

# *Technology leadership or technology somnambulism? Exploring the discourse of integration amongst ICT coordinators.*

## **Abstract**

This research aimed to explore Information and Communication Technology (ICT) coordinators' discourse in relation to ICT integration in a sample of Irish post-primary schools. As ICT leaders in their schools, how they conceptualise ICT significantly influences school-based policy and use. The research involved semi-structured interviews with a random sample of nine ICT coordinators in the Mid-west region of Ireland. The study found that the coordinators drew heavily on the prevailing policy discourse when justifying the use of ICT in schools. However, they tended to see the evolution of ICT as something beyond their control and perceived 'progress' only in relation to hardware acquisition.

The findings suggest that the shift from 'electronic janitor' to pedagogical leader (Lobos, 2008) is in its infancy in Irish schools. Policy makers may need to take greater cognisance of the importance of pedagogical leadership within a context dominated by a focus on acquiring hardware and resources. At a broader level educators need to define their collective vision for ICT, rather than placing sole responsibility on a single agent of change.

**Keywords:** ICT in schools; educational leadership; discourse; ICT coordinator; ICT integration

## **Introduction**

The challenge of successfully integrating Information and Communication Technology<sup>1</sup> (ICT) in teaching and learning has been an issue of debate for several decades (Hammond, 2014; Selwyn, 2011; Levin and Wadmany, 2008; Hayes, 2005; Mann, 2000). Several

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<sup>1</sup> For the purposes of this paper ICT refers to the wide range of hardware and software technologies, from traditional desktop PCs and laptops to Smartphone and tablet technology. ICT also encompasses all forms of Web 2.0 technologies, including Wikis and blogs.

reasons have been put forward to explain the emerging gap between the rhetoric of ICT use, evident within the public and policy discourse, and the reality of its implementation at a school and classroom level (Judge, 2013; Selwyn, 2011). While the importance of ICT leadership is recognised in this context (Lai and Pratt, 2004), it has, relative to other aspects (such as resources, training and relevant software) been given less attention to date (Chen, 2013). With the growing range of technologies available to schools the need for effective ICT leadership has never been greater. However, how ICT leaders conceptualise the use of the technology is hugely influential in determining its eventual use in schools. Bladergrogen et al. (2012), for example, argue that for successful integration of ICT to take place one must understand the motivations and subscribed meanings educators assign to technology. Within this context this research aimed to explore ICT coordinators' discourse in relation to technology integration in a sample of Irish post-primary schools. Exploring this discourse may help to explain the pattern of ICT adoption and use in schools, which is quite different to the type of use espoused in the policy discourse. The research was guided by two key research questions:

- How do ICT coordinators conceptualise the current and future use of ICT integration in schools?
- What discourses do they draw upon in justifying the use of ICT in teaching and learning?

### **Leadership and the ICT coordinator**

The importance of effective ICT leadership within the school system is widely recognized and has been researched and reported in the literature (Razzack, 2013; Chen, 2013; Tondeur, Cooper and Newhouse, 2010). Historically leadership in the area of ICT has been assigned to a specific person in the school other than the principal since very few principals have used

computers in 'meaningful ways with children, and therefore lack the requisite pedagogical vision and experience' (Flanagan and Jacobsen, 2003). Various terms such as ICT coordinator, ICT champion and ICT leader are used, often interchangeably, within the literature to describe this role. More recently the title of the role has begun to make reference to teaching, learning and pedagogy reflecting the shift towards a pedagogic champion as opposed to an ICT specialist (Reilly, 1999; Lobos, 2008). However Lai and Pratt (2004) report that ICT coordinators do not receive the recognition for their leadership roles.

Traditionally, the role of the ICT coordinator was assigned to the 'early adopters' of the technology normally because they often possessed the most knowledge about these emerging technologies. Assigning responsibility for ICT coordination based on one's level of technical knowledge was an understandable approach since many schools did not have access to professional levels of technical knowledge, however, a key function, assumed as part of the ICT coordinators role, was to act as a 'change agent' encouraging colleagues to integrate ICT. Unfortunately, selecting ICT coordinators based primarily on technical competence did not necessarily mean that the person had the leadership qualities to 'evangelise' others. It is one thing to possess the technical knowhow but quite another to possess the charisma and enthusiasm to promote innovative ideas and overcome resistance and indifference. Previous research has shown that the role can be conceptualised in different ways ranging from an electronic janitor (where the attention is focused on maintaining the school ICT infrastructure) to that of pedagogic visionary (Reilly, 1999; Lobos, 2008; Chen, 2013). This latter role has less of an emphasis on the 'nuts and bolts' of the technology and is instead more concerned about the role the technology can play in enhancing the pedagogical experience of teachers and students. Even amongst ICT coordinators that do recognise the important leadership dimension to their work the endless focus on issues of immediate

importance, such as maintaining equipment, supporting staff, purchasing equipment can leave little time to devote to more horizon gazing and ultimately action/implementation (Author, 2012; Lai and Pratt, 2004). For example, Tondeur et al (2010) noted that, '*coordinators, in practice, however, often appear to primarily provide schools with technical expertise, while their impact on educational or policy-related issues seems limited*' (p. 298).

Within Irish post-primary schools the position of the ICT coordinator varies in its status. Previous research into their roles has shown that the vast majority are also full-time practicing teachers and that the status and time allocated to the position varies significantly (Author, 2012). In some schools the position is seen as an important post of responsibility and holders of the post are allocated a number of hours per week to undertake the duties. In other schools the post has little status and is often 'given' to teachers that have some knowledge of ICT. Encouragingly, while the position has little status, ICT coordinators exhibit great dedication and positivity regarding ICT within their schools (Author, 2012).

While the status and role of the ICT coordinator varies from school to school, they nonetheless play an important role in determining the development and direction of ICT within their respective schools. This influence is quite evident in how they plan for new ICT equipment, develop ICT policy and coordinate professional development activities, but a more subtle and powerful influence is achieved through the ability to influence the discourse surrounding ICT use in the school through informal discussions with colleagues on a daily basis. The prevailing discourse in relation to ICT can have a powerful influence in determining teachers' reactions to and use of new technologies. If the prevailing discourse is largely negative and framed in a threatening way that undermines the 'core values' of teaching and learning it can be met with scepticism and even outright resistance. On the other hand, if presented in a positive light as an enriching experience for students and a tool

to enhance the teacher's practice, it can be embraced as the 'future' of teaching. The use of ICT has largely won over the hearts and minds of the public and the educational community in general. Within the public discourse ICT is synonymous with "good" teaching, so much so that a perception exists that "classrooms without computers indicate a deprived learning context" (Kompf, 2005, p. 221). In addition, Hammond (2014) argues that ICT has become associated with collaborative, authentic and constructivist student-centred learning.

Therefore an examination of the various discourses present, and indeed absent, in ICT coordinators' talk (Bladergrogen et al, 2012; Sasseville, 2004) may reveal how they 'see' the future role of technology in their schools and how they conceptualise their roles in the change process. It is only through exploring the localised meanings of ICT can one begin to understand the reasons for the successes and failures of ICT integration. Moving beyond the public and policy discourse into these localised meanings may also reveal possible differences in how schools, as opposed to policy makers, conceptualise ICT use.

### **Examining the discourse of integration**

The discourse surrounding the use of ICT in teaching and learning is complex containing different rationales for its use in the classroom. Despite the coexistence of these often incompatible views, awareness of these various contradictions often goes unnoticed (Aviram and Tami, 2004). For example, in the justification for its use with compulsory education, its rationale has been argued on several different grounds. The representation of ICT as 'modern' and up-to-date is commonly used. In a press release in 2007 Mary Hanafin, the then Minister for Education, stated that,

Ireland's continuing development as an advanced knowledge society will rely on the skills of our young people. The development of strong ICT literacy in all of our children will be an essential life skill for them as they look to participate in the opportunities of the global knowledge society. It is imperative that our schools provide opportunities for all of our children to develop to their full potential in that regard. (Press Release, 2007)

Much of the discourse is quite enthusiastic with ambitious claims and far reaching visions of how ICT has the potential to transform education (Hammond, 2014). This “techno-utopian social vision” (Ferneding, 2003, p. 112) is evident in many policies. For example, the Irish minister for Education’s strategy group noted that;

Undoubtedly, digital and interactive technologies can bring a new richness of resources to the classroom and to learning and teaching in general ...considerable progress has been made in integrating ICT into learning and teaching in our schools. Evidence from Irish schools shows that where ICT is used innovatively and integrated into the curriculum, the learning experience can be more enriching, collaborative and personally gainful (Minister’s strategy group, 2008, p.1)

A notable pattern within this “quasi-religious technological narrative” (Adams, 2006, p.28) is the implicit, but often explicit association of ICT with “good” teaching. A second notable exclusion is the absence of a critical perspective on many existing education practices. Within this context there is an emphasis placed on the ability of the technology to enhance existing practices as opposed to challenging them. This undermining of the transformative effect of ICT (Adams, 2011) suggests quite a narrow and selective adoption of the technology. This limited discourse has been evident for some time;

the discourse of school tends to keep curricula unproblematic and free from explorations that incorporate varying perspectives and a range of emotions by teaching the official knowledge accepted by the dominant culture. (Alvermann and Hagood, 2000, p. 201)

The ICT enhanced classroom is often juxtaposed against an education system that, for exaggerative purposes, is presented as backward and out of touch with recent technological developments. This ‘extreme case formation’ in the discourse strengthens the ‘need to modernise’ narrative. It is common in much commentary and is regularly used to justify expenditure in this area. For example, Egea (2014) argues that the push to integrate technology in schools is driven by a modernisation and innovation agenda that is seen as *‘inevitable and necessary when compared to the supposed inadequacies of the public sector and old-fashioned schools’* (p. 267).

The ‘crisis’ discourse is another that is prevalent. This is presented as both a social and economic crisis. These two, often interlinking, agendas are set within a neo-liberalist perspective and the “challenge” of the global marketplace where the downfall of national economies is predicted unless swift action is taken. Within these “global knowledge wars” the production of appealing and employable labour is key (Brown and Lauder, 2006; Egea, 2014);

Our growing knowledge economy requires an ICT-literate, creative and entrepreneurial workforce which confidently uses ICT for invention, problem-solving and knowledge creation. (Minister’s strategy group, 2008, p.1).

In addition to the economic concerns the social dimensions are also expressed. Concerns about the 'digital divide' and the fears that citizens could be 'left behind' and unable to fully interact and embrace the technology. For example, a report by the schools inspectorate noted the "profound" changes brought about by ICT in life and the "fundamental" need for ICT skills. This discourse is particularly evident in the context of ICT and media literacy, for example, Goodman (2003) notes that, "today's explosion in media technologies has brought new literacies into being ...even if our schools have been one of the last places to recognise this" (p.1).

There also exists a 'back to basics' discourse. Within this narrative ICT is presented as a vehicle to undo and suppress the 'dangerous' vices of the modern world (Kellner and Share, 2007). This discourse often assumes a fundamental mode of teaching and learning underpinned by ideologies espousing a fixed power dynamic within the classroom that can be negatively impacted by the 'encroaching' technology. Within this narrative the very technology that threatens the fundamental values of the education system can, paradoxically, be used to defend it.

In concluding this brief section it is evident that there are numerous reasons put forward for the use of ICT and therefore several available discourses to draw upon in justifying its use. For example, in a similar analysis of ICT policy by Lei, Conway and Zhao (2007) they identified six arguments for the use of the technology in schools within the policy discourse. Among them included concerns of being left behind (the fear argument), concerns over the digital divide (the equity argument) and utilising the potential of the technology to enhance the learning of all students (the hope argument). In addition to the influence of these prevailing discourses, localized interpretations of the role of technologies in education



(strongly determined by prevailing pedagogical practice) can also shape and determine the nature of ICT use, as Hammond (2014) explains, ‘any rationale given for the use of ICT will always be redefined within cultures of teaching’ (p.198). With this in mind the following section attempts to briefly sketch some of these ‘existing cultures’ within the Irish post-primary system.

### **Teaching, Learning and ICT in Irish post-primary classrooms**

Pedagogical practice is largely determined by cultural and ideological factors that are constructed and maintained within teachers’ discourses. Being context specific, the ‘local’ meanings which operate in a particular situation are constructed and maintained by ‘folk psychologies’ that construct a particular view of what teaching and learning is that subsequently determines teachers’ practice. Seen in this way ICT is not integrated in a vacuum but is instead mapped onto the contours of existing pedagogy.

Within the Irish context this existing classroom practice has undergone limited change over the years. Successive studies have reported a didactic approach, strongly teacher centered and powerfully influenced by examinations. Throughout the 1990s and into the new millennium snapshots of classroom practice reported didactic pedagogy (OECD, 1991), an absence of student-centered approaches to learning (Callan, 1997) and lessons dominated by teacher talk (Mackey, 1998). A large-scale study in 2003 into the teaching of mathematics, for example, noted that;

Classes were strongly teacher directed, with teachers generally using a didactic approach to the presentation of material ... The work programme of the class therefore was strongly teacher determined, with a resultant lack of student participation in the organisation of their own learning. (Lyons et al (2003) p. 147)

More recently the international OECD Teaching and Learning International Study (TALIS) report on Ireland found that teachers in Ireland were more supportive of direct transmission beliefs than their counterparts in the other five countries (Shiel et al, 2009).

In relation to ICT, the Irish state has a long history of integration. Since mid 1990s the Irish government introduced several ICT initiatives in both the primary and post-primary sectors. These initiatives mirrored international trends with a focus on equipping schools with ICT resources, up-skilling teachers and exploring possible uses of the technology across the curriculum. Yet despite considerable attention in recent decades, there is little research evidence to suggest that its use has been successfully integrated across the curriculum (DES, 2008). Computer use within Irish schools has tended to develop organically in the absence of tightly defined policy over the past three decades (Author, 2008) and its actual use is quite different than the potential uses it is often associated with in the public and policy discourse. For example, research by Judge (2013) into an ICT initiative in Ireland found that most teachers used traditional whole-class teacher-directed teaching in the classrooms while only 8% chose a more constructivist approach (although it must be noted that this research was conducted within the primary school sector).

Within this culture of content delivery and student passivity how is the use of ICT conceptualised amongst ICT Coordinators? In articulating their vision of the future use of ICT, how does the prevailing discourse surrounding ICT at a policy level interact with the localised meanings?

## **Methodology**

The research which commenced in 2010 with data collection concluding in 2011 and reported in this paper formed part of the larger study into the roles of 37 ICT coordinators and their attitudes towards ICT in post-primary schools (schools catering for the ages of 12 to 18 years) in the southwest region of Ireland. Initially 44 schools within the area were invited to participate, of these five schools had no coordinator, one coordinator chose not to participate and it was not possible to establish contact with one principal, leaving 37 participating post-primary schools. The study aimed to explore the role of the ICT coordinator, a position that has not been researched in any great detail. For the purposes of this study the ICT coordinator was defined as the person with responsibility for ICT in the school. However the researchers were cognisant that the nature of the position of ICT coordinator varied significantly in schools and that there was also considerable variation in the levels of ICT usage in schools. The coordinators ranged in age and experience, 68% of participants were male, 70% of participants were over 40 years of age, and 70% also had more than 15 years teaching experience. The subject areas that the coordinators taught in their respective schools varied greatly from Art to Physics to Guidance Counselling. The participants were drawn from the different post-primary schools (Vocational, Secondary, comprehensive and community schools/colleges). The sample was drawn from all schools within a 20-mile radius of a provincial city on the west coast of Ireland.

The research was conducted in accordance with the institution's ethical guidelines. Each participant was informed of the purpose of the study before being invited to participate. Participants were guaranteed of their anonymity and were free to withdraw from the research at anytime should they wish to do so. Pseudonyms are used in the reporting of the findings.

The first phase involved a survey of 37 ICT-coordinators identified in the region. The research reported in this paper focuses on the second phase of the study which involved semi-

structured interviews with a stratified random sample of nine of the 37 respondents. The purpose of the second phase of research was to firstly present the findings from the survey to the ICT coordinators, and to then further probe these findings. For example one of the key findings from the survey was the lack of time allocated to the post within schools, during interviews this finding on being presented to participant's generated discussion around what value the school and principal placed on the role of the ICT coordinator within their school.

Although ten participants were invited to interview, only nine interviews took place, these participants were selected to best represent all of the schools involved in phase one of the study (e.g. school type, urban and rural etc.) and factors such as the level of ICT infrastructure in the school were not considered. Each participant was interviewed once and each interview lasted on average 45 minutes, of the nine participants interviewed eight were male.

As teachers with the responsibilities for managing and championing ICT usage in their schools they have a detailed understanding of the nature of ICT use and their views and attitudes strongly influence the direction of ICT. They largely determine what ICT equipment is purchased and they also decide future planning needs in terms of staff training and software purchases. While their views may not represent all the views in relation to ICT within their schools, they nonetheless are immersed in the ongoing debates and conversations in relation to ICT. They therefore both reflect and initiate much of the prevailing ideas and beliefs in relation to ICT.

All interviews were transcribed verbatim and analysed. Since the aim of the research was to explore the discursive resources employed by the teachers when describing the use and

benefits of ICT in teaching and learning a discourse analysis was conducted. The analysis drew on two specific forms of discourse analysis: a Foucauldian discourse analysis, which aimed to capture the workings of ideology and social power, and a discursive social psychology perspective (Potter and Wetherell, 1987) which aimed to capture the ‘interpretative repertoires’ employed within the discourse.

## **Findings**

### ***Increasing interest and the hardware journey***

A level of optimism surrounding ICT dominated the ICT coordinators discourse, perhaps influenced by prevailing policy. On several occasions many referred to the positive attitudes towards ICT by most teachers within their schools, for example, Alex referred to the “massive interest” in relation to ICT. Despite this positivity there also appeared to be a lack of clarity in relation to its use, as highlighted by Francis;

Well I suppose while a lot of them have a positive attitude towards it and are open towards integrating ICT into the classroom, a lot of them are unsure how to actually do it. How to integrate it, what's available for them out there to actually go ahead and integrate this ... I think they are very aware that integrating ICT into the classroom is very, very important.

In another interview Karl noted that, “even people with very poor computer skills have become energised by the whole thing they see it as a new way of approaching their teaching”. To a large extent they reflected the positive discourse in the literature. These external influences were evident in comments by Liam who noted, “I know the Department [Government] promote it and say it’s good to have it in your teaching”.

The integration of ICT was seen part of a journey by all participants. Reference to “change” and “journey” were frequently drawn upon to reflect this process. Emer commented that, “the younger staff really see it as the way forward”. On a similar note Liam described his school as “barely getting ourselves up and running” and that he felt there was a “long road ahead” for the school in relation to the uptake and use of ICT across the curriculum. Keith drew on a similar discourse explaining that ICT integration is;

... a journey, it’s a road that you travel and the important thing is to be on that road and to be travelling it purposefully... the good thing is that we are certainly on that journey of developing E-learning in the school and that is the important thing.

The participants’ colleagues were presented at different stages of this metaphorical journey. Niall described the active ICT users in his school as “progressive” and Karl described very active ICT users in his school as the “pioneers” whereas during another part of the interview Karl described the “journey” and “humps” needed to be overcome by the “luddites”;

I would say the strongest luddite in the place is willing to give it a try, you know they like the idea of it but doing it is the next stage, getting them to do it. It’s like someone learning a foreign language, they might know it on paper, but getting them to speak it its getting over that hump I think is the challenge.

Similarly, Liam also noted that within his school “teachers that would be twenty years or more teaching... feel that they are maybe a little bit behind”. Karl raised a concern that

without appropriate training and support teachers could “fall back into their old ways and lose interest”.

While the integration of ICT was presented as a journey towards a particular point, the eventual destination appeared to be defined in terms of the level of ICT resources and infrastructure as opposed to the level and type of use. For example, Alex claimed that the “long-term goal” was to “give everyone a laptop and to get a projector in each room”. Describing the change in her school Emer also defined the change in terms of ICT infrastructure and made no reference to usage;

I think that from where I started here five years ago there has been a huge change. When I started here five years ago there was one room with about 10 computers, half of them didn't work, there was a printer stuck in a corner that never had enough ink. Whereas now we have two computer rooms, we have computers in all the offices, the career guidance room, the music room, the home economics room have all been networked, the international room the science lab and then next year they will all get their laptops so I think there have been huge changes since I came here.

Only one of the coordinators recognised this emphasis on infrastructure and lack of attention to pedagogical issues;

The bigger challenge is actually the whole culture shift in terms of teaching and learning, I think the infrastructural thing is actually a huge distraction, I think it's a woeful distraction -Keith

The attention and reference to getting more equipment, rather than discussing the nature of its use, suggests a lack of knowledge in relation to how the technology could appropriately support various pedagogies. This limited ‘pedagogic literacy’ is perhaps a legacy of a system where teacher lecturing and student passivity dominates and may help explain the comment by one of the teachers, Karl, in relation to their use of the technology across the curriculum, “our biggest lack of expertise though is in figuring out where to go with what we have”.

### *Finding the ‘right medium’ and avoiding ‘over-indulgence’*

The research was particularly interested in exploring how ICT was positioned within the discourse of teaching and learning and the school itself. The limited dispersion of ICT across the schools meant that in many instances students physically went to the computer room. Several references were made to the students going to the computer room; therefore, ICT was somewhere that students went to as much as something they did. When teachers were active users of technology this behaviour appeared to stand out as it involved physically relocating groups to the “computer room”. This did not go unnoticed by the coordinators. Niall for example, was “heartened” that a number of teachers had “taken the computer on board”. This included, “taking kids into the computer room... producing notes or producing documentation, or producing their exams on the computer”. Similarly, the “progressive” teachers referred to previously by Niall were those that were “using laptops and data projectors to show stuff on screens in lecture style, they are also bringing students to the IT room when it’s free”.

This physical positioning of ICT outside the ‘normal’ classroom has perhaps added to the positioning of ICT outside of “normal” practice within the teachers’ discourse. Keith, for example, noted that, “the use of technology in teaching and learning isn’t altogether in the



mainstream at the moment”. In instances where ICT was being used it appeared to augment existing practices. These pedagogical approaches tended to be quite didactic in nature involving teacher dominated explanations and lectures. The level of student engagement in such settings was limited. In explaining the role of ICT in teaching and learning, for example, Liam noted that in such lessons, “the teaching is still the same in many ways but that there is new technology used to make it more interesting, and making it enhanced for the student and so on. Eddie cautioned against “over-indulging” when using ICT;

I think it’s just about finding the right medium, the right medium about what you need to use rather than over indulging in the whole use of, in the use of what's available. You know you’ve got to strike a balance between the use of ICT and your general classroom work. Like ICT in the classroom isn’t going to work if you are going to use it 100% of the time. You know you have to strike a fine balance, use it when its necessary... you don’t over use it because if you overuse something, it going to lose its affect completely

This “cautious” view was echoed by Liam who said that, “I would say that ICT is supportive to the learning process, rather than taking over”.

From the coordinators’ comments one of the most significant reasons why ICT is being, and should be, used in teaching and learning is to maintain student interest and engagement. Emer noted that many of her colleagues used in-service training days to get PowerPoint presentations to “show them to the kids”. Francis noted that students “respond better” to the use of ICT in the classroom. In providing an example he described a lesson in which he used a five minute video to explain an architectural concept;

straight away they were tuned into what was going on, you could see that they were taken in by it and they were paying attention... you can't explain something like that, no matter how much talking you do from the top of the room.

It is evident that from almost all examples of ICT use provided by the teachers the role of the technology is peripheral to the learning experience and its function is to enhance the teachers' explanations, "making their lives easier in the long run because it takes the pressure off the chalk and talk" (Karl). Keith provided an explanation for this type of use arguing that prevailing examination pressures on students, and teachers, had created this emphasis;

... if you take our school with a good ICT infrastructure and if you look at how teachers are using it ...what students really want is notes. They want notes, they don't want to be distracted by perhaps more student-orientated, student-centred learning or approaches, because there is a culture of notes, and there is a culture of achieving at examination, so it is challenging for the teacher to move beyond that culture when it's still anchored to the exam itself

## **Discussion**

### ***Leadership and agency: the hardware journey***

Amongst the many roles of the ICT coordinator, providing leadership in relation to ICT is key. The championing of ICT requires commitment and enthusiasm to encourage colleagues and maintain interest in the school. The views expressed by the ICT coordinators in the findings reveal that they do have a positive attitude towards ICT and that they draw heavily on the positive discourse surrounding the use of ICT. This positivity is a good starting point

and one could argue is to be expected from a group of teachers charged with the role of providing leadership in relation to ICT in their schools. Yet leadership in relation to ICT also requires visionary thinking and an ability to articulate and defend the type of ICT usage one aspires to achieve. Looking at the coordinators' comments from this perspective is less encouraging. The frequent reference to a journey towards acquiring greater levels of ICT resources seemed to dominate the narrative when asked to comment on future plans in relation to ICT. The prevailing narrative amongst all but one of the coordinators suggests that they have adopted a technological determinist perspective on the ICT change process, one in which technological developments are determined more by the evolution of technologies rather than any strategic human input and direction. This perspective does not bode well for ICT leadership in schools since, if one views technological change from this perspective, technology is something that will determine the nature of future educational practices rather than being something that is shaped by emerging pedagogies. This 'technological imperialism' (Bladergrogen et al, 2012, p.116) has created what could be described as a passive acceptance of new technologies, rather than question their introduction, their concerns seemed to focus on identifying the 'correct' way to use the technology. There appeared to be only one of the teachers that displayed a more critical perspective on the technology. As ICT champions their commitment to the 'technologisation' of schools is understandable and, perhaps as Bladergrogen et al (2012) suggests, also points to a culture in which any opposition to the prevailing positive discourse surrounding ICT may be automatically label one as backward, uncooperative, or ignorant. As potential 'gate keepers' in relation to technology in schools and agents of change, the absence of a strong sense of agency amongst the ICT coordinators suggests that these schools, rather than taking a proactive stance and defining their vision, will instead remain influenced by and implement the latest technologies without perhaps the critical lens needed to assess their

educational value. This ‘technological somnambulism’ (Winner, 1996) was particularly evident when the coordinators expressed progress in terms of the levels of ICT hardware, as opposed to the nature of its actual usage. It was also evident when they expressed their future goals in terms of the acquisition of more hardware. This focus on hardware however is not unique to the Irish context, Flanagan and Jacobsen (2003) note that, ‘unfortunately, technology planning has too often been limited to the goal of acquiring hardware and software’ (p.127). Condie et.al (2007), in a report for BECTA warned that, ‘there is a lot more to integrating ICT into the educational experience of pupils than achieving a set ratio of computers to pupils and networking them’ (p. 13). This ‘aimless’ use is not new and has been around a long time. It is perhaps worth reflecting on Fullan’s (1991) observation 20 years ago in relation to this issue;

*we do not know very clearly what good quality use will look like or what the real impact on students will be. So boards, principals and teachers do not have clear guidelines. Furthermore, NET [New Educational Technologies] hardware and software are changing and developing continuously. We must invent our own future.*  
(Fullan, 1991, p. 55)

### ***Avoiding ‘over-indulgence’: incremental change or stasis of conservatism?***

The use of ICT reported by the coordinators appears to mirror the type of use found in the reported research. For example, a recent study by the education inspectorate noted that the most common ICT activity observed was the use of a data projector to make a presentation to a class group. The study also expressed concerns that the nature of ICT tasks undertaken by students were largely word-processing and presentation tasks (DES, 2008). As the findings have highlighted, the coordinators in this study reported similar use but did not express

similar concerns about the nature of ICT use in their schools. It appears from the coordinators comments that they were content to report that the technology was being 'used' by teachers but appeared to show no concern about the nature of its use.

In exploring the possible reasons for this absence of critique there are many possible explanations. It could be that the use of ICT is coming from such a low base that any use merits comment. On the other hand, the absence of a critique of existing use could point to a broader misplaced optimism surrounding its use. To what extent have the coordinators bought into and conformed to what Lloyd (2008) refers to as the 'seductive claims about the technology' (p.21) accepting what Ferneding (2003) calls the 'techno-utopian dream' in which all ICT use is seen as innovative use? Perhaps the absence of a critical perspective on the prevailing discourse surrounding ICT reflects the broader problem of an absence of discussion and debate about what is taught in Irish schools and how it is taught (Gleeson, 2010).

In addition to the absence of a critical perspective on the current nature of ICT use in their schools and the optimism shown towards ICT, the coordinators were also cautious about the technology. As the findings have highlighted, while all expressed an interest in integrating ICT this was accompanied by a concern about 'over-using' the technology. References to the technology 'taking over' or teachers and students 'over-indulging' in the technology suggests the presence of some underlying concern that the 'traditional' classroom could be undermined by 'too much' technology. Further research is perhaps needed to explore this issue in greater depth to determine whether these concerns are grounded in sound pedagogical principles or whether other beliefs and attitudes are at play. For example, it could be that concern about 'over-indulging' in ICT indicates that it is seen as separate from

the learning environment and not an integral part of it. Concerns of a dilution of learning as a result of 'too much' ICT may also suggest that it is seen more as a distraction and not central to learning in the classroom. Such attitudes may originate in quite traditional understandings of classrooms, students and teaching.

## **Conclusion**

This study aimed to examine the discourse of ICT coordinators in relation to ICT. From analysis of the coordinators' discourse it is evident that their interest and enthusiasm towards ICT draws heavily on the prevailing policy discourse relating to the potential of ICT in teaching and learning. Although very optimistic in terms of ICT, progress was defined in terms of increases in ICT resources rather than how it was being used in schools. When describing specific ways in which ICT could enhance teaching and learning they also drew on quite conservative types of use that augmented existing teacher-centred approaches. There was little reference made to examples of more transformative uses where ICT supports more student-centred learning.

From a leadership perspective it would appear that the shift from 'electronic janitor' to pedagogical leader (Lobos, 2008), although prevalent in policy documents, is in its infancy in Irish schools. When considering how to best integrate ICT into the Irish educational system policy makers and those in leadership roles may need to take greater cognisance of the disparity in planned and actual use and recognise that all policies are re-interpreted by teachers in their work (Hammond, 2014).

It is almost 30 years since Winner (1986) coined the phrase 'technological somnambulism' to describe the unquestioned adoption of emerging technologies. Evidence of this somnambulism was evident in the participants' talk where they described the adoption of ICT as a journey without questioning the underpinning assumptions associated with this

discourse. At a broader level educators need to define their collective vision for ICT to facilitate affective leadership. Such an approach would take us beyond the prevailing technoutopian hegemony to a more insightful critique of the educational merits of emerging technologies and the claims that are associated with them.

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