of selected school leaders to clarify answers or investigate unexpected findings. School leader interviews will be semi-formal with both closed and open ended questions prepared beforehand. The researcher will also take notes of personal observations and collect documents where possible to verify the information resulting from the interviews.

C. Data analysis

The information gathered from the survey and during the interviews will be interpreted by the researcher to construct an understanding of school leadership deploying and integrating ICT in schools. Initially, survey answers will be collated then generalised or identified as unique to respondents. The information will then be used to refine interview questions seeking further understanding of perceptions behind the answers. The interviews will be recorded and transcribed into written text. The transcripts will then be studied and organised into an initial draft. Mind maps and tables will also be used to tabulate the information. The resulting draft will then be used to draw conclusions and meanings. The process will be repeated as needed, to create other drafts, until a finished paper is produced.

D. Verification

This research will verify conclusions and meanings from the study using triangulation between the survey, interview recordings, transcripts and notes, and a document analysis. The interview recordings and transcripts will be the primary proof of what was said in the interviews, the researcher’s notes will verify how the context matched what was recorded and the documents can also provide secondary validation of what the school leaders were saying. In addition, interviewees will be given the opportunity to check written transcripts before any analysis begins. Allowing interviewees to read the transcripts and confirm where the recordings were correct or needed correction.

E. Proposed timeframe

The proposed schedule for collecting data will coincide with school terms, from Term 4 of 2015 to Term 4 of 2016. The transcription and analysis of the data will commence
immediately after the first interview and continue throughout 2016.

CONCLUSION

This paper has presented from the literature different perceptions about the role of school leadership deploying and integrating ICT, such as, school leaders were central for deployment and integration, to not being required or of changing importance. Key concepts were raised from further analysis of the literature within bureaucratic, political professional and commercial categories. Based on the analysis, a research approach and methodology was described for the construction of new knowledge about school leaders and the deployment and integration of ICT. Understanding more about external influences from the perspective of school leaders deploying and integrating ICT should both be, useful for future research and, of interest to ICT and education professionals in the ecological environment of schools.

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REFERENCES