The importance of school leaders for deploying and integrating ICT in schools.

Steven Francis Vella, Oliver Kisalay Burmeister, Andrew Barnden and Arnela Ceric.
How important do Catholic rural school leaders think they are for deploying and integrating ICT in schools?
Contents

• The answer
• Relevant literature
• How we found out (Method and results)
• Analysis & knowledge gained
• Summary & conclusion
• Questions and discussion
How important?

School leaders answered
For integration: Considerably or critically important.
How important?

School leaders answered
For deployment: Not at all to Critically important.
Responses for integration were consistent but why did deployment vary so much?

The literature.
Relevant literature

Systematic analysis of peer reviewed articles on:
• Organisational leadership and ICT

In conjunction with
• The Catholic perspective of schools
Literature review

Analysis suggested, the studies of leadership and ICT in organisations had common threads related to:

1. Characteristics and purpose
2. The research perspective and
3. The context
Literature review

Analysis suggested, the literature of the Catholic perspective of schools had common threads related to:

1. Characteristics and challenges
2. The research perspective and
3. The context
The gap:

To help understand more about leadership (character & purpose) and its role deploying and integrating ICT (research perspective) in Catholic schools in Australia, (context), specifically:

• From the Catholic rural school leaders’ perception
+++ Response for integration were consistent but why did deployment vary so much?

Finding out.
How did we find out?

Selected schools from a region of a Catholic Diocese and asked permission to hold the study.

Surveyed school leaders in formal leadership roles: principals, assistant/associate principals and leaders/head teachers/coordinators

Then interviewed volunteers from the survey willing to discuss findings further.
Who participated?

Schools:
- 5 out of 10 in a region of a Catholic Diocese.

Participants (n=9):
- Different: Roles, Age groups and Schools
Participant schools

![Graphs showing school size - Students enrolled, School size - EFT Teachers, and School size - EFT administrative staff.](Image)
Participant demographics

- **Leadership role**
  - Principal
  - Assistant / Associate Principal
  - Leader / Head Teacher / Coordinator

- **Years as formal leader**
  - Less than 1
  - 1 - 2
  - 3 - 5
  - 6 - 10

- **Education**
  - Postgraduate diploma
  - Bachelor degree
  - Masters degree
Participant demographics

- **Gender**: Male is more common than female.
- **Age**: The highest influence is seen in the 40-49 age group.
- **Influence on level of schooling**: Primary (K-6) has the highest influence, followed by secondary (7-12).
Responses for integration were consistent but why did deployment vary so much?

The analysis
Importance? Deploy: Not important at all. Integrate: Critical

“All students have <device 1> or laptops, using <company 1> apps suite. I am responsible for ensuring a coherent, informed and skilled use of technology as a tool to assist student learning. My role is to give clear messages to staff, students and parents about effective technology use and to ensure that staff and students have access to the necessary learning and support to make best use of the network and technology resources.”
Importance? | Deploy: Considerable | Integrate: Critical

“In the last 12 months we have purchased <device 1> for each of our senior students (17 in total), have bought two <device 2>s and have installed <device 3>s around the school. We had support provided to us from the Catholic Schools Office (CSO) to set up the <device 2>s and <device 3>s but this is the extent of support provided. Any professional development or issues with technology are organised by myself. When our server went down due to a blackout in the town, I followed instructions over the phone in order to get things going again.”
Responses for integration were consistent but why did deployment vary so much?

New knowledge from the data.
### From school leaders:
#### 1. Characteristics and purpose

<table>
<thead>
<tr>
<th>Participant</th>
<th>Theme</th>
<th>Literature</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>P3</td>
<td>Team responsible for purchasing devices</td>
<td>Feeny and Willcocks 1998 Earl 1996</td>
<td>Business systems thinking, planning, informed buying, facilitating and monitoring contracts, and risk management</td>
</tr>
<tr>
<td></td>
<td>The decision to invest in new devices –</td>
<td>Davenport and Short 1990 Li and Atuahene-Gima</td>
<td>Doing so at the time of purchase reduced disruption for individual students, their teachers and classroom when faulty devices were easily replaced by the supplier later.</td>
</tr>
<tr>
<td></td>
<td>Considered costs, device performance &amp; after</td>
<td>2001</td>
<td></td>
</tr>
<tr>
<td></td>
<td>sales support.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P8 &amp; P9</td>
<td>Further discussed informed buying.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# From school leaders:

## 1. Characteristics and purpose

<table>
<thead>
<tr>
<th>Participant</th>
<th>Theme</th>
<th>Literature</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>commitment, support and ability to implement change arising from ICT.</td>
<td>Powell and Dent-Micallef 1997 Armstrong and Sambamurthy 1999</td>
<td>From stories generally.</td>
</tr>
<tr>
<td>P2 &amp; P4</td>
<td>Level of authority.</td>
<td>Feeny and Willcocks 1998</td>
<td></td>
</tr>
<tr>
<td>P6</td>
<td>Strategic, informational and transactional change. Meeting external subject requirements.</td>
<td>Weill 1992 Hew and Brush 2007</td>
<td></td>
</tr>
<tr>
<td>P2, P4 &amp; P9</td>
<td>Building relationships.</td>
<td>Li and Atuahene-Gima 2001</td>
<td></td>
</tr>
</tbody>
</table>
From school leaders:

2. Research perspective

<table>
<thead>
<tr>
<th>Participant</th>
<th>Theme</th>
<th>Literature</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>P4</td>
<td>Communication</td>
<td></td>
<td>To discuss and identify device requirements with team members and suppliers.</td>
</tr>
<tr>
<td>P3 &amp; P9</td>
<td>Device Support</td>
<td></td>
<td>Business systems, planning and risk management.</td>
</tr>
<tr>
<td>P3</td>
<td>Leadership roles</td>
<td></td>
<td>Limited staff resources.</td>
</tr>
</tbody>
</table>
From school leaders:
3. Context - Organisation

<table>
<thead>
<tr>
<th>Participant</th>
<th>Theme</th>
<th>Literature</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>P4</td>
<td>Positive: openness to innovation, and being able to understand and evaluate the benefits of technology.</td>
<td>Thong 1999</td>
<td>Considered by Thong as contributing factors for the <strong>successful adoption</strong> of information systems (IS). An alternative research design might have confirmed whether IS was <strong>successfully adopted</strong> Thong also suggested the size of the organisation and amount of information needed to process determined the <strong>extent of adoption</strong>.</td>
</tr>
</tbody>
</table>
## 3. Context - Catholic

<table>
<thead>
<tr>
<th>Participant</th>
<th>Theme</th>
<th>Literature</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>P8 &amp; P9</td>
<td>Catholic Education Office</td>
<td></td>
<td>Support Catholic Diocesan schools</td>
</tr>
<tr>
<td>P3 &amp; P7</td>
<td>Internal technology support and team</td>
<td></td>
<td>Support within schools</td>
</tr>
<tr>
<td>All</td>
<td>7 commercial companies</td>
<td>4 types of devices</td>
<td>Available to all schools</td>
</tr>
<tr>
<td></td>
<td>12 applications</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Organisational leadership and ICT

3. Context:
   • The context reflects aspects of Catholic schools coming through.
     • Firstly, that commercial companies, devices and applications are examples of many influences on schools (Schuttloffel 2012) and,
     • Secondly, that interactions with the CSO and internal technology support and teams may reflect school leaders as spiritually being in communion with others, and the Church, who share common beliefs and practices (Miller 2006)
Organisational leadership and ICT

3. Context:

• If so, further study into these interactions might find characteristics, perceptions and contexts contribute to the:

  • unique identity of Catholic schools, and
  • the perception of leaders deploying and integrating ICT.
Summary and conclusion
The importance of school leaders for deploying and integrating ICT in schools.

Summary:

• Perceptions of school leaders about their role for integrating ICT were similar, but diverse for deployment.

• Key literature identified character and purpose of leadership, research perspective and context of leadership might be relevant.

• This study confirmed characteristics, purpose, research perspective and context were evident.
The importance of school leaders for deploying and integrating ICT in schools.

Conclusions:

• This study fills a gap and starts a discourse about school leadership and deploying and integrating ICT in rural Catholic schools in Australia.

• Knowledge gained was in context of rural Australian schools in one regional centre of a Catholic diocese.

• This knowledge although specific to the sample, may also help us understand, more about integrating and deploying ICT, leadership, school leadership, local, national and international schools, generally.
Questions & discussion
The importance of school leaders for deploying and integrating ICT in schools.

Contacts:

- Author for correspondence:
  - Steven Vella  svella@csu.edu.au  Tel: +61 2 6922 4594

- Oliver Burmeister  oburmeister@csu.edu.au  Tel: +61 2 6338 6233
- Andrew Barnden  a.barnden@boxhill.edu.au  Tel: +61 3 9286 9973
- Arnela Ceric  aceric@csu.edu.au  Tel: +61 2 6338 4507