MALTA REVIEW OF EDUCATIONAL RESEARCH

Volume 9, No.1, Special Issue, pp. 99-114

The use of ICT in the teaching of Maltese and teachers' concerns

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Abstract: The importance of technology in education has increased enormously in recent years. As a result of the ongoing developments in ICT both teaching and learning are being transformed. This article starts by giving a brief overview of the main advantages of ICT in teaching a language. It then outlines the milestones in the introduction of ICT in Maltese state schools, which include the distribution of laptops to all teachers, the installation of interactive whiteboards and the introduction of a virtual learning environment that connects all primary and secondary state schools into one virtual network. Then, this article identifies the most popular ICT resources and makes reference to the ones that are more easily accessible by the teachers of Maltese. However, the implementation of ICT in schools has not come about without difficulty. The article discusses the local teachers' concerns related to the introduction and use of ICT in the classroom. Finally, some practical suggestions are put forward with the aim of making the use of ICT in the local educational sector more successful and beneficial in the educational process.

Keywords: Information and Communication Technology (ICT), Maltese, teachers' concerns, resources

Introduction

A great proportion of teachers' time has always been dedicated to the creation of teaching resources for use in the classroom, especially in subjects like Maltese where commercially available material is scarce. Indeed, while the proliferation of the Internet has eased this strain for certain subjects due to the availability of interesting and professionally developed resources at the tip of a click, for the Maltese language teachers the situation slowly became a frustrating one. In fact, ICT content and interactive resources available for the teaching of Maltese are still very limited, with the consequence that teachers

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are still dedicating a significant amount of their time preparing new resources or adapting available resources to cover the syllabus content and in order to achieve the stated curricular objectives.

This article begins by highlighting some of the advantages related to the use of ICT in the classroom. It goes on to point out the major milestones in the use of technology in Maltese classrooms highlighting their benefits and shortcomings. It then attempts to list initiatives taken by different entities to increase the availability of Maltese resources. While stating the positive attributes of these initiatives, this article highlights the teachers' major concerns and the obstacles they encounter in using these resources. It also explains some of the difficulties they encounter as they struggle to create more such resources. Reference is made to their scepticism in the process.

The advantages of using ICT in the classroom

The drive to use technology in teaching has been on the increase for more than a decade. Among the most important benefits of using ICT in education, the following are worth mentioning:

- ICT promotes learning, enabling a hands-on approach

The use of computers for educational purposes, allowing for individualization and greater learner control, have repeatedly been put forward as major advantages of ICT (Wright, Fugett, & Caputa, 2013). Students can access numerous resources for any topic they want to know about. Knowing how to look for and access information helps students to become independent learners.

ICT is believed to increase students' vocabulary as students are more likely to search for meanings of new words from online dictionaries rather than from hard copy dictionaries (Mullamaa, 2010). The web contains unlimited information about any subject, making it easier for students to access any information they require.

By becoming independent learners, students enhance their problem solving skills, decision-making skills, creativity, risk taking and interpersonal skills. Thus, technology is crucial in developing independent learners in the 21st century (Bhaskar, 2013).

- ICT enables self-paced learning

ICT enables matching learning with students' attainment levels. There is evidence of the impact of ICT on practising skills from a wide range of studies

including simple programmes with a particular focus such as early reading to more complex Integrated Learning Systems which have all improved pupils' attainment (Lynch, Fawcett, & Nicolson, 2000). Educational software can ensure that learners are given tasks at an appropriate level that can be matched to their prior attainment or their individual needs (ibid.). Furthermore, advanced educational software allows students to progress to more difficult levels only after the current level has been completed (Passey, 1999).

- ICT makes the educational setting more stimulating than in a traditional classroom environment

Technology helps educators to widen their spectrum of tools and the exposure students can get (Predetti & Mayer-Smith, 1998). ICT provides rich opportunities for learning as it enables exploration, interaction, collaboration, and immersion in learning activities. Research indicates that students would commit themselves more to their work if they have an audience beyond their teacher (Yonus, Nordin, Salehi, Sun, & Embi, 2013). Individual pride and the desire to communicate leads students to engage in writing and revising text, thus resulting in increased student motivation, students' engagement with written language and increased quality of writing.

Students' motivation to fully engage in writing and revising text is also sparked by their desire to communicate with the reader of their work. All of these factors can increase students' engagement with written language and increase the quantity of writing produced. Online learning and teaching enables students to socially construct knowledge through communication and collaboration. This in turn pushes learners to actively construct their own perspectives which are then communicated to their audience (Yonus, Nordin, Salehi, Sun, & Embi, 2013).

- ICT enriches learning through a combination of audio, video, images, text and animation.

ICT is powerful in presenting information in a variety of ways such as text, pictures, slideshows and videos. Information can be manipulated easily on a computer and pupils can make changes and evaluate the effect of those changes (Kenning, 2007). Furthermore, ICT is an essential tool for inclusion. For students with intellectual disabilities there are programmes, which facilitate greater participation within the classroom. Assistive technology is vital for intellectually disabled students who have limited verbal or written communication skills (elisebblog, 2011).

ICT enables special needs students not just to be engaged in class or on-tasks but it allows them to communicate what they are thinking and feeling in

ways they never could before or without the use of ICT. In various ways, these programmes allow students to create written commands, requests and expression. They also allow for visual and kinesthetic learning rather than solely auditory (ibid.).

The digital era also helps to make learning more attractive and long lasting. Research demonstrates that the learning results that have been reached by using ICT solutions are more profound than the learning results achieved through using traditional learning methods (Mullamaa, 2010).

- ICT enhances learning through interaction and collaboration

ICT provides a virtual space where students can interact and collaborate. Blogs give their contributors a predominant space to express individual views. Blogs can be used to expose young authors' contributions giving them stimulus and driving them to write. Furthermore, it does not offer just a space for the students to expose their ideas through writing but has the possibility of multiple audiences and access points. From a research study on the effects of online interaction conducted by Kelly and Safford (2009), during the 2006 World Cup, it emerged that an online forum empowered pupils to use high-level forms of language. Online blogs allow students to get feedback not just from the teacher as usually happens in the traditional class but from multiple readers including peers and others interested in the subject, which according to Holder (2006) might be more effective. Evidence shows that students that have their own blogs tend to be prolific writers inside and outside school (Lenhart, Arafeh, Smith, & Macgill, 2008).

- ICT increases motivation in pupils

Students using ICT tools tend to be more willing to spend more time working at, or practising, the skills being studied and tested. Many pupils enjoy using computers. One benefit of computers may also be the combination of such motivation and the increased practice at particular tasks. Computers can therefore help by increasing the amount of time pupils spend on particular activities, by increasing pupils' motivation and engagement when doing these activities and by providing practice at an appropriate level. According to Mullamaa (2010) computer assisted learning that allows for this liberty of choice, directs both motivated and less motivated students to do more in a fixed period as a result of their higher effort and persistence.

Students engaged in publishing their writings using ICT, such as publishing their work over the Internet, were also found to be more highly motivated. They tried harder to produce better outcomes than when using traditional media, as ICT was found to increase the young authors' pride of authorship (Mullamaa, 2010).

Motivation was found to increase among students using ICT tools due to their familiarity with these tools outside their school as part of their everyday life. Thus, integrating these tools in their learning of reading and writing would make the learning process easier and more natural for the students (Lenhart et al. 2008).

- ICT helps students to learn new skills including analytical and evaluative abilities

ICT in education may also be used to equip pupils with skills that they will be able to use outside school and later on in the workplace. ICT can help students develop their evaluative and analytic abilities by creating an environment which is inductive to creativity, generating new ways of looking at the surrounding world, facilitating deeper understanding, critically analysing the present information and designing multiple pathways for meeting particular ends (Reinders, 2011). ICT tools can also be easily deployed within schools to encourage students to explore, rationalise, combine and share ideas (Northcott, Miliszewska & Dakich, 2007). Educational technologies can enhance these outcomes through online group work, or by creating portfolios of experiences.

- ICT helps improve students' reading comprehension

Wright, Fugett and Caputa (2013) found that children preferred reading when the material was presented electronically using e-books. Increased interest in reading leads to improvement in reading fluency and reading comprehension (Higgins, 2003). Through specific software students' interests, personal learning styles and writing styles are identified and then activities and resources are designed to enrich the students' learning process. Immediate access to word meaning and to further information can help the students improve understanding. Embedded digital notes, either typed or voice recorded, have also been proven to improve students' summarizing abilities, and therefore comprehension (Fry & Gosky, 2008).

ICT may also be used to offer consistent modelling, practice tasks, assessment, feedback, and application of comprehension strategies (Wijekumar, Meyer, & Puiwa, 2013). ICT resources allow students to progress with comprehension activities even when teachers cannot work individually with them (ibid.). Text-to-speech programmes, when integrated with subject based teaching, provide further support in comprehension as they facilitate organization and understanding of material more effectively (Power, 2014).

- ICT encourages autonomous learning

Educational software design provides a mix of choices, feedback and support that allows students to increasingly take charge of their own learning. ICT can empower teachers and learners by shifting teaching and learning processes from being highly teacher-dominated to student-centred. This transformation will result in increased learning gains for students, creating and allowing for opportunities for learners to develop their creativity, problem-solving abilities, informational reasoning skills, communication skills, and other higher-order thinking skills.

Students get higher satisfaction from learning when they determine when and what 'to know' (Passey, 1999). This is more likely to happen when students have access to the Internet, which opens the door to vast amounts of information for those with access to computers. Thus, e-learning makes the study process more flexible and individualised according to the needs of every individual student. Furthermore, technology helps educators to widen their spectrum of tools and the exposure students can get.

After that brief outline of the advantages ICT has brought in the field of education, the article moves on to discuss the three major milestones in the introduction of technology to all state schools in Malta.

Laptops, Interactive Whiteboards and Virtual Learning Environment

The first decisive step, which marked the opening of our doors to technology, was the supply of laptops to all teachers employed in state schools. This, in itself would not have been a progressive move without the provision of adequate training to teachers. For this reason, the e-learning Department within the Directorate for Quality and Standards in Education was set up with the aim of supporting teachers and providing them with the necessary training. This move opened the doors of our classrooms to technology. It enabled teachers, especially those who were not accustomed to using computers, to familiarise themselves with this tool and the available software, and to further appreciate its benefits in teaching. Furthermore, the availability of computers immediately enabled teachers to produce better and more professional resources for their students.

The introduction of Interactive Whiteboards (IWB) in all primary and secondary state schools classes in Malta and Gozo in 2011 meant a major infrastructural project for schools and a change in how teachers conducted their lessons until then (ICT Feature: Government Announces the rollout of over 1,800 Interactive Whiteboards in all state schools, 2011).

For this initiative to succeed it did not merely mean that the IWBs had to be properly installed in the classrooms, but as in the case of the laptops, it

required that teachers be properly trained and made to feel confident in using this device. Furthermore, teachers needed to be convinced of its benefits and of how this initiative was going to improve their teaching.

Having an IWB in class first of all means the presence of video projectors in every class. Thus, lessons could now be complemented with the projection of PowerPoint and Prezi presentations, Word and PDF documents, video clips etc., thus making lessons more appealing to the students. It also meant that teachers could produce interactive educational resources, thus enabling students to take a more active role in the development of the lesson.

The third and latest nationwide technological initiative was the introduction of a Virtual Learning Environment for all primary and secondary schools in 2013, better known as Fronter (Attard, 2011). Through this system, teachers possess a virtual space called rooms, where they can upload any educational material they feel suitable for their students. They may include links to educational websites, past papers, quizzes, presentations, handouts, lesson notes, reminders and so on. Teachers can also use the VLE to communicate with their students or post tasks directly to their students. Students on the other hand, may be asked to post their work to their respective teachers through Fronter. Another important feature is that this VLE can be used to accumulate the students' assessment marks and thus achievement or progress reports can be produce in real time.

Maltese teachers' concerns about the use of ICT

Although in theory, therefore, teachers are better equipped to do their work (Euopean Schoolnet and University of Leige Psychology and Education, 2012), in reality teachers have concerns regarding the use of ICT in education. The following concerns emerged from a qualitative research study using semi-structured interviews with fifteen secondary school teachers. The focus of the investigation was the effects of the educational reform on teachers' emotions, self-efficacy and professional identity. The introduction of ICT in education constituted one of the major changes this reform brought about (Gatt, 2014).

The teachers participating in the study did not seem to appreciate the IWB's assets and most of them used the IWB solely as a projector. Although, there seems to be general consensus that the training for the use of the IWB was rather effective, teachers felt that it did not meet their expectations (Gatt, 2014). Two criticisms were that the content covered during the training sessions was too vast, and that it was lacking on the practical side, with the consequence that the training did not enable them to acquire the necessary skills to properly develop interactive lessons on the IWB. Teachers taking

part in this study also claimed that they were still not confident to use this tool, as the training given consisted of just a two-hour session during which they had limited opportunity to assimilate the training content. Teachers are important stakeholders in education and their training is crucial for the successful implementation of change. It is, therefore, rather worrying that teachers expressed so much disappointment.

The introduction of ICT tools in the classroom imposed on teachers the need to update their skills and learn to integrate new tools into the way they teach. Respondents for instance claimed that although the introduction of ICT in teaching was considered a step forward and an essential tool, its positive effect was diminished as teachers felt that they did not have enough time to get accustomed to the new technology before other initiatives were launched, such as the introduction of an e-learning platform.

Another cause leading teachers not to use the IWB was that teachers were not assigned a classroom due to space limitations, where they could leave their resources including their laptop connected throughout the day. Instead, teachers had to move around from one class to the other carrying their books, their students' work, other teaching resources and their laptops, every time connecting to and disconnecting their laptops from the IWB. Furthermore, respondents identified the IWB brand installed in most secondary classes as the most difficult to produce interactive lessons with.

Teachers also felt that the IWB and its resources were not suitable for students of all levels and forms and this tool was not always the most appropriate to cover any syllabus topic. Some teachers argued that it was difficult to produce intellectually challenging resources with the IWB. They claimed that these IWB resources were less suitable for the higher forms and the more academically able students.

Teachers also mentioned the lack of compatibility between different IWB brands as a constraint in using this technology. One respondent recounted how he could not apply the training he received on IWB because the IWB in his laboratory had particular software, which was incompatible with the ones he had been trained to use. Furthermore, the Internet was not always available in class, and thus he could not always use the resources he prepared. This demotivated him and he felt that for him preparing interactive resources was extra work and not worthwhile.

Nevertheless, the fact that schools were assigned ICT experts, for a whole year (2013/2014), in order to assist teachers in developing their interactive resources, helped the teachers to become more confident in using the IWB and to address, as much as possible, the concerns mentioned above.

Although Fronter (VLE) offers a range of benefits to teachers, it does not mean that all teachers are willing to use this infrastructure. One of the reasons

for this could be that when the Fronter training took place the infrastructure was not yet in place and thus the teachers could not practise what they had covered during their training sessions, which took place after school hours. Many teachers felt that this initiative was, yet, another burden.

Interviewees felt very strongly about the fact that they needed to be given the necessary time to get used to the changes before other changes were introduced. This lack of space and time to get used to new initiatives seemed to affect teachers' motivation and commitment negatively. This is coherent with what Abrahamson (2004) cited in Hargreaves (2004, p. 288) defines as *initiative overload* or "the tendency… to launch more change initiatives than anyone could ever reasonably handle".

It must be mentioned that while these new technologies were being introduced, teachers were also facing other changes, such as, the phasing out of Secondary Area schools and the introduction of coeducation. These changes have led to many teachers being transferred to new workplaces. This meant that teachers had to update their teaching content including schemes of work, lesson plans, resources and assessment methods to reflect the new realities at their new school.

Another change, which had a drastic impact on Maltese teachers' time, was the introduction of mixed ability classes, as teachers have had to differentiate their resources to reflect the abilities of the students in any one class. All these changes have led teachers to invest their time in producing resources which they have been confidently doing before, while holding them back from experimenting with the new technologies available (Gatt, 2014).

Teachers also rightly felt that technological resources are not going to solve all learning difficulties their students have. A general feeling that surfaced throughout these interviews was that the priority should have been to tackle the problems brought about by the mixed ability classes. Teachers felt that it would have made more sense to reduce the ratio of students per class, if the ultimate goal was that of giving each and every student a tailor-made educational experience in order to reach his/her maximum potential. Due to the pressure imposed on teachers by all these reforms taking place in a short span of time, interviewees argued that they felt like they were becoming more like technicians than professionals who could concentrate on holistic education. Below is a quotation from one of the teachers that I interviewed:

> "These reforms will lead us to become technocrats, focusing on teaching our subject, and leaving no time for us to be educators, we will stop being educators and simply teach... we will not have time to stop and reflect how students change throughout the year and draw their attention to it...in a few months' time this dimension will be lost."
>
> Respondent P

On the other hand, as mentioned above, in order to mitigate the burden of new technologies on teachers and help them become more confident in their use, the Curriculum Management and eLearning Department within the Ministry of Education assigned specialised ICT professionals to all state schools. This meant that these ICT professional helped teachers overcome some of their difficulties. They offered help and assisted teachers with creating interactive resources and/or to solve technical hitches while using the IWB or the Fronter.

Thus, the part of the reform related specifically to the introduction of IWB, seems to have made teaching more effective and attractive to all students according to the teachers interviewed. According to Respondent G, "This was a significant step forward which we could not do without, because our kids have grown up surrounded with technology." For Respondent T the IWB is changing the way teachers teach and facilitates teachers' target to motivate students.

Now that the technological infrastructure is in place and available to all teachers, the priority should be to help the teachers build their confidence in using this technology. This could be achieved by offering continuous professional development and by offering professional assistance when needed. When teachers and learners feel confident with their ICT skills, the emphasis will shift from the technology to the benefits which students can gain from it. Thus, for example, in teaching a language the focus becomes the quality of creative writing, rather than the ability to word process. Schools elsewhere have reported that the use of good online teaching and revision resources had lifted grades by 0.5 or more in certain subjects (Allen, 2013).

I will now mention some of the most easily available and popular ICT resources for the teaching of the Maltese language.

Websites

Some schools have managed to build professional websites, which serve as a portfolio for the teachers' and students' work. Teachers of Maltese in various schools are using their school's website to disseminate their resources or as a resource bank. The Education Department's Maltese Language official website is also being reorganised to better reflect the reorganisation of the present teaching programmes. The ultimate aim is that this website serves as a reference point for the teachers of Maltese. It is thus being regularly uploaded with new resources for Maltese teachers for both the primary and the secondary sectors.

Teachers can also use this website if they require any clarification on Maltese grammar and orthography. It also holds all the circulars issued by the Department of Education in relation to the teaching of Maltese.

Teachers of Maltese can also utilise various other websites' content related both directly and indirectly to the Maltese language such as Maltese authors' websites or Maltese newspapers' websites.

Video technology

Short video clips can be utilised as a starting point for the lesson, as a means for stimulating discussion or as a medium to exercise comprehension. Teachers may use interesting clips uploaded by local production houses, which can be easily linked to the Maltese language syllabus such as clips on the Maltese cultural heritage, or biographies of important Maltese personalities. Schools may also use their financial resources to acquire copies of educational programmes produced by local production houses.

Books with Audio CDs and Podcasts

Another educational resource available to Maltese teachers is books with accompanying audio CDs. This resource can be easily available and utilised during Maltese lessons. The latest Literature textbook, set for the syllabus of the School Leaving Examination conducted by the University of Malta, also includes an audio CD with all the readings of the literary texts.

More of this type of resource would certainly help local teachers especially those teaching the early and middle years and those teaching on the core competences programmes.

Advancement over this technology is the incorporation of podcasts with books. These podcasts offer students the opportunity to listen to excerpts of text through access of the web. The only drawback with podcasts is that these recordings cannot be downloaded. Thus, their use in the classroom is limited as it depends on the quality of the Internet connection present in the classrooms.

The Current Project: E-content

In the near future teachers of Maltese should have at their disposal interactive lessons covering every topic of the primary syllabus and the first two forms of the secondary syllabus. Although the project is not finalised yet, it elicited positive feedback from teachers who attended in-service training on this subject. However, two aspects need to be considered. The first is the fact that since they are not editable, teachers cannot amend them to reflect the ability

level of their students. Another, hitch is that these lessons are in Adobe Flash Format and therefore their use on portable devices may be problematic due to the withdrawal of support of Adobe for Flash on mobile devices since November 2011.

More to come

As from the scholastic year 2013/2014, the Education Department (**Directorate for Educational Services)** employed three full time teachers with the goal of producing resources for the teachers of Maltese. During the last year, these teachers, together with the Head of Departments and the Education Officers, were engaged in creating the lesson scripts to be developed by Siveco, the company responsible for the development of the interactive lessons discussed in the previous section. These teachers will now continue to produce resources, which will be made available to the teachers of Maltese through the official departmental website (malti.skola.edu.mt).

In addition, during scholastic year 2014/2015, the project that had been initiated by MCAST (Malta College of Arts, Science and Technology) students to produce short videos on Maltese poems has been extended to a number of novels covered in the Maltese Secondary syllabus.

Another project presently in its piloting stage is the introduction of tablets for Year 4 students. Local publishers are also participating in this initiative as they are in the process of converting printed books into e-books that can then be read on the tablets. This should extend the benefits of the already available technologies. It should also help to create a more individual approach to learning while enhancing the students' ICT skills, creativity and motivation.

Toward a transformation

Vast educational resources still await to become available to the public. Such resources include radio and TV programmes stored in archives. These could be made available to educators by uploading them to media libraries.

Other resources, which depend on ICT for delivery, could be created by the teachers themselves, if they are provided with the professional support required and the opportunity to collaborate among themselves. Unfortunately, until now the culture of collaboration is being stifled, rather than encouraged, with workloads that leave minimal time for cooperation among teachers (Borg & Giordmaina, 2012).

The potential of communicative media such as audio and video conferencing, which bring people together to discuss issues, has not even been tapped

upon. Considering the popularity and impact of social media today, this resource, if used smartly would definitely benefit students (Kenning, 2007).

Teachers have to plan for the effective use of available technologies in order to design, develop and integrate learning technologies to support high levels of learning achievement. According to the SAMR model, developed by Dr. Ruben Puentedura (The SAMR model: engage in deep learning and autentic contects, 2013), there are four levels of technology integration in the classroom that increase in complexity and effect. The first level is *substitution* where technology simply replaces the traditional resources such as when the students use a word processor for their writing or print out worksheets from the internet, work them out and hand them in to their respective teachers. An example of such resource is the online worksheets prepared by the Maltese heads of department on the recently introduced anthology Arja Friska. (http://malti.skola.edu.mt/wp-content/uploads/2014/12/Arja-Friska-1.pdf).

The second level is *augmentation*, where technology substitutes the traditional resource but with functional improvement. In the case of the word processing example, now the students use the available tools to improve their writing. This can be done by enabling the spelling and grammar tools, using the thesaurus and embedding images and other graphics in their document. The Maltese electronic lessons on the Directorate of Educational Services' VLE (Fronter) are another example of digital resources at the *augmentation* level (https://ilearn.edu.mt/malta/main.phtml).

Modification is the third level within the SAMR model and comprises the significant task of redesigning through technology. Furthering the previous writing task example, the students use online collaborative space to write in small groups where they can conduct peer editing, provide feedback and comment on the final product.

The forth and most complex change which can be brought about when using ICT in the classroom is *redefinition*. This is achieved when through the use of technology new tasks, previously inconceivable, are created. For instance, the writing task be presented and improved by sharing and discussing it with other classes through web conferencing. A range of technologies could be used to communicate and share information between school groups. This model can provide a common framework for teachers to use as a reflective tool for how they use technology to support curriculum learning.

Conclusion

Although the advantages of ICT in teaching are far reaching, one cannot lessen the importance of traditional resources and the significant role the teacher still has in the teaching process. The technological resources mentioned above should be looked at as a means through which teachers can better reach their objectives i.e. making it easier for their students to fully engage in the learning process.

In order for teachers to use the already available ICT as an effective pedagogical tool and progress to the enhanced interactivity stage, more investment is needed in appropriate training opportunities. Research has highlighted the need for teachers to have a better understanding of how such technology can be helpful in individualising learning (Calleja & Bezzina, 2012).

Investing heavily in buying the equipment and developing the infrastructure is the first step towards making our classes technological. Training and professional development is the next and the most significant step. It should be ensured that teachers are given the necessary support including (in school) on the spot and one to one assistance, to help them understand better how the technology can be used to support a pedagogy that puts the pupil at the centre (Calleja & Bezzina, 2012).

More training and professional development opportunities should be provided, to help teachers improve their self-confidence and gain further skills. This training should always reflect the requirements of teachers deducted from ongoing professional needs analysis (Guhn, 2009). This should help teachers reaffirm their expertise and feel prepared to face the new challenges ahead. Colleges should be provided with the necessary financing to invest in adequate resources, thus empowering teachers to mitigate the increased work demands. It is also here that we move away from a top-down approach in teacher professional development to the model propounded by the Education Act (2006) that sees the colleges taking a more direct lead in nurturing the appropriate climate for ongoing professional learning for educators.

Local policy makers should be more open to feedback from teachers who are the front liners implementing changes (Lee & Yin, 2011). In order for school initiatives to gain support among teachers they need to fit with what teachers are already doing and to reflect their feedback.

School administrations should provide regular opportunities for teachers to air their concerns. Teachers could also be encouraged and provided with the opportunity of sharing good practice. Teachers' professional needs are fulfilled if new initiatives allow for appropriate adjustments to reflect

individual schools' differences, leading teachers to own those initiatives (Lee and Yin, 2011).

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