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# EdTech in Jordan's Schools: *Findings from Jordan's 2018 National Teacher Survey*

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## Disclaimer



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# Education Technology in Jordan's Schools: *Findings from Jordan's 2018 National Teacher Survey*

**Key findings**

1. Ministry of Education (MoE) teachers reported the least regular use of technology in schools (27-33%), when compared to UNRWA (47-48%) and private school teachers (56-64%).
2. Principal reports reveal MoE schools are the least equipped with technology infrastructure, while private schools were the most equipped with a variety of functioning devices.
3. While the majority of teachers reported using computers or the internet to view videos in class within the 3 months prior to survey administration, fewer teachers reported using desktops, laptops and tablets for learning activities in the classroom within that timeframe.
4. Teacher reports reveal there is high utilization of computers or the internet for carrying out administrative tasks; with approximately 90% of teachers reporting such use in the 3 months prior to survey administration.

***What does it mean to use technology in education?***

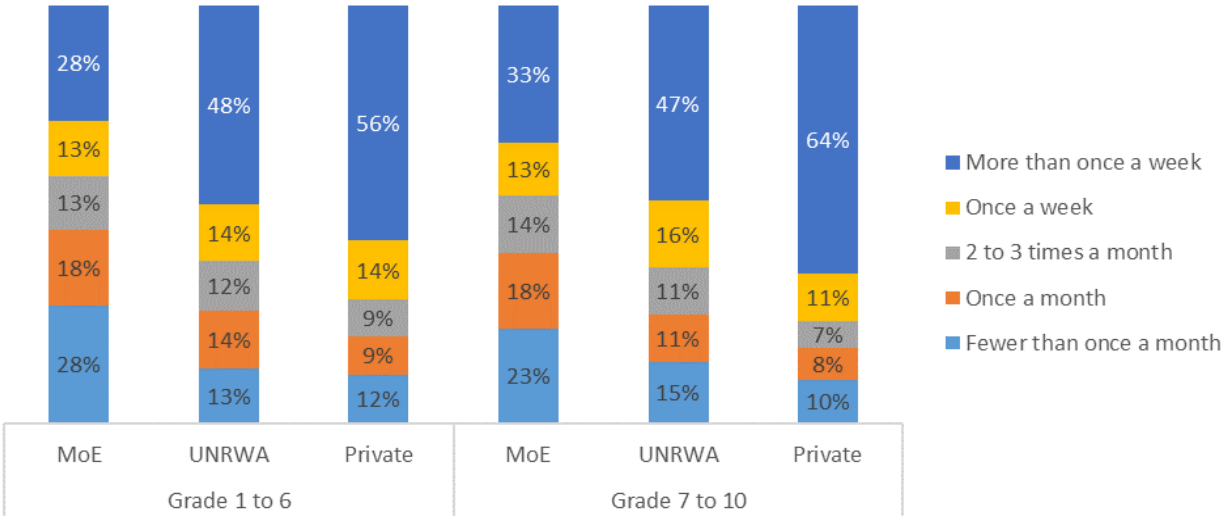
Technology use does not equal good teaching or student learning. In fact, misuse of technology can actually be a detriment to student learning.[i] There are many factors that affect the use of technology, such as teacher beliefs, the quality and availability of technology infrastructure, and lesson time spent to set up technology or move to another technology-enabled room.[ii] Hence, technology use is not necessarily an indication of a teacher's technological savviness or willingness to use technology. Technology use can also mean different things. A teacher using a video in class could either be to illustrate a point, or to fill lesson time. This is essential to consider prior to making generalizations about the nature of technology use reported in this brief around EdTech in Jordan's schools. Below are the key findings from the National Teacher Survey regarding technology use in Jordan's schools, followed by questions left unanswered and policy recommendations.[iii]

***Technology use in schools was not unfamiliar to teachers***

For many teachers, technology use in schools was not unfamiliar, especially in UNRWA and private schools. A large number of teachers reported regular use of technology in schools (Figure 1). About half of private and UNRWA school teachers reported using technology in schools more than once a week. For MoE teachers, that was lower at 27% for grade 1-6 teachers and 33% for grade 7-10 teachers. As aforementioned, use of technology could refer to several things. Teachers may consider use of technology as using the computer to fulfill administrative tasks, for communicating with other teachers, or for educational purposes with their students. Findings from this question alone do not shed light on

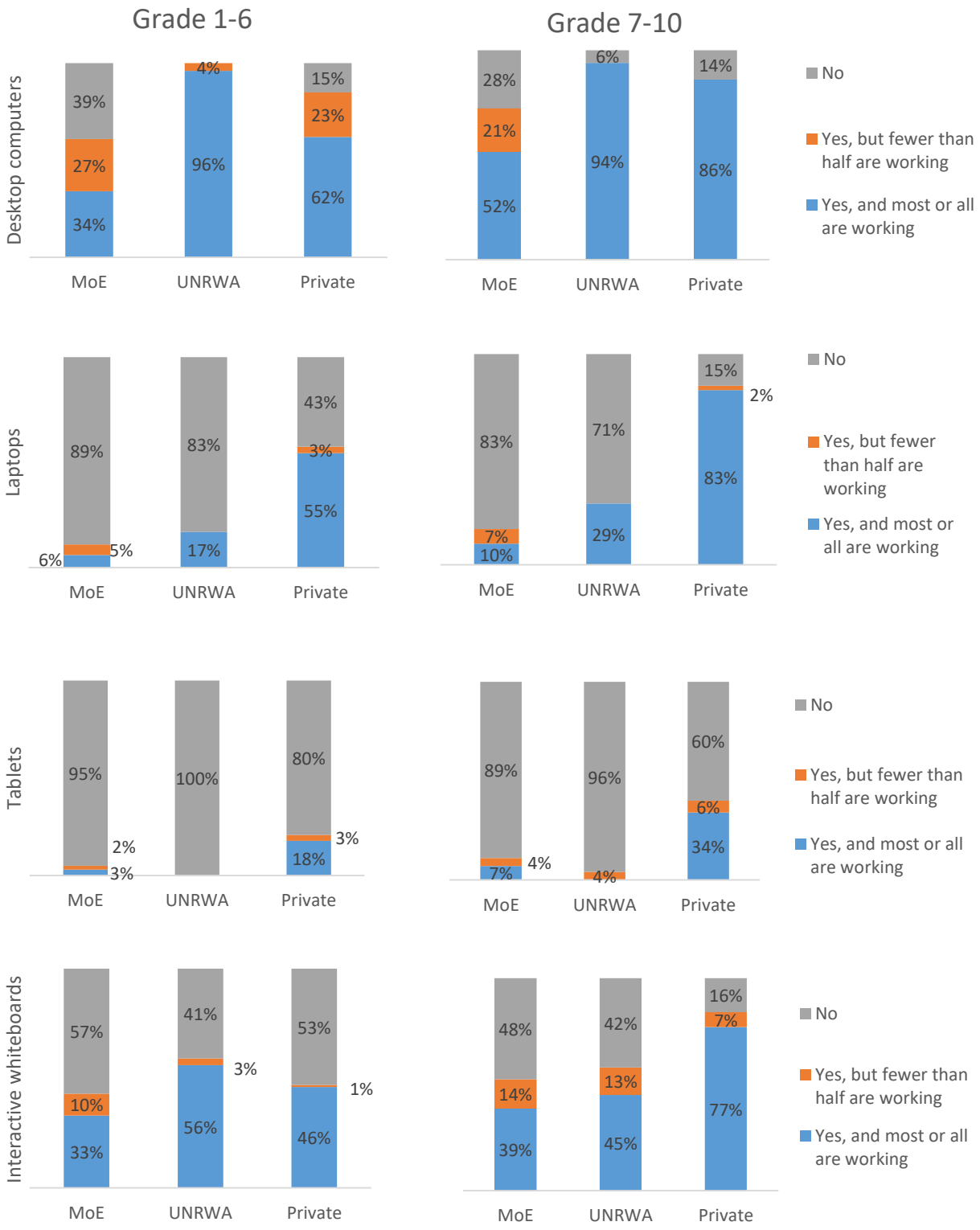
the nature of technology use, but the frequency of use in general. Nature of use is explored in the following sections of the brief.

Figure 1: *Teacher reported frequency of computer, laptop or tablet use at school, by teacher grade level and school type*[iv]




Availability of technology infrastructure is one explanation for the reported differences in technology use. The principal survey shows MoE schools were the least equipped with technology infrastructure, while private schools were the most equipped with a variety of different functioning devices. More than 8 in 10 grade 7-10 private school principals reported that laptops are available at the school and almost all are working, compared to 1 in 10 MoE and fewer than 1 in 3 UNRWA principals (Figure 2). Other sources for this discrepancy could be work practices and school policies regarding technology use.

Figure 2: *Principal reported availability of technology devices at the school, by school type, device and grade level*[v]



***The most common reported use of computers or the internet was to carry out administrative tasks.***

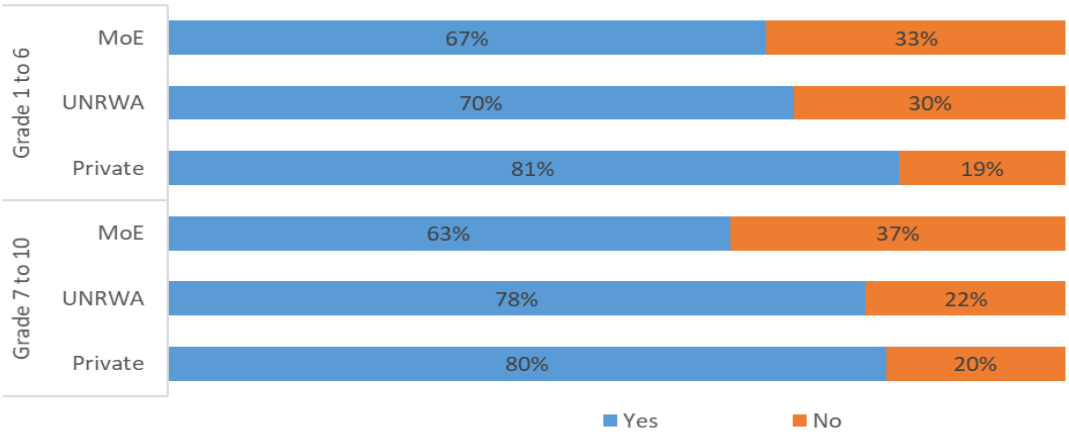
Unlike pedagogical use of technology, administrative use is required by MoE teachers.[vi] Approximately 90% of teachers reported having used technology in the last 3 months – prior to survey administration - for administrative tasks. While the findings indicate high levels of usage and may suggest technical capability, anecdotal evidence from MoE school staff points to a different reality. Interviews with MoE teachers and principals, and school visits[vii] conducted by QRF have shown there were multiple cases of teachers relying on a single teacher (typically the computer teacher) to perform administrative tasks on the computer. On some occasions, the teachers were required to visit a neighboring school with better infrastructure to perform these tasks.[viii] As such, if future research aims to explore teachers' capacity in using technology, exploring technology use alone may not be the best indicator of teacher capacity.

***The highest reported pedagogical use of computers or the internet in schools was to view videos in class.***

More than 6 in 10 MoE, 7 in 10 UNRWA and 8 in 10 private school teachers reported using computers or the internet to view videos in class in the 3 months prior to survey administration (Figure 3). Surprisingly, even teachers of grades 1-6 reported high rates of technology usage for videos, who typically have lower access to technology than their counterparts who teach older grades (Figure 2).

Additionally, MoE school teachers were less likely to report use of technology for showing videos in class than their counterparts at UNRWA and private schools (Figure 3). This may be due to the lack of technology available in MoE classrooms.[ix] Principal reports show internet access is limited in MoE classrooms; with only 10% of grade 1-6 and 6% of grade 7-10 MoE principals reporting its availability in the classroom. Questions, therefore, arise regarding the nature and source of the technology used in classrooms among teachers who report using technology, and whether such sources can be capitalized on in other situations.

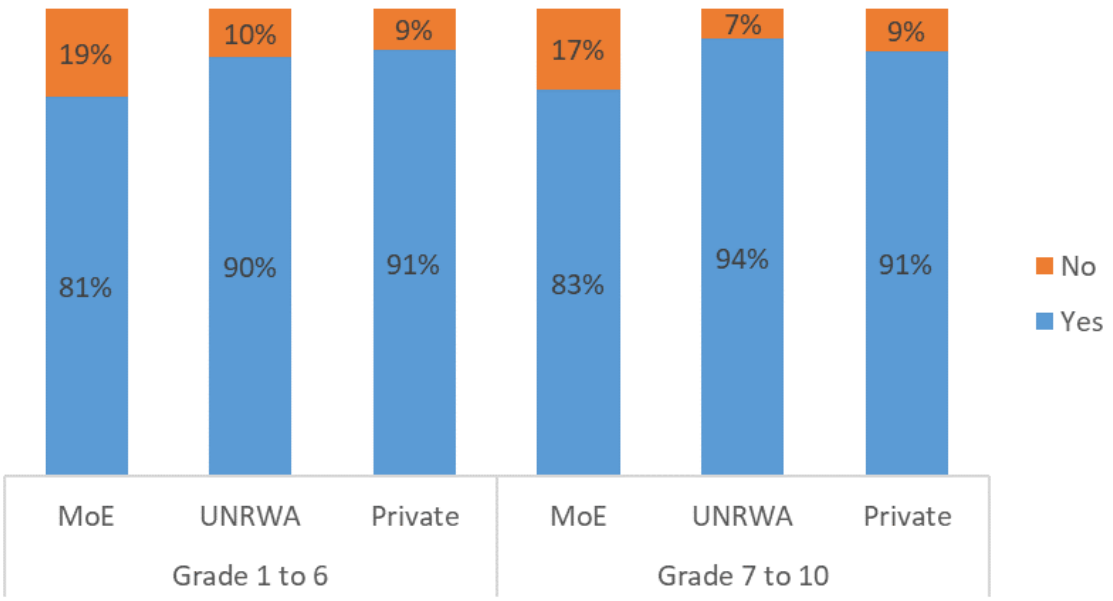
Figure 3: *Teacher reported use of a computer or the internet to use educational videos for classroom viewing, by school type and grade level*




***Teachers reported using computers and the internet to search for classroom materials.***

One of the most commonly reported uses of technology by teachers was searching the internet for content to be used in the classroom, with more than 8 in 10 reporting doing so over the past 3 months prior to survey administration (Figure 4). This is potentially facilitated by the availability of internet at schools. The majority of principals across all school types reported internet is available at the school; 100% of grade 1-6 and 7-10 UNRWA principals, 73% of grade 1-6 and 86% of grade 7-10 MoE principals, in addition to 80% of grade 1-6 and 95% of grade 7-10 private school principals. While it is unclear what computer/internet utilization to search for classroom material looks like on the ground, it is evident the internet is a potential source for teaching material. This has a direct impact on the design of teacher-focused interventions. Understanding the sources teachers rely on can provide a feasible, low-cost way to reach a large number of teachers.

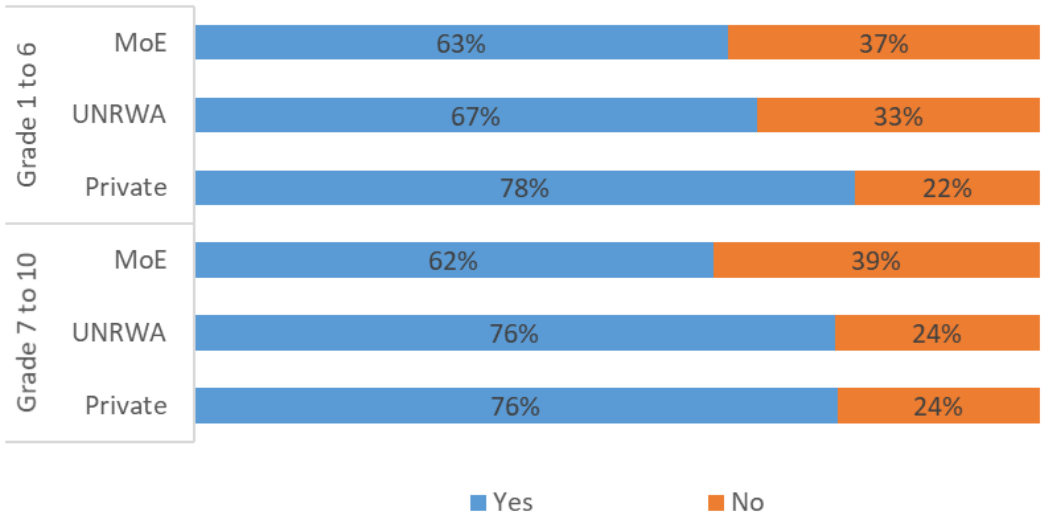
Figure 4: *Teacher reported utilization of computers or internet to search for content to be used in the classroom over the last 3 months prior to survey administration, by school type and grade level*




***A common practice among teachers was sharing educational content with their colleagues.***

More than 6 in 10 teachers reported using a computer or the internet to share educational content with other teachers, with slight variations based on school type and grade levels taught (Figure 5). This data hint towards the potential acceptance of online professional development and learning networks. However, this raises questions regarding the source of the material that is shared, and what sources teachers consider reliable.

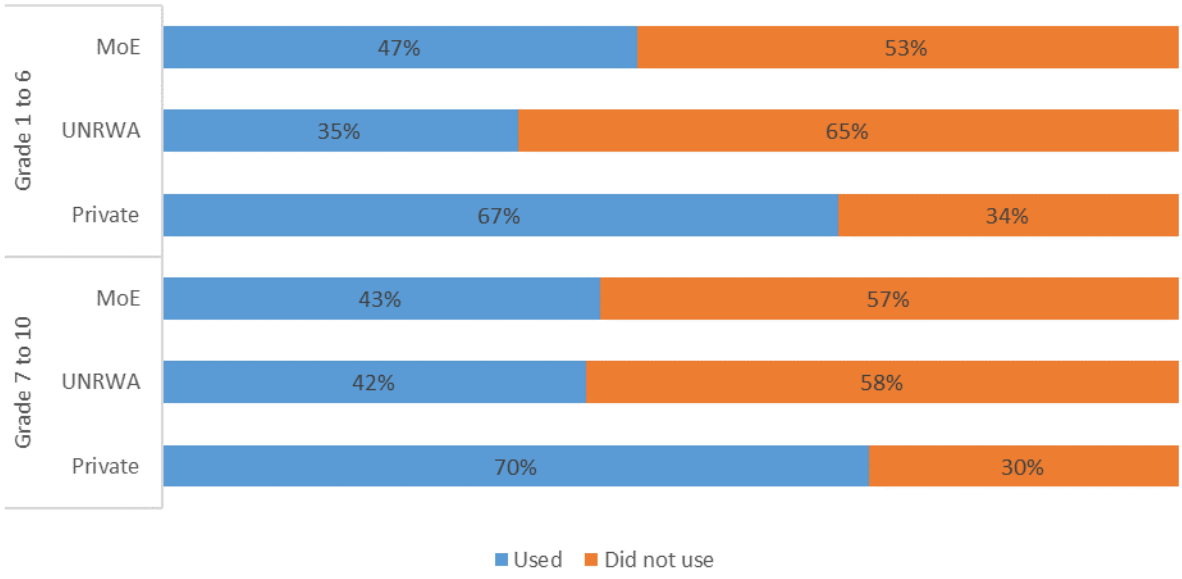
Figure 5: *Teacher reported use of a computer or internet to share educational content with other teachers over the last 3 months prior to survey administration, by school type and grade level*



***Use of computers or the internet to view videos in class was more common than the utilization of laptops, desktops or tablets for learning activities in the class.***

Desktops, laptops and tablets were not being used often for learning activities in MoE and UNRWA classrooms. Fewer than half of MoE and UNRWA teachers reported the use of these devices for learning activities in the classroom in the last three months (Figure 6). Since the survey specified the types of devices used in each question, the survey may not have been able to capture teachers' full utilization of different technologies for learning activities in the class. For example, many teachers reported commonly using computers or the internet to view videos in class (Figure 3), which may be considered a learning activity. As such, looking at both aforementioned findings may suggest teachers are using other devices, such as interactive whiteboards or their personal smartphones - rather than computers or tablets - for watching videos in classrooms, and potentially other learning activities. It is essential to extensively explore the types of devices teachers are using, so that infrastructure investments cater to teachers' needs. Thus far, nationwide technology infrastructure investment has largely been limited to computer labs and not the classroom. Findings from the principal survey corroborate this. The vast majority of principals across all school types report the availability of internet in the computer lab, while very few report its availability in the classroom.

Figure 6: *Teacher reported use of desktops, laptops or tablets to carry out learning activities with students in class in the last 3 months prior to survey administration, by grade level and school type*



***Email use was not a pervasive practice with MoE teachers, but was a lot more common across private and UNRWA teachers.***

More than 4 in 10 grade 7-10 MoE teachers reported using the computer or internet to send emails, compared to 76% of UNRWA and 71% of private school teachers.[x] Social media platforms such as Facebook, which are commonly used in Jordan, have previously required emails to sign up. Given the ubiquity of Facebook in Jordan,[xi] many Jordanians have email accounts. However, as this statistic implies, having email accounts does not mean that emails are used regularly. Understanding email usage and, in a broader sense, teacher communication habits, has profound impact on methods that should be used when communicating with teachers.

**Further questions**

1. **For what purposes does the technology infrastructure exist, and how can one evaluate its efficacy?**

   Technology can serve multiple purposes within schools - from performing administrative work to achieving pedagogical goals. Before assessing teachers' use of technology, it is essential to better understand *for what purpose* they should be using it. This would provide better interpretation of the survey data. If the infrastructure was purely put in place to support administrative tasks, the efficacy of the technology would be far greater than if it had been put in for use in the classroom.

2. **How do teachers define "use"?**

   There is no clarity on what teachers define as "use" of technology. For example, "searching for online resources" could mean searching on online forums, WhatsApp groups, a simple Google search, or even daily in-depth research on latest teaching practices. Focus groups to better understand what these practices might be will not only provide a better understanding of the data, but could also provide clearer avenues to explore for program development. They might give insight into the best ways to influence in-classroom behavior or to communicate with teachers.

3. **What alternatives are used when technology is not available from/at the school?**

   Given the data from principals on MoE schools, reported use of technology - particularly in the classroom - is much higher than the availability of that technology. This may suggest that the Bring Your Own Device model is fairly common among MoE schools. Further research into what alternatives teachers use to compensate for the lack of technology in their schools may be beneficial, to better understand the nature of education technology in Jordan's schools.

4. **What factors, other than infrastructure, influence teachers' technology use?**

Of the most interesting findings highlighted in this brief is that there was little to no difference in technology use between teachers who have received pre-service training and those who have not. It would be important to explore what factors, if any, aside from infrastructure are influencing technology use in Jordan's schools.

**Policy recommendations**

- **Explore the potential of the Bring Your Own Device model for teachers.** This is particularly relevant given the discrepancy between available technology infrastructure and technology use, implying that teachers are already using their own devices for pedagogical use. Policies should be set in place to manage and encourage this use.
- **Integrate use-based indicators to measure infrastructure performance.** While it is important to keep track of the available technological infrastructure, the devices are only as important in so far as they are used. As the use-based questions have shown, there is often a discrepancy between reported hardware availability and reported teacher use. Coupling both access and usage indicators will allow for a more nuanced understanding of education technology and provide deeper policy insights.
- **Explore alternative methods of communicating with teachers.** Gaining a deeper understanding of teachers' social media and internet usage can provide great insight into the most effective methods of communicating with teachers. Regular WhatsApp messages to be shared among teacher groups may provide an effective model to share important information, impactful teaching habits, or gain regular insight into teacher satisfaction might prove a light-touch, low cost way of including teachers in national interventions.
- **Develop systematic approaches to reinforce and support the use of technology in schools and classrooms.** The survey data suggests there is no systematic way for technology use in schools and classrooms, and much of the technology use is at the discretion of teachers. One opportunity to develop such an approach may be embedding technology use in the new curricula, which are currently under reform in the Kingdom. This can ensure technology use is more systematic across different schools and teachers. However, this would need to come hand-in-hand with improving technology infrastructure in schools.

The 2018 National Teacher Survey (NTS) is a comprehensive nationally representative survey, conducted through a partnership between Jordan's Ministry of Education (MoE) and the Queen Rania Foundation for Education and Development (QRF), with funding from the Foreign, Commonwealth and Development Office (formerly the Department for International Development) and Global Affairs Canada. The survey design and instruments were aligned with the Organization for Economic Cooperation and Development's (OECD) Teaching and Learning International Survey (TALIS), allowing comparisons to be made with other TALIS-participating countries. Approximately half of the questions of the survey were borrowed from the TALIS trend questions. The remainder were tailored to Jordan's context.[xii]

The survey explored Jordanian teachers' educational backgrounds, experience, training, attitudes, pedagogical practices, challenges and experiences serving refugee students in various contexts. School and classroom climates were also explored. To explore these areas, 5,722 teachers of basic-level education (i.e. grades 1-10) were surveyed, along with their school principals from 361 MoE, private and United Nations Relief and Works Agency (UNRWA) schools. The sample was specific to the International Standard Classification of Education (ISCED) level 2 to allow for comparison with TALIS. This was achieved by disaggregating schools into two groups: schools serving grades 1-6 (ISCED level 1) and those serving grades 7-10 (ISCED level 2). The sampling also allowed exploration of teachers serving in various refugee contexts, including Syrian refugee camps, Syrian second shift schools, schools with Syrian refugees integrated in host community classrooms, and UNRWA schools serving Palestine refugee children.

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[i] Mueller, P. A., & Oppenheimer, D. M. (2014). The pen is mightier than the keyboard: Advantages of longhand over laptop note taking. *Psychological Science, 25*(6), 1159-1168. http://dx.doi.org/10.1177/0956797614524581

[ii] Based on school visits conducted as part of the review of the National ICT in Education Strategy

[iii] The questions used in the survey relating to teacher's technology utilization were adapted from the ICT in Education Brazilian Survey, from Cetic.br (2018).

[iv] Fewer than once a month could mean usage once every 2 months or once every 6 weeks, etc.

[v] Totals exceed 100% due to rounding.

[vi] From discussions taken place with MoE staff as part of the review of the National ICT in Education Strategy

[vii] The school visits were conducted as part of the review of the National ICT in Education Strategy

[viii] Ibid v.

[ix] Based on conversations as part of the review of the National ICT in Education Strategy with the MoE, who reported that with the exception of computer labs, most other technology in schools come from ad hoc pilot projects from third party organizations.

[x] Similar trends are evidenced for grade 1-6 teachers.

[xi] Information from analyzing the raw data of Ipsos' Technology Tracker in 2016

[xii] Information regarding the full survey methodology can be found on the QRF website.