

# Policy Brief

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## Strengthening Digital Learning in South African Schools: Improving Subject Advisors' Digital Literacy through Professional Development

### Executive Summary

Strengthening digital learning has many benefits and is becoming increasingly important within the context of the Fourth Industrial Revolution (4IR) and the Covid-19 pandemic. In order to maximise the potential of digital learning, educators need to be empowered to use transformative pedagogies supported by Information and Communication Technologies (ICT), online tools and resources. Given the critical role that Subject Advisors play in supporting educators and curriculum delivery, it is vital that they have access to high quality professional development initiatives focused on improving their digital literacy. This policy brief explores Subject Advisors' digital literacy and ways in which this could be strengthened. The brief suggests that an ICT and Digital Learning Framework for Subject Advisors be developed to guide their professional development in this area. Subject Advisor Professional Learning Communities (PLC) should also be established with a specific focus on digital learning. Finally, the ongoing monitoring and building of digital literacy skills for advisors and educators is recommended.

### Introduction

#### The power of digital learning

Information and Communication Technologies (ICT) undoubtedly hold massive potential to improve teaching and learning outcomes. Access to ICTs and digital resources is vital, but so is digital literacy, in other words, the ability to recognise the potential of digital tools and resources, and to use these in ways that are safe, legal and ethical. Strengthening digital learning has many benefits. It can support more interactive and collaborative classroom activities, as well as widen opportunities for learners to engage in personalised and self-directed learning outside of the classroom. It can also enable more efficient forms of learner assessment, as well as help support teaching for learners with disabilities. Educators can also use digital tools

and resources to strengthen their knowledge and skills through online learning and sharing information with peers. In order to maximise the potential of digital learning, educators need to be empowered to use transformative pedagogies supported by ICTs and online resources. Even simple technologies in resource poor contexts can be transformative if understood and applied within a transformative pedagogical framework (DBE, 2018).

#### Digital learning policy gap

With the rapid changes brought about by the Fourth Industrial Revolution (4IR) and the Covid-19 pandemic, digital learning takes on an even more critical role in our education system. Government is keenly aware of this and have initiated various policies and programmes to harness the opportunities that technologies can provide; including the

*Professional Development Framework for Digital Learning* (DBE, 2018), and the ambitious SA Connect programme, which aims to roll out broadband to various South African institutions, including schools. Importantly, the emphasis of these policies and programmes is on using technologies to foster inclusion and promote equal opportunities, and not to exacerbate inequalities and the digital divide.

Whilst various government policy and framework documents draw attention to the significance of improved digital literacy in South Africa, these guidelines tend to focus exclusively on educators – how they can support themselves and/or how they can be better supported by others (such as education leaders, teacher trainers and curriculum specialists). A glaring gap is the lack of specific policy frameworks to guide the professional development of Subject Advisors in respect to digital learning.

Given the critical role that advisors play in curriculum implementation, it is important that they have access to high quality professional development initiatives, and that they engage in learning programmes on a continuous basis. As we move into a future where technology is becoming increasingly important, it is crucial that advisors are resourced and capacitated to fully leverage the potential that ICTs can bring for improving teaching and learning.

### **Purpose of policy brief**

This policy brief explores Subject Advisors' digital literacy and ways in which this could be strengthened. The findings and recommendations are drawn from the Subject Advisor Profiling Study that was conducted between July 2019 and October 2020. The study focused on profiling all General Education and Training (GET) Mathematics and English First Additional Language (EFAL) Subject Advisors nationally, in order to better understand their roles and responsibilities, their access to resources and support, and

also their professional development needs and experiences.

The research revealed that participating Subject Advisors were accessing ICT professional development programmes, but that these were not meeting their needs. Subject Advisors regarded ICT training as high priority and were not making the most out of digital tools and resources. Advisors also reported minimal or no initial job orientation training to equip them with the knowledge and skills to undertake their work. In terms of resources, access to laptops and computers was seen as satisfactory, but internet access, and in particular access to data for working remotely, were seen to be inhibiting factors.

The research puts forward a number of recommendations aimed at strengthening ICT integration and advisor capabilities. This brief outlines these recommendations and takes the discussion a step further to consider the ways in which policy can support the presented recommendations.

## **Research Methodology**

The Subject Advisor Profiling Study adopted a mixed method approach. Quantitative data were gathered from GET advisors across all 75 districts nationally using a form tool (608/608-100% response rate) and a survey instrument (366/608 advisors-60% response rate). In addition, 29 qualitative interviews were conducted with advisors and Chief Education Specialists (CES) (district and provincial officials) across 6 targeted districts in the Free State (FS), KwaZulu-Natal (KZN) and the Western Cape (WC) (Thabo Mofutsanyana, Xhariep, Pinetown, King Cetshwayo, Metro East & Overberg). The Centre for the Advancement of Science and Mathematics Education (CASME) undertook the study on behalf of the Department of Basic Education (DBE), in partnership with the National Education Collaboration Trust (NECT) and the Zenex Foundation.

## Research Results – What did we learn?

### ICT skills development is a high priority

The survey data show that nationally, the majority of advisors identified ICT skills development as the area that they felt they need the most support in. This area emerged as the area where advisors requested prioritised professional development support (295 advisors or 81% marked ICT Skills as 'High Priority'). ICT skills was also seen to be the most critical professional development need identified by interviewed advisors (16).

### ICT training programmes are accessible but need strengthening

The data show that ICT training is being provided and that this is accessible to advisors. For example, in the WC, 98% (55) of Subject Advisors that completed a survey had received ICT training within the past year, as had 89% (47) of KZN advisors, and 81% (59) of Gauteng advisors. The province with the lowest percentage of advisors reporting to have received recent ICT training was the EC (49% or 20).

Despite widespread participation in training opportunities, many advisors reported that the training did not meet their expectations. Satisfaction levels were lowest for advisors attending ICT workshops (36% or 97 advisors reported being dissatisfied). The interview data also reveal evidence of ineffective ICT training, where connectivity fails, as well as examples where advisors reported needing more training, and training on different programmes (e.g. Excel). Thus is it perhaps unsurprising that this area was the focus area where the majority of advisors requested prioritised professional development support.

### Low uptake and use of ICT platforms and tools

The survey data show further that advisors were not fully accessing and making use of different online platforms and tools in their work (see Figure 1). With the exception of

Whatsapp video calling, surveyed advisors reported low usage of other popular video conferencing platforms for work purposes, and 29% of surveyed Subject Advisors reported not having used any of the identified platforms.

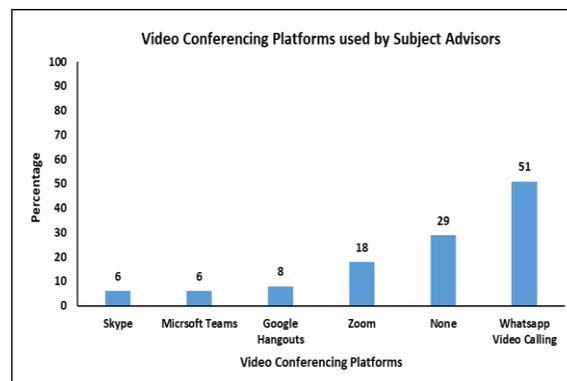


FIGURE 1: Video Conferencing Platforms used by Subject Advisors

Given that Microsoft Teams is the preferred video conferencing platform of the South African government, it is concerning that only 6% of the survey participants stated that they had used it.

Linked to these findings, it is also noted that 98% of Subject Advisors who completed the survey reported having used ICTs to support educators, although for the large majority, this again translates to using WhatsApp (93% have used WhatsApp groups) (see Figure 2).

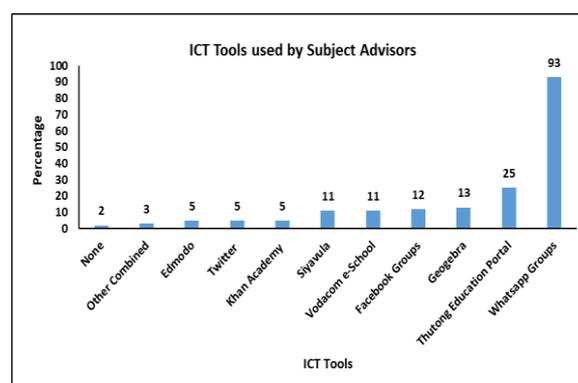


FIGURE 2: ICT Tools used by Subject Advisors

Although it appears that advisors were not making the most of ICT tools and platforms at the time of data collection, it is promising that there is an evolving usage of WhatsApp Groups; moving from general chat to more sophisticated use through sharing documents,

linking to resources, and sharing explanatory voices notes, for example.

These results can be explained in light of the resource constraints discussed below, but they also indicate that advisors do not feel confident in their abilities to use technologies; highlighting the importance of quality ICT training programmes. The fact that the majority of participants reported a desire for better ICT training shows an appreciation of the benefits of digital tools and resources. The challenge lies in improving advisors' exposure to digital tools and resources, as well as their capacity to effectively use ICTs and digital resources in their work. It must also be noted that the research fieldwork took place during the initial hard lockdown and onset of the Covid-19 pandemic in South Africa, and thus more proficient use of online tools and resources may be expected currently as advisors gain more ICT experience through practice.

### **Resource constraints**

In terms of resourcing, access to computers or laptops was reportedly satisfactory, and this is encouraging. Advisors interviewed in all districts (20) had access to either device, although some had only reportedly received laptops recently. Access to the internet varied, however, and in districts where advisors reported receiving data allowances, these were routinely described as insufficient (11), especially in current times when the Covid-19 pandemic resulted in more work being done

online. These findings are reinforced by the survey data; the majority of advisors reported having reliable access to a desktop or laptop computer (76%), however, access to the internet through the ethernet was reportedly more often unavailable (32%) or 'sometimes available' (34%), than being 'always available' (34%). Access to a data allowance is seen to be even more problematic with 63% of survey respondents reporting that a data allowance is 'unavailable' to them. Subject Advisors are fieldworkers who work remotely and accessing the internet is crucial to fulfilling their functions.

### **Subject Advisors could benefit from a strengthened job orientation programme**

Finally, the research findings reveal that there is room for improvement to the initial orientation provided to newly appointed advisors. Drawing from the interview data, some advisors (9) admitted that they had received no formal training or orientation when appointed, whilst others (11) explained that they had received some training (e.g. on the district organigram, Performance Management and Development Scheme (PMDS), or labour matters), but that this was insufficient. Although PEDs do reportedly provide induction for new advisors, this is unstructured and is not standardised. Informal peer mentorship proved valuable to those who did not receive a formal induction.

## **Key Findings Summary**

- Subject Advisors' reported ICT skills development as high priority
- Subject Advisors are accessing ICT training opportunities, however, the majority reported being unsatisfied with the quality of training programmes
- Subject Advisors need more exposure to digital tools and resources, and can do more to make the most of online platforms and tools in their work
- Subject Advisors reported satisfactory access to computers or laptops, however, many noted the need for better connectivity and data provision to work remotely
- Initial job orientation and training to newly appointed Subject Advisors needs to be improved

## Research Recommendations

Given these key findings, and the rapidly changing world we find ourselves in currently, the research puts forward a number of recommendations to improve ICT integration and digital literacy within the Subject Advisory service in South Africa.

### **Provide quality ICT training**

It is recommended that the education system (DBE and PEDs) relooks at the ICT training programmes they have on offer and invest more in quality courses and facilitators. The courses should focus on how to use digital tools and resources to enhance digital learning, and should strengthen the use of ICT tools (e.g. SA-SAMS and Tripe D Dashboard) that support evidence based planning and decision-making.

### **ICT enhanced development**

An audit of current facilitators and service providers should be undertaken to ensure that those providing training are up to the required standard. The Professional Development Framework for Digital Learning (2018) should guide the quality audit through its 13 competencies.

### **ICT enhanced educator support**

Subject advisors should be capacitated on how to effectively use ICTs to coach, mentor, and support schools and educators. By strengthening virtual support, advisors will be able to reach a greater number of educators in a more efficient and cost-effective manner; alleviating challenges associated with transportation and human capacity shortages within the system.

## Policy Implications: Call to Action

### **Develop an ICT and Digital Learning Framework for Subject Advisors**

The imperative to integrate ICTs into teaching and learning, and build digital literacy among educators, is clearly stated in government policy. The *National Development Plan* (2011),

### **Ensure adequate resourcing**

As fieldworkers, it is essential that advisors have access to a smartphone or laptop, as well as data, in order to complete their tasks effectively. Likewise, in times when advisors need to work remotely, they need to be equipped to do so. Equally important is ensuring that schools themselves are adequately equipped. The DBE and Subject Advisors should be confident and capacitated to mainstream full ICT integration in all schools.

### **Strengthening the use of Institutes and District Teacher Centres**

These institutes and teacher centres are hubs where internet connectivity should be strong and functional. Professional development for Subject Advisors and educators should be championed from these hubs, which can accommodate face-to-face, virtual and blended learning models and curricula.

### **Improve initial orientation support to advisors**

It is recommended that a standardised orientation and training programme for new Subject Advisors be developed and implemented (a draft course outline developed as part of the study is attached in the report as an appendix). It is important that training modules and content be future thinking. Advisors need agility to cope with disruptions and change. They need to learn how to learn in order to be able to build resilience. It is thus recommended that a crucial component of this initial induction focuses on ICT training and digital literacy, as well as the encouraging peer mentorship for ongoing support.

for example, highlights the importance of distance education, supported by ICTs, which has the potential to expand different learning opportunities and promote lifelong learning and continuous professional development. Similarly, the DBE's *Action Plan to 2019:*

*Towards the Realisation of Schooling 2030* (date) recognises the critical role that computer literacy and e-Education can play in improving teaching and learning outcomes, as well as improving parent and community participation, and the quality of the monitoring and support services provided to schools by district offices (see Goals 16, 20, 22 and 27). Other policy documents, such as *Integrated Strategic Planning Framework for Teacher Education and Development in South Africa (2011-2025)* (2011), *the White Paper on e-Education* (DBE, 2004), and the *Guidelines for Teacher Training and Professional Development in ICT* (2007), similarly recognise the importance of digital learning, the need to invest in digital technologies, and the importance of ensuring that educators are digitally literate (DBE, 2018).

Although it is possible to infer the required competencies and roles of advisors in relation to digital teaching and learning from existing policy, this involves a layer of interpretation as the policy directives focus primarily on educators – how they can support themselves and/or how they can be better supported by others (such as education leaders, teacher trainers, tertiary education institutions, and curriculum specialists) to reach policy goals. Given this gap, it is recommended that a specific digital learning framework for Subject Advisors should be developed. The proposed framework should draw on the Technological Pedagogical Content Knowledge (TPACK) Framework and should be appropriate to the South African schooling context. Existing research, including this study, can be used to develop practical steps for advisors and other relevant stakeholders to address deficits in digital literacy and identify means to strengthen digital learning through ongoing professional development.

### **Establish Professional Learning Communities (PLC) for Subject Advisors**

The concept of PLCs should not be limited to educators. The methodology and associated benefits are transportable and can be

harnessed by the South African Subject Advisory service. The research findings presented in this brief further support the argument to establish Subject Advisor PLCs, in that advisors drew attention to the positive impact that peer mentorship and peer learning can play in supporting newly appointed advisors navigate their roles and responsibilities.

In relation to the pressing need to enhance digital learning, goal specific PLCs could be established that focus on ICT integration and digital literacy. To expand the reach of these PLCs, and to keep the operational costs minimal, a blended approach could be promoted, whereby advisors meet and share information online, as well as face-to-face where possible. Working online will further strengthen advisors' ICT skills through practice. The *Professional Learning Communities: A guideline for South African schools* (DBE, 2015) document is a useful starting point for the formulation of a similar guidelines for advisor PLCs.

### **Ensure ongoing monitoring and strengthening of digital literacy skills for Subject Advisors and educators**

Government policy is clear on the need for educators to be digitally literate. The *Professional Development Framework for Digital Learning* (DBE, 2018) takes this mandate further by identifying 13 competencies (along with associated toolkits, indicators and self-assessments) to guide educators and their support structures in assessing their digital competencies with the view to strengthen any identified gaps. This brief recommends that these competencies, and the tools to measure their attainment, should also be applied to Subject Advisors.

It is imperative that advisors have superior ICT skills to that of educators, so that they can lead educators' development in this area. The research shows that the cohort of GET advisors selected for the study had extensive prior work experience as educators and in

curriculum leadership positions. Despite this extensive experience, the results show a poor uptake of ICTs and the need for quality professional development support. Why is the foundational ICT knowledge and capacity of advisors insufficient?

To respond to this question, it is critical that better mechanisms are put in place to assess this knowledge and plug gaps. One way to do this would be to test advisors on their ICT and digital literacy skills as part of their selection and appointment process. The research shows that computer literacy is a required skill for new appointments, but this needs to be formally tested before advisors are appointed, with the view that their foundational skills can be enhanced through a structured orientation programme, and through ongoing professional development initiatives, as described in their brief.

Secondly, taking a long term view that recognises that advisors start out their careers as educators, it is equally important to strengthen mechanisms to evaluate the extent to which policy directives around digital learning are being integrated into teacher training courses and professional development programmes. The *Initial Teacher*

*Education Research Project* report (JET, 2016) highlights the lack of a common or core national Initial Teacher Education (ITE) curriculum. The ITE programmes assessed in this study did include a number of compulsory modules that were similar in name and/or focus, however, universities and academics were seen to have significant freedom to design the exact content of their modules. Where ICT and digital skills training is placed in these courses, and how best it should be taught and integrated into existing courses, needs further investigation. It is recommended that a process to develop a national course framework for new teacher training be developed, and that this process and its policy outcomes take particular cognisance of the need to strengthen ICT skills and digital literacy in educators.

## References

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