



## **An online professional network to support teachers' information and communication technology development**

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This paper reports on an evaluation undertaken of the potential impact of a Network for Educators: the Pathways for Learning, Anywhere, Anytime (PLANE) website. The evaluation was undertaken in New South Wales, Australia with teachers in Government, Catholic and Independent schools in both rural and suburban areas. The benefits and challenges associated with supporting teachers' information and communication technologies (ICT) skills via a professional learning network platform are highlighted. Results of the study indicate that a well-designed online platform could potentially provide a space for teachers to learn to integrate ICT in their teaching with and from each other within a learning community.

**Keywords:** CoPs; online communities; teachers; professional development

### **Introduction**

Educators today are faced with the challenge of fostering students' ability to prepare themselves for an unknown future, one that will involve the effective use of information and communication technologies (ICT). In order for teachers to be able to educate their students, they themselves need to be equipped with skills in using and teaching with ICT. In response to the need to develop the ICT capabilities of teachers in New South Wales (NSW) Australia, the Pathways for Learning, Anywhere, Anytime—a Network for Educators (PLANE) website was developed in late 2011. The project was funded through the Australian Federal Government's Digital Education Revolution ICT Innovation Fund.

This paper reports on the potential impact the PLANE website might have on the innovative use of ICT in pedagogy, specifically in terms of enhancing the capacity of teachers and leaders to develop the pedagogical understanding, confidence and the tools required to design and deliver curricula that effectively enhances student learning outcomes. In carrying out this evaluation, interviews, case studies and surveys were utilised.

The key question driving the evaluation was: What is the potential impact of PLANE on the innovative use of ICT in pedagogy?

### **Teachers' online professional networks- a review of the literature**

It is clear from the literature that teachers are participating in many varied online professional networks organised both formally through associations and informally through sites like Facebook. Each of these sites

offers something to teachers that support their professional needs. Participation in networks has many benefits but there are also many challenges in setting up and sustaining them.

Teacher professional networks have been in existence for many years. These networks usually involve “voluntary, reciprocal interactions among teachers that enable teachers to share or acquire the professional expertise that strengthens service to students” (Adams, 2000, p. 19).

Participation in informal social networks can be a powerful catalyst enabling teachers to improve their practice (Schlager & Fusco, 2003). One of the main reasons for participation in informal social networks is that it fulfills a teacher’s immediate needs or desires. “This ‘just-in-time’, as opposed to ‘just-in-case’, need-to-know basis can transform teachers into active knowledge builders possessing substantial autonomy regarding the specific knowledge they require (Granger, Morbey, Lotherington, Owston, & Wideman, 2002)” (p. 574).

One of the benefits of online networks identified was their ability to reach teachers regardless of where they live and work (Thomas, 2004). This gives teachers access to information and resources when needed. Some teachers have referred to this as help as ‘only a click away’. Physical barriers to access are removed, allowing ‘anytime, anywhere’ and ‘just-in-time’ learning to occur.

In order to encourage teachers and school leaders to engage in professional online networking it is important to provide teachers with the tools with which to undertake this. Teachers need to be provided with up-to-date devices so that they can engage in online training anywhere and anytime. The provision of these computers should also come with professional on-site technical support and the ability for teachers to download software as they see fit to support their online networking. Currently this occurs in NSW Government high schools, but not in the primary schools. Nor is it uniformly done in the Catholic and Independent sectors. Until it is, teachers cannot readily be expected to engage in professional networking in their own time using their own resources.

## **Methodology**

The evaluation of the potential impact of PLANE comprised two phases: The first phase was conducted between November 2011 and April 2012. The second phase took place between May 2012 and September 2012. The purpose of both phases of the evaluation was to explore PLANE’s potential. This was achieved through interviews with individuals and groups who were directly involved in managing or advising the development of PLANE, analysis of documents related to the project and observation of early PLANE prototype trials. In the second phase, data were collected from in-service teachers and school leaders through surveys, interviews and analysis of case studies. It is the results of Phase 2 that inform this article.

## **Results and discussion**

The majority of the teachers interviewed had some leadership role in the school, often associated with ICT. All the teachers interviewed were highly enthusiastic about PLANE and could see great potential once the site was fully developed. The majority of teachers interviewed were the only ones using PLANE in their school and they had usually heard about it or seen it generally through their existing professional networks or at meetings. It was because these teachers were early adaptors that they were chosen for the research project.

A number of themes relating to the use of PLANE as an online networking tool emerged through analysis of the data are discussed below:

### **Professional learning**

The teachers were asked if they felt they received enough professional learning opportunities in relation to ICT. Over 50% of respondents felt that they were not receiving enough training at the school level, which does indicate the importance of web environments like PLANE.

There was a mix of ideas in relation to the professional learning opportunities of PLANE. All the teachers interviewed felt that the opportunity for being accredited by the NSW Institute of Teachers (the NSW teacher accreditation body for teachers in NSW) for professional learning in PLANE was highly desirable.

The rural teachers interviewed were very enthusiastic about the opportunity for professional learning through PLANE due to their limited opportunities to attend professional development workshops in person. The on-

going professional development for teachers is challenging and a lack of it can have a negative impact on early career teachers in rural areas (Herrington & Herrington, 2001).

Many of the metropolitan teachers stated they had adequate professional development opportunities through their school and did not place a high value on this aspect of the site although they felt this would be a good opportunity for early career teachers. One teacher stated that the 'no charge' nature of the site made it attractive for professional development, particularly given the cost of professional development courses plus the cost of a replacement teacher.

### **Cross-sectoral feature**

The fact that the site is an initiative of DEC, the Independent and Catholic systems was viewed as favourable by around half of these teachers. They felt this gave the site more credibility. According to one participant: "*the cross systems, bringing together Public, Independent, Catholic, it is way overdue, it brings people together for the right reasons.*" A number of the teachers attend TeachMeets where there is a cross-sectoral approach and saw some compatibility between PLANE and TeachMeets.

Every teacher interviewed already had a rich online professional network. Ozedmodo, Twitter and Yammer were the three main sites to which participants referred. They all felt that PLANE had something different to offer and that a number of contacts from the three sites mentioned were also members of PLANE. One teacher commented that many teachers in his school do not network outside of the school. Another teacher suggested many teachers like to download and get resources, but many do not upload or provide resources. Judging from the comments, participants would continue to use the other sites in conjunction with PLANE.

### **E-portfolios**

e-Portfolios offer a new way of collating and displaying information (Hills, Randle & Beazley, 2010). Respondents found the PLANE e-portfolio module beneficial in different ways: supporting the integration of ICT into the classroom, organising resources and information, and encouraging reflection. Participants also felt that creating a portfolio on this site may be safer as opposed to a commercial website which could close down meaning all the work would disappear. The site also has more credibility as it is an initiative of the education sectors. Having an eportfolio on the PLANE site was viewed as beneficial as this would allow teachers (particularly early career teachers) to be seen by potential employers and would increase their employment prospects. One participant felt the design of the eportfolio could be more clearly linked to the New South Wales Teacher Institute outcomes.

### **Building a learning community**

One of the important features of any network, whether it is online or face-to-face, is that participants have a sense of community. However, when asked if they linked to other teachers on PLANE, not all teachers said they attempted to contact teachers while on PLANE. Of those that did, the majority found that it was easy to link up with other teachers. This ease of use is important in helping to build a learning community.

It was noted that during the interviews and case studies that the PLANE site contributed towards building a community by augmenting face-to-face interactions, which occurred in two different ways. Firstly, a number of the teachers we spoke with belonged to a professional organisation and some of these members joined PLANE so there was an existing community which was then developed further on PLANE. Secondly, some teachers met each other at TeachMeet events and through this they were able to then link up with each other on PLANE and continue to build the community online.

The PLANE site has the potential to allow teachers to engage in activities and conversations over time on topics that they are interested in, rather than one-off sessions mandated by the school. These one-off sessions have not been found to be successful (McCornell, Parker, Eberhardt, Koehler & Lundeburg, 2012). Allowing for sustained and focused interactions within a learning community is a critical design feature of the PLANE site.

### **Design of the site-ease of use**

What constitutes a good web site design has been traditionally explained by relating it to usability. "In other words, a successful web site generally refers to one with high usability, which is user-friendly and user-centered in interface and functional aspects" (Lee & Koubek, 2010, p. 330). In the survey, respondents were asked to

report whether they had experienced difficulty when attempting to use PLANE. Respondents indicated that they experienced some difficulties accessing PLANE. The three most frequent difficulties were that some functions did not work correctly, navigational difficulties and uploading files.

It should be noted that the site was under development throughout the evaluation period and that the navigation issues were being taken on board to ensure that the site was as intuitive as possible. Whilst there were some difficulties reported - some of which were outside the control of the site (eg. internet connectivity), 35 respondents reported having no difficulties with the site at all.

## Conclusion

The design of the site brought the three sectors of education (Independent, Catholic and Government) in NSW together. The ability to bring together pre-service teachers, in-service teachers and school leaders is also another innovative design feature. The PLANE site allowed teachers to interact with other and content along the continuum of their professional careers from pre-service teacher to leader.

Providing accreditation from the NSW Teachers Institute those teachers who undertook activities online was also an important feature of the PLANE web site. This feature is particularly important for early career teachers who are required to undertake 100 hours of training over five years. In considering the design features of professional learning websites, it is not only the navigational aspects that are important, the pedagogical design features are also equally important.

It was clear through discussion with teachers that PLANE was one of a number of sites that they used to support their professional development. The importance of a vibrant online learning community to support the professional development of teachers so that it is 'just in time' as opposed to 'just in case' is critical if teachers are to develop ICT skills to support their teaching. The features built into PLANE offer the opportunity for this to happen although some participants suggested additions that would add extra opportunities such as chatrooms to extend the potential to develop a learning community. This challenge to improve capabilities of the web site is open to the developers of the web site. It was determined from this evaluation that the PLANE online environment could potentially have a positive impact on the innovative use of ICT in pedagogy.

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