HIGHER EDUCATION INNOVATION NEWSLETTER
Higher Education Innovation Newsletter (HEI Newsletter) is sponsored by International Centre for Higher Education Innovation under the auspices of UNESCO (UNESCO-ICHEI). This newsletter aims to disseminate new thinking, ideas, technology and methods of ICTs in higher education. It covers a wide range of topics such as heated issues, policies, strategies, cases in practice, and international projects in relation to online education, mobile learning, distant education, MOOC, open education resources, etc. It also provides updates on UNESCO-ICHEI, including projects, meetings and conferences, activities, and communication.

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CONTENTS

[Editor's Note] UNESCO believes that ICT can contribute to achieving universal education worldwide, through the delivery of education and training of teachers, improved professional skills, better conditions for lifelong learning, and the potential to reach people outside the formal education process. UNESCO takes a holistic and comprehensive approach including policy, teacher education, mobile learning, open educational resources, electronic learning, lifelong learning, education management information system and ICT in education prize, which can promote ICT development in education. Access, inclusion and quality are among the main challenges they can address.

ISSUE 4 will focus on reporting Mobile Learning related policy reports and Mobile Learning Week. This issue will also report UNESCO-ICHEI’s recent activities.

02 MOBIL LEARNING
- P03 Report: Policy Guidelines for Mobile Learning
- P27 Report Excerpt: Reading in the Mobile Era
- P41 Mobile Learning Week

48 CENTRE ACTIVITIES
- P49 Deputy Director of UNESCO-ICHEI attended Conference on Higher Education in Eastern Africa
- P50 Upcoming Events: June 15th-16th, 2017
  UNESCO Regional Conference on Quality Assurance of Higher Education in Asia-Pacific
MOBIL LEARNING
what is mobile learning?

Mobile learning involves the use of mobile technology, either alone or in combination with other information and communication technology (ICT), to enable learning anytime and anywhere. Learning can unfold in a variety of ways: people can use mobile devices to access educational resources, connect with others, or create content, both inside and outside classrooms. Mobile learning also encompasses efforts to support broad educational goals such as the effective administration of school systems and improved communication between schools and families.

Mobile technologies are constantly evolving: the diversity of devices on the market today is immense and includes, in broad strokes, mobile phones, tablet computers, e-readers, portable audio players and hand-held gaming consoles. Tomorrow the list will be different. To avoid the quicksand of semantic precision, UNESCO chooses to embrace a broad definition of mobile devices, recognizing simply that they are digital, easily portable, usually owned and controlled by an individual rather than an institution, can access the internet, have multimedia capabilities, and can facilitate a large number of tasks, particularly those related to communication.
Another defining attribute of mobile technology is its ubiquity. There are over 3.2 billion unique mobile phone subscribers worldwide, making mobile phones the most widely used interactive ICT on Earth. In developed countries 4 out of 5 people own and use a mobile phone, and while this ratio is significantly lower in developing countries (2:5), these countries are also experiencing the fastest growth in penetration rates. By 2017, it is estimated that approximately half the people living in developing countries will have at least one active mobile phone subscription (GSMA, 2012). Newer mobile technologies such as tablet computers are further changing the ICT landscape. Industry experts predict that the sales of touch-screen tablets are likely to parallel or surpass purchases of PCs as early as 2016 (NPD, 2012). Already several countries, including Turkey and Thailand, have announced ambitious plans to roll out tablet computers in schools.

Mobile learning is a branch of ICT in education. Yet, because it employs technology that is more affordable and more easily self-procured and managed than tethered computers, it requires reconceptualizing traditional models of technology use and implementation. Where computer and e-learning projects have historically been constrained by hardware that is expensive, fragile, heavy and kept in tightly controlled settings, mobile learning projects tend to assume that students have uninterrupted and largely unregulated access to technology. The ever-increasing availability of mobile technologies requires policy-makers to revisit and rethink the potentials of ICT in education. These guidelines seek to assist this endeavor by detailing several of the unique benefits of mobile learning and then articulating high-level policy recommendations.
Far from being a theoretical possibility, mobile learning is an on-the-ground reality: students and teachers from Mozambique to Mongolia are using mobile devices to access rich educational content, converse and share information with other learners, elicit support from peers and instructors, and facilitate productive communication.

While mobile technology is not and never will be an educational panacea, it is a powerful and often overlooked tool – in a repertoire of other tools – that can support education in ways not possible before.

This section describes how mobile technologies can help UNESCO Member States now and in the future.

**NO1. Expand the reach and equity of education**

Today mobile technologies are often common even in areas where schools, books and computers are scarce. As the price of mobile phone ownership continues to decline, more and more people, including those in extremely impoverished areas, are likely to own and know how to use a mobile device.

A growing number of projects have shown that mobile technologies provide an excellent medium for extending educational opportunities to learners who may not have access to high-quality schooling. For example, the Bridge IT initiative in Latin America and Asia brings up-to-date content that supports inquiry-based learning pedagogies to geographically isolated schools via mobile networks. These networks provide internet access to institutions that do not have fixed-line connections. Another large project funded by the government of Colombia is providing inexpensive mobile devices equipped with educational software to 250,000 people in an effort to eradicate illiteracy.
These projects improve educational equity by introducing new pathways for learning and improving existing educational offerings. By utilizing the unique affordances of mobile devices, these projects do not replace but rather complement existing educational investments such as textbooks, infrastructure, hardware, training and content.

NO2. Facilitate personalized learning

Because mobile devices are generally owned by their users, highly customizable and carried throughout the day, they lend themselves to personalization in a way that shared and tethered technologies do not. Applications on mobile phones and tablets can, for example, select among harder or easier texts for reading assignments depending on the skills and background knowledge of an individual user. This technology helps ensure that students are not held back or left behind by larger groups. While PCs have offered similar affordances for years, this technology came with serious limitations: learners could not easily carry computers to and from educational centres, and many learners could not afford them, so the technology – even when it was available in computer labs – was not truly personal. Mobile technologies, by virtue of being highly portable and relatively inexpensive, have enormously expanded the potential and practicability of personalized learning.

Additionally, as the amount and type of information mobile devices can collect about their users increase, mobile technology will be better able to individualize learning. For instance, if a student is a visual learner with an interest in maps, historical information might be presented on an interactive atlas that can be manipulated on a touch-screen device. A student with different learning preferences might be presented similar information in a very different way, such as on a timeline indicating
important events with links to informational videos and primary-source documents. Over time, personal technology will supersede one-size-fits-all models of education.

Cumulatively, intelligent mobile devices, many of which are already in the pockets of millions of people, can give students greater flexibility to move at their own pace and follow their own interests, potentially increasing their motivation to pursue learning opportunities.

**NO3. Provide immediate feedback and assessment**

A number of projects have demonstrated that mobile technologies can streamline assessments and provide learners and teachers more immediate indicators of progress. While historically learners have had to wait days or weeks to get guidance regarding their comprehension of curricular content, mobile technologies, thanks to their interactive features, can provide instant feedback. This allows learners to quickly pinpoint problems of understanding and review explanations of key concepts. A number of mathematics applications available for smartphones as well as basic mobile devices show learners, step-by-step, how to correctly solve questions they might have answered incorrectly. This functionality helps ensure that assessments are used to advance student learning rather than simply rank, reward and punish performance.

Mobile technologies can also make educators more efficient by automating the distribution, collection, evaluation and documentation of assessments. For example, a number of mobile applications make it easy for teachers to administer short quizzes to ensure that learners completed a given reading assignment. These programs typically support multiple operating systems, allowing learners to complete the
quiz using their personal mobile device, rather than one provisioned by an institution. The quizzes can be assessed instantaneously and, when desired, synched to a grade book – no paper, red pens or laborious data entry necessary. By speeding up or eliminating tedious logistical tasks, educators can spend more time working directly with students.

**NO4. Enable anytime, anywhere learning**

Because people carry mobile devices with them most of the time, learning can happen at times and in places that were not previously conducive to education. Mobile learning applications commonly allow people to select between lessons that require only a few minutes to complete and lessons that demand sustained concentration over a period of hours. This flexibility allows people to study during a long break or while taking a short bus ride.

Mobile devices also have a track record of reinforcing retention of essential information. A number of applications – building on theories that human forgetfulness follows certain patterns – employ carefully calibrated logarithms to schedule reviews of concepts at optimal times, after information has been learned and just before it is likely to be forgotten, thereby facilitating the movement of information from short-term to long-term memory. In order for these programmes to work effectively, learners need to carry the technology with them throughout the day; mobility is crucial.

**NO5. Ensure the productive use of time spent in classrooms**

UNESCO’s investigations have revealed that mobile devices can help instructors use class time more effectively. when learners utilize mobile
technology to complete passive or rote tasks such as listening to a lecture or memorizing information at home, they have more time to discuss ideas, share alternative interpretations, work collaboratively, and participate in laboratory activities at school and other learning centres. Far from heightening isolation, mobile learning allows people increased opportunities to cultivate the complex skills required to work productively with others.

A model gaining traction in North America ‘flips’ classrooms by asking learners to watch informational lectures outside of school – usually on mobile devices carried with learners wherever they are – so that more class time can be devoted to the application (as opposed to the mere transmission) of disciplinary concepts. Tasks that were once schoolwork become homework, and schoolwork places greater emphasis on the social aspects of learning.

NO6. Build new communities of learners

Mobile devices are regularly used to create communities of learners where they did not exist before. Yoza Cellphone Stories, a project in South Africa, allows young people to read and comment on short stories using inexpensive mobile phones, effectively creating a community of readers in areas where physical books are scarce. The Pink Phone project in Cambodia trains women leaders to use mobile handsets to share ideas, information and resources in a virtual space. Women draw on the expertise of females in their virtual network to assist people in their physical communities. Massive open online course systems or MOOCs have experimented with a variety of methods to encourage productive communication between learners taking the same class. Other platforms provide focused job training to students with similar
vocational interests. Apart from making first-rate instruction available to far more people than traditional brick-and-mortar institutions can support, these systems – which are increasingly tailored for use on mobile devices – help students pose and answer questions, complete collaborative projects, and, more generally, engage in the social interactions foundational to learning.

NO7. Support situated learning

While formal education has historically been confined to the four walls of classrooms, mobile devices can move learning to settings that maximize understanding. Just as museums regularly offer ‘audio guides’ that allow visitors to learn about particular artefacts or works of art while viewing them in three dimensions, pioneering developers have made similar ‘site-specific’ mobile applications to facilitate learning in disciplines as varied as history and chemistry. A number of applications guide users through cities, pointing out important architectural landmarks and providing information about their design, construction and significance. Other applications allow botany students to learn about particular plants while inspecting them in their natural habitats. Mobile devices can, in essence, give literal meaning to the maxim ‘the world is a classroom’.

In North America and Europe several projects have employed mobile devices to ‘augment’ reality. Relying on location-aware technology, devices reveal processes and structures in the physical world that cannot be seen visually. For example, software available on tablet computers helps engineers-in-training ‘see’ the location of structural supports inside specific bridges when they are observed from different angles in the field.
NO8. Enhance seamless learning

Cloud computing and cloud storage streamline education by providing students continuous and up-to-date learning experiences regardless of the hardware they use to access content. Because educational resources and information about a learner’s progress are stored on remote servers rather than on the hard drive of a single device, students can access similar material from a wide variety of devices (including desktop computers, laptops, tablets and mobile phones), utilizing the comparative advantages of each. For example, a tethered computer with a large screen and full-sized keyboard might be better for composing essays and conducting extensive internet research, whereas a mobile device might be superior for inputting bits of information collected in the field and noting exploratory ideas. Software is able to synchronize work across devices, so students can pick up on a mobile device where they left off on a desktop computer and vice versa, thereby ensuring continuity of the learning experience. Also, because computing is increasingly moving to the cloud, devices do not necessarily need expensive processors to utilize sophisticated software; they simply need to provide a learner a connection to the internet.

NO9. Bridge formal and informal learning

Mobile devices facilitate learning by blurring boundaries between formal and informal education. Using a mobile device, students can easily access supplementary materials in order to clarify ideas introduced by a classroom instructor. As an illustration, numerous language learning applications ‘speak’ to students and ‘listen’ to them via the speakers and microphone embedded in mobile phones. Previously, this type of speaking and listening practice required the presence of a teacher.
Additionally, learners who strike up conversations with people fluent in a target language can use a mobile device to translate the meaning of unfamiliar words and phrases, thus supporting communication. The mobility and relative unobtrusiveness of the device makes this process fairly straightforward; it does not disrupt conversation in the same way that a paper-and-ink dictionary or laptop computer might. Many translation applications allow learners to flag difficult words for later review, and confusing word combinations can be brought to the attention of a classroom instructor at a later date. Mobile technology helps ensure that learning which happens inside and outside classrooms is mutually supportive.

NO10. Minimize educational disruption in conflict and disaster areas

Because mobile infrastructure is generally easier and quicker to repair following a disaster or conflict than other infrastructure, such as roads and physical schools, mobile learning holds special application for learners living in post-crisis areas. For example, in the aftermath of a flood or war students can in many instances utilize educational resources and connect with teachers and peers via mobile devices, even when traditional schools and universities are closed or unsafe. Research has indicated that mitigating educational disruptions in post-conflict and post-disaster areas speeds up recoveries and helps heal fragile societies. Mobile devices can help ensure the continuation and continuity of education during times of crisis.

NO11. Assist learners with disabilities

Thanks to the integration of text-enlargement, voice-transcription,
location-aware and text-to-speech technologies, mobile devices can dramatically improve the learning of students with physical disabilities, in resource-poor and resource-rich communities alike. The Cambridge to Africa Network, for example, recently launched a programme that encourages the participation of deaf children enrolled in Ugandan schools. Students use mobile devices and an innovative SMS system to gain access to the curriculum and interact with peers. For visually impaired learners, freely available software can, for example, turn a mobile phone equipped with a camera into a tool that reads text aloud. Mobile technology can also aid students with learning disabilities. Researchers at the Harvard-Smithsonian Center for Astrophysics recently discovered that text can be reformatted on small-screen digital devices to improve the reading speed and comprehension of individuals with dyslexia. Findings like these have prompted the creation of mobile applications tailored for people who struggle to read due to a disability.

**NO12. Improve communication and administration**

Because messages sent by mobile devices are generally faster, more reliable, more efficient and less expensive than alternative channels of communication, learners and educators are increasingly using them to facilitate the exchange of information.

Besides being more likely to reach intended recipients than paper- and-ink leaflets, messages sent via mobile technology can be used to elicit as well as disseminate information. Teachers can ask students to provide feedback on assignments, and parents can request up-to-the-minute information about the academic progress of a child.

Additionally, a number of projects active in Asia, Africa and North America rely on mobile phones to streamline communication between classroominstructorswhoteachsimilar disciplinesorgroupsofstudents.
In South Africa instructors involved in the Teaching Biology Project used social media platforms to share lesson plans and pedagogical ideas via mobile phones. Teachers involved in this project reported that it helped instill a sense of professionalism and camaraderie and made it easier for them to request assistance from peers who understood the day-to-day exigencies of their job.

**NO13. Maximize cost-efficiency**

When weighed against the costs of comparable educational resources, mobile technology can offer good value. For example, Thailand recently launched an initiative to provide students with tablet computers and plans to gradually phase out traditional textbooks. While this project is expensive in absolute terms, it must be balanced against the costs of purchasing, procuring, delivering and updating physical textbooks. Similarly, the functionality and limitations of tablet devices versus paper books need to be compared and contrasted. Although long-term cost–benefit analyses still need to be conducted to compare the total costs of paper versus digital textbooks, early signs indicate that mobile devices may maximize cost-efficiency by offering rich feature sets at increasingly low prices.

Many governments have successfully expanded educational opportunities by leveraging the technology people already own, rather than providing new devices. Initiatives that transform ubiquitous mobile devices into tools for learning, while ensuring equity of opportunity for students who cannot afford them, generally provide affordable solutions to educational challenges.
In order to realize the unique benefits of mobile learning, UNESCO recommends that policy-makers take the actions described in this section.

NO1. Create or update policies related to mobile learning

Because most ICT in education policies were articulated in a ‘pre-mobile’ era, they do not seek to maximize the learning potentials of mobile technology. The rare policies that do reference mobile devices tend to treat them tangentially or ban their use in schools. Newly developed policy directives related to mobile learning should be embedded within existing ICT in education policies, which many governments already have in place. In order to leverage the opportunities afforded by mobile technology and other new ICTs, education officials may need to review existing policies.

Policy recommendations

- **Examine** the unique educational potentials and challenges offered by mobile technology and, when appropriate, incorporate these understandings into broader ICT in education policies.
- **Avoid** blanket prohibitions of mobile devices. Universal bans, unless implemented for well-considered reasons, are blunt instruments that usually obstruct educational opportunities and inhibit innovation in teaching and learning.
- **Provide** guidance on how new investments in technology can work in conjunction with existing educational investments and initiatives.
NO2. Train teachers to advance learning through mobile technologies

To capitalize on the advantages of mobile technologies, teachers need to be trained to successfully incorporate them into pedagogical practice. In many instances, a government’s investment in teacher training is more important than its investment in technology itself. UNESCO’s research has shown that without guidance and instruction teachers will often use technology to ‘do old things in new ways’ rather than transform and improve approaches to teaching and learning.

Policy recommendations

- **Prioritize** the professional development of teachers. The success of mobile learning hinges on the ability of teachers to maximize the educational advantages of mobile devices.

- **Provide** necessary technical and well as pedagogical training to teachers when introducing mobile learning solutions and opportunities. While many teachers know how to use mobile devices, many do not, and as devices grow more versatile and complex they tend to become more difficult to use.

- **Encourage** teacher training institutes to incorporate mobile learning into their programmes and curricula.

- **Provide** opportunities for educators to share strategies for effectively integrating technology in institutions with similar resources and needs.
NO3. Provide support and training to teachers through mobile technologies

UNESCO has found that very few education systems use mobile technologies to support the work and development of teachers, even though this is often a practical and cost-effective method to assist educators, especially those working in remote and resource-poor areas. Mobile devices can also help move teacher training away from homogenous and centralized institutions and towards the classrooms and school sites where learners and educators come together. With the ability to access curricular content remotely, aspiring teachers can spend more time practicing pedagogy in authentic environments. And just as mobile devices can tailor learning materials for students, they can also ensure that teachers study concepts relevant to particular disciplines, schools and student populations. One-size-fits-all approaches to professional training are insufficient for teachers as well as students, and mobile learning offers a promising avenue to better personalize curriculum and instruction for both groups.

Policy recommendations

- **Ensure** that, where possible, curriculum, educational resources and lesson plans are available to teachers via mobile devices. While many mobile learning projects make resources available to students, very few target teachers specifically.

- **Explore** the practicability of providing professional development and teacher training via mobile technology. This approach can complement but should not replace the face-to-face training usually necessary to truly change teachers’ beliefs and improve their practice.
NO4. Create and optimize educational content for use on mobile devices

Currently most educational content, including digital content, is not accessible from mobile devices, nor does it take full advantage of the unique multimedia, communication and sometimes location-aware capabilities of these devices. Also, even when content is available, it often lacks relevance to local student populations due to limited language options or a dearth of culturally-specific material. Additionally, a great deal of content fails to follow standards or incorporate features that improve accessibility for students with disabilities. By tailoring appropriate resources for use on mobile devices while ensuring their relevance and accessibility to diverse student populations, educators can vastly extend the reach of these resources, because far more learners and teachers own mobile devices than laptop or desktop computers.

Policy recommendations

- **Ensure** that educational resources and content, including existing online repositories, are easily accessible from mobile devices.
- **Support** the open licensing of mobile content to facilitate its widest possible use and adaptation. This can be accomplished by supporting the use of open educational resources or OERs.
- **Create** incentives for developers to build content specifically for mobile devices. While it is possible to ‘migrate’ learning materials from computers and textbooks to mobile technology, designers need to ‘think mobile first’, making hard choices about how to streamline content for presentation and use on...
devices with small screens and limited input options.

- **Encourage** the development of platforms or software that allow classroom teachers (and others with first-hand knowledge of students) to create or tailor mobile content.

- **Promote** the creation of mobile content that is relevant to local groups and accessible in local languages. This can be accomplished by inviting local developers to build mobile learning content for their communities.

- **Advocate** for standards that make mobile hardware, software and content accessible to diverse student populations, including students with disabilities.

**NO5. Ensure gender equality for mobile students**

UNESCO promotes the right of all women and men, girls and boys to a quality education that meets basic learning needs and enriches lives. While mobile phones have empowered women and girls in educational, social and economic ways, approximately 300 million more men own mobile phones in low to middle-income countries than women (GSMA et al., 2010). Men are also more likely to know how to use mobile technology than women. The mobile phone gender gap is a symptom of broader gender inequalities, apparent in education as well as in the general use and ownership of ICTs. Policy-makers should work to promote gender equality for mobile learning.

**Policy recommendations**

- **Ameliorate** existing ICT in education gender gaps by encouraging women and girls as well as men and boys to leverage mobile technology for learning.
• Identify culturally relevant ways of normalizing mobile phone ownership and use for women and girls in particular.

• Develop strategies to teach women and girls as well as men and boys relevant ICT skills.

NO6. Expand and improve connectivity options while ensuring equity

Most mobile learning opportunities depend on reliable connectivity to the internet and other communication and data networks. As access to information becomes increasingly tied to economic and social development, governments should work with relevant industries to build and augment the technological infrastructure that powers mobile learning. It is also crucial that governments seek to provide equal access to mobile connectivity. A student who cannot use a mobile network – whether because of economic or geographic reasons – is denied access to an impressive and growing range of learning possibilities.

Policy recommendations

• Take stock of existing ICT infrastructure and establish realistic targets for improving this infrastructure incrementally, devoting particular attention to underserved areas.

• Support the provision of robust and affordable mobile networks within and across communities, especially in educational institutions such as schools, universities and libraries.
• Consider providing full or partial subsidies for access to mobile data and broadband services. Many governments offer ‘e-rate’ subsidies to promote internet access for educational purposes via computers. In addition, governments should now consider advocating for ‘m-rate’ subsidies to promote mobile access to the internet.

• Support efforts to build local and ad hoc networks to support mobile learning, especially in settings where larger networks are unavailable.

NO7. Develop strategies to provide equal access for all

Mobile devices hold special promise for education, in large part because a majority of people already have access to one. Collectively, they are the most ubiquitous interactive ICT on the planet. While governments should seek to enlarge learning opportunities for the huge number of people who own a personal mobile device, they also need to ensure mobile learning opportunities remain open to learners who do not have a device.

Currently there are three widely practiced models for ensuring people have the hardware needed for mobile learning:

- Governments or other institutions provide devices directly to learners;
- Learners supply their own devices, commonly referred to as ‘bring your own device’ or BYOD; or
- Governments and institutions share provisioning responsibilities with learners.
The BYOD model is attractive because it is inexpensive: the costs of the devices, their maintenance and their connectivity plans are usually shouldered by learners. As a result, BYOD projects can be implemented quickly in areas where most people have mobile devices. However, BYOD has serious limitations if it fails to accommodate learners who do not already own mobile hardware. It can also create scenarios where learners with superior devices and connectivity plans can outperform those with inferior devices and plans.

Policy recommendations

- **Ensure** equal access to mobile technology and participation in mobile learning for all students and teachers. In the case of BYOD implementations, governments should adopt measures to provide mobile hardware and connectivity to learners who do not have a personal device.

- **Allow** students to ‘own’ their mobile device whenever possible. A principal advantage of mobile learning is that it opens up educational opportunities inside and outside of schools. If students cannot take full ownership of their devices, they are unlikely to adopt them as personalized learning tools and use them in informal contexts.

- **Encourage** government departments and educational institutions to negotiate with vendors and leverage the purchasing power of large numbers of learners.
NO8. Promote the safe, responsible and healthy use of mobile technologies

Like any ICT, mobile technology can be used to access inappropriate material. In the wrong hands mobile devices can also enable undesirable behavior – such as bullying, sending violent or sexually explicit messages, and interacting with dangerous individuals – which may exacerbate gender and other inequalities. However, because mobile technologies are often overlooked or prohibited in schools, educators have not had opportunities to teach students how to use them responsibly. Schools are well-placed to provide guidance on the appropriate and productive uses of mobile devices and, in many instances, students are unlikely to get this guidance elsewhere. Data reviewed by UNESCO overwhelmingly indicates that banning mobile technologies in formal systems of education does not prevent young people from using them. Rather, schools should increase student awareness about using mobile devices safely and avoiding the inherent hazards of open access to communication and information, including over-use and internet addiction.

Finally, there are concerns around potential health risks associated with the use of mobile technologies, including eye strain from working on small screens and exposure to electromagnetic radiation. While most research has concluded that mobile technologies are safe, alleged health risks, especially those stemming from long-term use, should be actively researched (WHO, 2011).

Policy recommendations

- Promote the responsible use of mobile devices by teaching digital citizenship.
• **Adopt** ‘responsible use policies’ (RUPs) instead of ‘acceptable use policies’ (AUPs). RUPs help highlight and reinforce healthy habits while simultaneously ensuring that educators are not forced to police mobile technology use, a task that is largely futile for classroom instructors who may see hundreds of students over the course of a single day.

• **Articulate** strategies to balance online interaction with offline interaction in contexts where excessive screen time and over-use of ICTs are serious concerns. Also, distinguish what constitutes productive and unproductive or healthy and unhealthy screen time.

• **Stay** abreast of research surrounding potential health risks associated with mobile technologies.

**NO9. Use mobile technology to improve communication and education management**

Mobile technology has a track record of making educational administration more efficient, as well as improving communication between schools, teachers, students and parents. By streamlining tasks such as recording attendance and assessment results, mobile technologies allow educators more time to focus on instruction. Mobile devices also facilitate data gathering and improve education management, especially in education systems where fixed-line internet access is unavailable.

**Policy recommendations**

• **Promote** the ‘system strengthening’ uses of mobile technologies.
• **Encourage** schools and individual educators to communicate with students and parents via mobile devices.

• **Extend** the reach and effectiveness of education management and information systems by integrating support for mobile technologies.

• **Consider** how mobile technologies can support the collection of educational information following a conflict or disaster.

**NO10. Raise awareness of mobile learning through advocacy, leadership and dialogue**

Negative social attitudes regarding the educational potentials of mobile technology constitute the most immediate barrier to the widespread embrace of mobile learning. Broadly speaking, people tend to view mobile devices (and mobile phones in particular) as portals to entertainment, not education, and as a result this technology is regularly dismissed as distracting or disruptive in school settings. Historically, the small screen sizes and awkward input methods on mobile devices have also been seen as disadvantages to their use in education. While these views are changing – largely due to impressive technological advances and the advent of larger-screen tablet computers – policy-makers can also take steps to educate the public about the benefits of mobile learning.

Policy recommendations

• **Highlight** and model how mobile technology can improve teaching, learning and administration.

• **Share** research findings and evaluations of mobile learning programmes.
• Encourage dialogue among key stakeholders – including principals, teachers, learners, parents, local leaders and community-based organizations – about mobile learning.

• Provide a coherent vision of how technology, including mobile technologies, will further learning goals.

CONCLUSION

This year the number of connected mobile devices, the vast majority of which are mobile phones, will surpass the world’s population for the first time in history. Yet despite their ubiquity and the unique types of learning they support, these technologies are often prohibited or ignored in formal systems of education.

This represents a missed opportunity. The learning potentials of mobile devices are impressive and, in many instances, well-established. While hardly a cure-all, they can meaningfully address a number of pressing educational challenges in new and cost-effective ways.

In a world that is increasingly reliant on connectivity and access to information, mobile devices are not a passing fad. As mobile technologies continue to grow in power and functionality, their utility as educational tools are likely to expand and, with it, their centrality to formal as well as informal education. For these reasons, UNESCO believes that mobile learning deserves the careful consideration of policy-makers.
While UNESCO research indicates that hundreds of thousands of people in countries like Ethiopia, Nigeria and Pakistan are reading on mobile devices, very little is known about these readers. This information gap hampers efforts to expand the footprint of mobile reading and realize the educational and socio-economic benefits associated with increased reading.

Drawing on findings from a year-long study, this report explains the habits, preferences and demographic profiles of mobile readers in seven developing countries. By painting a picture of how mobile reading is practiced today and by whom, it offers insights into how mobile technology can be leveraged to better facilitate reading in countries where literacy rates are low.

The report was created through an ongoing partnership between UNESCO, Nokia and Worldreader and is part of a two-paper series on mobile reading. The other complementary publication, *Reading without Books*, reviews mobile reading initiatives around the world, identifying their strengths and weaknesses in order to steer the development of future projects. Cumulatively, the two publications explain how mobile technology can empower readers and further literacy in developing countries and beyond. This publication is the culmination of a year-long partnership between UNESCO, Nokia and Worldreader.
While this is transformational by any measure, there are still gaps. Only 40 per cent of the world’s population is online and in developing countries 16 per cent fewer women than men use the internet (ITU, 2013). Geographic inequity is especially startling. Today in Africa only 7 per cent of households are connected to the internet, compared with 77 per cent in Europe.

Although fixed-line internet technology has certainly expanded access to text, it is hardly a panacea. Many people lack access to computers as well as books, and hence remain cut off from textual information that is foundational to education, employment and engagement in the world at large.

UNESCO estimates that worldwide 774 million people cannot read or write. Of this number, 123 million are classified as young, aged between 15 and 24 years-old (UIS, 2013b). For many of these people illiteracy can be traced – at least in part – to an inability to access text.

The world faces a fundamental challenge: how to bring text to the millions of people who do not have enough. Fortunately, the internet is helping to level the playing field. It has accelerated the spread of information and, in many instances, democratized access to it. Digital networks, computer processors and liquid crystal display (LCD) screens remove production constraints that have kept reading material prohibitively expensive for centuries. Increasingly, paper and ink are being replaced by bits and bytes, and physical distribution channels are being streamlined by cables that can carry electronic information to the farthest corners of the planet almost instantaneously. At the same time ever-improving search tools are making the vast repositories of online text easy to use and navigate. Today a robust internet connection gives a person access to more text than in all of the physical libraries ever built.
The question remains: How do we bring text to the unreached? How do we make reading material accessible to, say, a girl from a poor family in the northeast of Ethiopia where over 50 per cent of her female peers will never go to school (UNESCO, 2013a)? How do we provide text to young people in remote Pakistani villages, or adults living in slums outside Rio de Janeiro? What mechanisms exist to get books into the hands of the poorest people on Earth?

The answer – at least in the immediate term – is mobile devices, and more precisely mobile phones.

Why mobile phones? Because people have them. Recent data from the United Nations indicate that of the estimated 7 billion people on Earth, over 6 billion now have access to a working mobile phone. To put this number in perspective, only 4.5 billion people have access to a toilet (United Nations, 2013). Collectively, mobile devices are the most ubiquitous information and communication technology (ICT) in history. More to the point, they are plentiful in places where books are scarce.

While mobile phones are still used primarily for basic communication, they are also – and increasingly – a gateway to long-form text. For a fraction of the cost of a physical book, it is often possible to access the same book via a mobile device. And this capacity is not restricted to smartphones: today even the least expensive mobile handsets allow users to access and read books.

Across developing countries, there is evidence of women and men, girls and boys reading multiple books and stories on mobile phones that can be purchased for less than 30 US dollars. Mobile reading is not a future phenomenon but a right-here, right-now reality.

UNESCO is committed to encouraging mobile reading as a way to help people get on the right side of the Matthew Effect. The more pathways to reading, the better, and mobile devices represent perhaps the most promising pathway of all, due to their unprecedented proliferation. Stimulating people to utilize
mobile devices as books can prompt a virtuous cycle. A small amount of mobile reading can beget more reading and eventually, following from the Matthew Effect, ensure people ‘have in abundance,’ not only books themselves, but the benefits of strong literacy skills.

In low- and middle-income countries, a woman is 21 per cent less likely to own a mobile phone than a man (GSMA Development Fund and Cherie Blair Foundation for Women, 2010). This figure increases to 23 per cent if she lives in sub-Saharan Africa, 24 per cent in the Middle East and 37 per cent if she lives in South Asia. The gap widens further in the case of data-enabled phones (which are required to run the Worldreader Mobile application), as men in developing countries are far more likely than women to own higher-end phones and use mobile data.

Summary:
Who are mobile readers?
1. In absolute numbers, mobile readers are predominantly male. However, female users greatly outnumber males at higher levels of usage, and female mobile readers spend significantly more time reading per month than males.
2. Although people of various ages use mobile technology to access long-form reading material, mobile readers are typically young. Older people were noticeably absent from the survey data.
3. Mobile readers tend to be more educated than the general population, and female mobile readers are more educated than males. The most active mobile readers are those who have achieved a diploma but have not completed a higher education degree such as a bachelor’s, master’s or PhD. Interestingly, mobile readers with higher education degrees are not the most active users, presumably because they have alternative channels through which to access reading material.
Gender Differences in Intentions to Read

Females in the survey were generally more enthusiastic about mobile reading in the future than their male counterparts. They were more likely to express intentions to: spend more time reading on their mobile phones, read on their mobile phones to help them in a class, read on their mobile phones for pleasure, and read on their mobile phones to help them in their jobs. Women were also more likely than men to have shown or told other people how to use their mobile phones to access books and stories.

There were also interesting gender differences in confidence using the Worldreader Mobile App. Female respondents expressed more confidence than men using the functions of Worldreader Mobile, and they felt more confident in their ability to find the books they want. On the other hand, males felt more confident that they could solve problems they might encounter while using the Worldreader Mobile app.

Mobile Reading Survey: Key Findings

1. Mobile reading opens up new pathways to literacy for marginalized groups, particularly women and girls, and others who may not have access to paper books.
2. People use mobile devices to read to children, thereby supporting literacy acquisition and other forms of learning.
3. People seem to enjoy reading more and read more often when they use mobile devices to access text.
4. People read on mobile devices for identifiable reasons that can be promoted to encourage mobile reading.
5. Most mobile readers are young, yet people of various ages are capable of using mobile technology to access long-form reading material. More can be done to encourage older people to use technology as a portal to text.
6. Current mobile readers tend to have completed more schooling than is typical.
7. There appears to be a demand for mobile reading platforms with text in local languages, level-appropriate text and text written by local authors.
STRATEGIES

There are three broad strategies for extending the benefits of mobile reading to more people:

1. diversify mobile reading content and portals to appeal to specific target groups;
2. increase outreach efforts to create opportunities for potential users to experiment with mobile reading and learn about its benefits;
3. lower cost and technology barriers to mobile reading.

NO1. DIVERSIFY CONTENT AND PORTALS

When it comes to reading, content matters. Whether seeking information on a specific topic for school or work, or looking for a new book that sparks their interest, people of all ages and backgrounds are much more likely to read if they find the content they want. They are also more likely to be deterred from reading if they fail to find content that appeals to them. The current study found that limited content is the main barrier to mobile reading among existing Worldreader Mobile users, more so than connectivity issues or concerns about airtime costs. The majority of survey respondents agreed with the statement ‘There are limited books I want to read on my mobile’ – and these are people who, for the most part, are already enthusiastic about mobile reading. If a wider range of books were available on mobile phones, current readers would be more engaged, reading more and more often, and new readers would be enticed. With an estimated 6.9 billion mobile phone subscriptions worldwide, there are literally billions of potential mobile readers out there; many of them may simply be waiting for the right content (GSMA, 2014).
The ‘right’ content is not always what is already popular. Mobile reading developers should not just provide more of what readers seem to enjoy; they should also examine what is missing and look to fill those gaps. In terms of genre, evidence suggests that current Worldreader Mobile content caters to the preferences of female readers, with a heavy tilt towards fiction, and romantic fiction in particular. Studies have shown that men, on the other hand, tend to prefer non-fiction and are more likely to read for work or education than for pleasure (Harris Interactive, 2010; Pew Internet, 2012). This may be why male mobile readers are less active than their female counterparts, in spite of the fact that there are more men using mobile reading applications. Diversifying mobile reading content to include more non-fiction material, as well as more fiction that might be of interest to male users, is a key strategy for increasing engagement among men and boys.

There is also a need for mobile reading content published in local languages and written by local authors. The study found that many mobile readers are searching for these texts, but they are unlikely to find many offerings at the moment, as the vast majority of mobile reading materials are in English. In addition to the current research, several mobile reading initiatives in Africa have highlighted the growing demand for more local content to engage readers, particularly young people. For example, approximately one-quarter of the youth involved in Yoza Cellphone Stories, a South African mobile reading project, choose mobile books written in isiXhosa, a regional language, in spite of the fact that most of the available content is in English (Kraut and West, 2014). Content published in local languages need not displace English-language content that readers are already enjoying, particularly because many people may use or wish to use mobile reading to improve their English skills. Yet countless others may be unable to reap the benefits of reading on their mobile phones, simply because there are no reading materials available in their language.

Expanding the amount of local-language text accessible through mobile phones could enlarge readership worldwide and help address the global literacy crisis. Similarly, cultivating content written by local authors has the
potential to significantly increase engagement in mobile reading, particularly among young people in developing countries. In many cases the problem is not a lack of digitized local books but a lack of local books in general. Azerbaijan, for example, releases, on average, around 550 new books per year; the USA, in contrast, publishes close to 300,000 (Bowker, 2014; Pendse and Goyushov, 2011). Efforts to address this gap require not only curating local content but also creating it. The FunDza Literacy Trust, based in South Africa, provides a promising example of how to increase locally relevant content, by commissioning African authors to write stories for their mobile site (Kraut and West, 2014). Other strategies for improving local mobile content include:

- purchasing the rights to such content or convincing publishers to make it available to mobile readers for free or very low prices;
- digitizing content that is not under copyright or is openly licensed;
- translating content into local languages; and
- incentivizing local authors and publishers to produce more content and make it available to mobile readers.

Finally, and perhaps most importantly, mobile reading platforms are sorely lacking in content appropriate for children and beginning readers. The study found that current mobile readers are actively searching for reading materials that are categorized by
reading level, and particularly for beginner-level texts. Some of these readers are probably looking for books to read to children: more than one-third of survey respondents said they read to children from their mobile phones, and an additional one-third said they would do so if more children’s books were available. Other users are searching for materials to help them develop their own literacy skills. To begin to meet the needs of current mobile readers and attract new ones, mobile reading platforms must vastly increase the amount of content appropriate for children as well as adults and adolescents who are learning to read. Yet simply putting content on a mobile site is not enough. Dedicated portals should be created where parents and teachers can search for appropriate texts to read to the children in their care. These portals should have menu and navigation options that allow people to easily locate reading material for children of various ages, abilities and interests. Similarly, adults who are learning to read or trying to develop foreign-language literacy should be able to find mobile reading materials appropriate to their reading level. While some of this material could overlap, it should not be assumed that adults who are learning to read will want to consume the same texts as children. Efforts should be made to expand literacy development content for both children and adults and to build user-friendly portals for parents and teachers as well as newly literate adults and language-learners.

**NO2. INCREASE OUTREACH**

The study found that the strongest predictors of mobile reading adoption are 1) opportunities to learn about the benefits of mobile reading and 2) the anticipation of benefiting from mobile reading. This is consistent with the results of other mobile reading projects in developing countries, which have demonstrated that people are more likely to engage in literacy activities on their mobile phones when they see tangible benefits to doing so. Project ABC in Niger, for example, teaches newly literate people living in rural villages to access up-to-date agricultural market information via SMS, allowing them to
get better prices for their crops. This economic benefit motivates people to practice their new literacy skills while at the same time giving them the means to do so (i.e. a mobile phone). As a result, literacy retention rates for project participants were significantly higher than for people who had just completed a traditional literacy course, without the mobile phone component (Kraut and West, 2014). In basic terms, people are more likely to engage in mobile reading if they think they will benefit from it in some way. And indeed, this study and others have shown that there are myriad benefits associated with mobile reading, from improved self-confidence and self-esteem to better economic opportunities and job prospects, to name a few. The study also shows that people tend to enjoy mobile reading once they try it. Thus, a key strategy for promoting mobile reading is to provide people with opportunities to experiment with mobile reading and learn about its benefits.

This outreach can be accomplished through programmes and trainings that emphasize the benefits of mobile reading, and help potential users adopt a positive mindset towards reading on their mobile phones and overcome possible fears about technology use. People should be able to hear testimonials from other mobile readers, watch demonstrations of how to download and navigate a mobile reading application, and experiment with mobile reading first-hand. Given that adults who own mobile phones generally already know the basics of how to use them, one-day training seminars introducing mobile reading and showing people how to actually access books and stories could be a cost-effective way to significantly increase reading among adults. Specific outreach efforts should also be tailored to the different target groups discussed above. For example, older people may be less comfortable with technology and, as a result, need more hands-on demonstrations and technical assistance in order to begin reading on their mobile phones. Some women may need training in using mobile phones for purposes other than voice calls, and they might also
benefit from community outreach that focuses on normalizing mobile phone use for females. Parents and teachers looking for books to read to children from their mobile phones need not only dedicated portals designed for this purpose but also a means of learning about the portals and how to use them. As an example of this type of outreach, UNESCO has launched pilot projects in several countries that provide classroom teachers pointed instruction in how to use inexpensive mobile devices as portals to both text and pedagogical advice (UNESCO, n.d.). Mobile reading outreach can include any number of strategies, such as advertising, community workshops and more. In order to build on the strength of existing programmes, this outreach can and should be incorporated into education, literacy and ICT initiatives already in place in developing countries.

NO3. LOWER COST AND TECHNOLOGY BARRIERS

Somewhat surprisingly, the study found that cost and technology issues are not as important as content or outreach in determining whether someone will engage in mobile reading. Yet this is not to say that cost and ease of connectivity are non-issues. First, and most obviously, access to a mobile phone is a prerequisite for mobile reading. With almost as many mobile subscriptions as people on the planet, mobile phones are nearly ubiquitous, yet their distribution is far from even throughout the population, particularly in developing countries (ITU, 2013). More work must be done to ensure that
women and girls, as well as men and boys, have access to data-enabled phones that allow mobile reading. The GSMA has issued a set of policy recommendations to address the mobile phone gender gap, which include reducing the total cost of mobile phone ownership, working to remove cultural barriers to female access to mobile phones and ICTs in general, promoting technical literacy among women, and encouraging the development of value-added mobile services that benefit women in particular (GSMA Women, 2011).

In 2015 UNESCO has plans to release a report detailing initiatives that leverage mobile phones to advance literacy and education for women and girls specifically.

Second, the technology solutions that enable mobile reading are also crucial to its widespread adoption. Without platforms like BINU, for instance, with its data compression technology, reading on feature phones would be far more difficult and, in some instances, impossible. And while the majority of survey respondents said they felt comfortable using the Worldreader Mobile application, it is likely that they feel this way because the app is well-designed and maintained; an application that constantly crashed or was not user-friendly would probably not earn the same vote of confidence.

Policy-makers should promote the continuing development of mobile reading applications and platforms that optimize the user-end experience, through the provision of grants, competitions, research funding, purchases for schools and other incentives.

Third, mobile reading depends on connectivity. While the newest and most expensive models of mobile phones have the storage capacity to house large libraries of text, most feature phones do not. The most common phones have about 30 MB of internal memory (Fripp, 2012). Most mobile books are compressed to around 1.5 MB, meaning that a maximum of 20 books could be stored on this type of phone, provided that no other space was occupied by music, photographs or apps. Even if space were not an issue, permitting users to download entire books is problematic for publishers, due to copyright laws and concerns about piracy. A few mobile reading applications, such as
BooksInMyPhone, do allow users to download entire books which can later be read offline, because the majority of the content is out of copyright and hence free (Kraut and West, 2014). Most applications including Worldreader, however, are built to conserve memory space and comply with publisher restrictions by loading one page at a time – thus requiring a constant and reliable data connection. One solution to this problem is to encourage more publishers and authors to freely license their texts to mobile reading sites for educational purposes, hence allowing people to bypass the connectivity issues. Another solution is to extend the reach of mobile broadband services around the world. Cellular data coverage is by no means universal: mobile broadband penetration currently stands at around 20 per cent in developing countries – and only 11 per cent in Africa – versus 75 per cent in developed countries (ITU, 2013). Indeed, survey respondents cited connectivity issues as their second-most-important concern when reading, after limited content. Mobile internet in some regions, particularly rural and geographically isolated areas, may be so spotty or slow as to render it unusable. To ensure that all people have equal opportunities to access reading materials through their mobile phones, governments should continue to work with mobile phone operators to improve infrastructure and guarantee reliable mobile broadband connectivity throughout the country.

Finally, connectivity is a moot point if people cannot afford the data costs associated with mobile reading. Encouragingly, the study found that the airtime costs incurred while reading on mobile phones were not a primary concern for most mobile readers; fewer than 20 per cent of survey respondents said they worried about these charges on a regular basis. Nevertheless, policy-makers should endeavor to make mobile data as affordable as possible to encourage more people to adopt mobile reading. Cost concerns are slightly more common among women than men, possibly because women are more active mobile readers, or perhaps because women in the countries surveyed have less economic power or access to discretionary funds. Whatever the reason, this finding indicates that high data usage fees may disproportionately affect
women and hinder their literacy development. Reducing the cost of mobile data would lower this barrier and encourage more mobile reading among women as well as men. One way to do this is to subsidize mobile internet access for educational purposes. The UNESCO Policy Guidelines on Mobile Learning recommend that governments offer m-rate’ subsidies – full or partial subsidies for mobile data, similar to the ‘e-rate’ subsidies that many governments already provide to promote internet access via computers in schools, libraries and households with school-aged children (UNESCO, 2013b).

Another strategy is to work directly with mobile operators to lower or eliminate data charges for certain content. An example of this is the Wikipedia Zero initiative, a project by the Wikimedia Foundation to enable free mobile access to Wikipedia in developing countries (Wikimedia Foundation, 2013). The initiative is based on partnerships with mobile phone operators, who agree to waive access charges to the Wikipedia mobile site in each of the most common languages in their country. As an incentive to the partners, a banner appears at the top of the mobile web page attributing the free access to the partner company that is subsidizing it. The banner also assures users that the access is free and warns them when they leave the page that they are exiting the ‘free’ environment and normal data charges will resume. The Wikipedia Zero project is currently active in twenty-four developing countries, and the project continues to seek partnerships with mobile providers in an ongoing effort to lower the barriers to accessing educational information via mobile phones (Wikimedia Foundation, 2014).

Mobile reading initiatives could pursue a similar strategy to promote free access to mobile platforms that offer books and other reading materials to users in developing countries.
UNESCO Mobile Learning Week

Mobile Learning Week (MLW) is UNESCO’s flagship ICT in education conference. Held annually at UNESCO Headquarters in Paris, the event convenes experts from around the world to share how affordable and powerful mobile technology – from basic handsets to the newest tablet computers – can accelerate learning for all, particularly people living in disadvantaged communities. Each year the event has a specific theme to focus discussions.

The conference is composed of numerous tracks, typically including workshops, a symposium, a high-level policy forum and a research seminar. These tracks engage a wide range of participants, including policy-makers, project managers, educators, researchers, and representatives of NGOs, international organizations and private companies.

Holistically the event seeks to advance understandings of how technology can be leveraged by UNESCO Member States and others to improve education. Mobile Learning Week is typically held early in the year, in either February or March.
Mobile Learning Week 2011

UNESCO held its first Mobile Learning Week, organized in partnership with Nokia, at its headquarters in Paris to discuss how mobile technologies can be used to help achieve Education for All (EFA) goals. The week was comprised of an international experts’ meeting (12-14 December) and an open symposium (15-16 December). Objectives of the MLW 2011:

• To present the initial findings of the regional reviews of mobile learning in the Middle East and Africa, Asia, Europe, North America, and Latin America, while paying special attention to policies that promote mobile learning as well as effective ways in which mobile technologies can be utilized for teacher support and professional development.

• To discuss the opportunity for a set of policy guidelines that could help countries develop their own approaches to mobile learning.

• To conceptualize sustainable and scalable modalities of using mobile technologies to support teaching and the professional development of teachers, particularly those working under severe conditions.

• To share the latest developments of mobile technologies and their implications for education, and envision innovative ways in which mobile technologies can be used to enhance the quality of education and transform learning processes.
Mobile Learning Week 2013

Building on its commitment to better understand the possibilities as well as the challenges of mobile learning, UNESCO held a second Mobile Learning Week Symposium from Feb. 18 to 19 in Paris, France. This event was supported by UNESCO’s partners, Nokia and Microsoft, and sponsored by GSMA, Huawei, and Alcatel Lucent. A Walking Gallery complemented the Symposium. It gave various stakeholders—from governments to NGOs to private companies—a venue to exhibit and share their work.

The theme of MLW 2013 is mobile learning and EFA goals. The event aimed to explore mobile learning as a unique and significant contribution to achieving the EFA goals of increasing education access, quality and equality. MLW 2013 focused on three particular EFA goals as they relate to mobile learning:

- **To improve** levels of adult and youth literacy: how mobile technologies can support literacy development and increase reading opportunities.

- **To improve** the quality of education: how mobile technologies can support teachers and their professional development.

- **To achieve** gender parity and equality in education: how mobile technologies can support equal access to and achievement in basic education of good quality for all, in particular for women and girls.
Mobile Learning Week 2014

The theme of MLW 2014 was teachers.

Teachers are the pillars of education systems and their involvement is crucial to the viability of ICT in education efforts. This is particularly true as mobile technology jumps from the margins of education to the mainstream, from informal settings to formal ones and from small independently-funded projects to large government-supported initiatives. Without the support of teachers in their myriad iterations—including those who work with children, youth or adults—technology generally remains peripheral to teaching and learning.

MLW 2014 explored how mobile technologies can help teachers work more effectively in different contexts. Also, in light of the urgency of the global teacher crisis, UNESCO wanted to better understand how mobile technology can help prepare new teachers and provide professional development to working teachers.

In order to improve of teacher development and effectiveness through mobile learning, MLW 2014 had three core objectives:

- **Convene** mobile learning experts, practitioners, researchers, industry partners and government representatives to share innovative mobile learning initiatives, best practices, trends and research.

- **Provide** a forum for dialogue and networking so that opportunities and challenges related to mobile learning are discussed and interrogated.

- **Launch** or announce key UNESCO contributions, including publications and findings from field projects.
Mobile Learning Week 2015

MLW 2015 seek to illuminate how increasingly ubiquitous, affordable and powerful mobile technology – from basic handsets to the newest tablet computers – can be leveraged to accelerate high quality education for women and girls, especially those living in disadvantaged communities. The event aimed to help direct the world towards greater gender equality, both in education and beyond.

MLW 2015 had four core objectives, aligned with the four tracks of the week-long event:

• **Build** the capacity of mobile learning practitioners through knowledge-sharing workshops.

• **Convene** government representatives, education and mobile learning experts, gender specialists, project managers, researchers, and industry partners to share mobile learning innovations and best practices as they relate to gender equality during a two-day symposium.

• **Provide** a policy forum for government representatives to discuss ideas for mainstreaming and scaling up successful mobile learning interventions to promote gender equality in education. Building on existing policy and programming recommendations – such as the Education for All goals and the Beijing Declaration on the Status of Women – the forum will also ask officials to deliberate the role mobile technology should play in the post-2015 education and development agendas.

• **Inform** the future development of mobile learning to support gender equality through the sharing of research. The research seminar will provide insights into what questions need to be answered and how the field should move forward to extend the benefits of mobile learning to more women and girls. The seminar will further examine how to ensure women are actively engaged in shaping the future of mobile learning research.
Mobile Learning Week 2016

MLW 2016 seek to clarify the difficult question of how ICT can be used as an educational ally. The event shed light on the ways mobile technology can be leveraged — in different contexts and for different groups — to provision and assure high-quality education for all learners now and in the future. By facilitating knowledge-sharing between countries, organizations and individuals, Mobile Learning Week 2016 aimed to highlight lessons learned from earlier roll-outs of educational technology to ensure that new investments in ICT meaningfully improve student learning.

The overarching theme of Mobile Learning Week 2016 was ‘innovating for quality’. The event examined three interlinked subthemes to advance understandings about how mobile learning and related innovations can improve the quality of education: 1) Making high-quality education a reality for all learners; 2) Improving pedagogy and the relevance of learning; 3) Enhancing management, planning and evaluation.

MLW 2016 had four core objectives, aligned with the four events of the week:

- **Clarify** how and to what extent mobile technology can facilitate learning and strengthen the quality of education during an Education Fast Forward WEBINAR which will allow remote participants to take part in MLW and pose questions to expert speakers.

- **Enhance** the capacity of mobile learning practitioners through knowledge-sharing WORKSHOPS.

- **Convene** government representatives, education specialists, mobile learning experts, project managers, researchers and industry partners to share mobile learning innovations and strategies to improve the quality of education during a two-day SYMPOSIUM.

- **Share** ideas for promoting mobile learning and other technology-based innovations with successful policy interventions during a POLICY FORUM to be jointly organized with ITU.
Mobile Learning Week 2017

MLW 2017 co-organized by UNESCO and UNHCR, was held under the theme ‘Education in emergencies and crises’ from 20 to 24 March in Paris.

MLW 2017 highlighted the ways in which mobile technology can be leveraged in different contexts and across borders to help address long-standing educational challenges confronting displaced learners.

The event examined how new and affordable technologies can help:

• **Strengthen** inclusion in education;
• **Preserve** the continuity of learning in conflict and disaster contexts;
• **Open and enrich** learning opportunities for refugees and other displaced people;
• **Facilitate** the integration of learners in new schools and communities;
• **Catalyze** innovation in the education sector and improve the impact of humanitarian interventions.
CENTRE ACTIVITIES
Deputy Director of UNESCO-ICHEI attended Conference on Higher Education in Eastern Africa

On May 2nd-3rd 2017, Dr. HAN Wei, Deputy Director of UNESCO-ICHEI was present at Conference on Higher Education, Policies and Research: Quality and Future Challenges for Eastern Africa, which was held in Djibouti. The Conference was jointly organized by UNESCO Regional Office for Eastern Africa and Ministry of Higher Education and Research, the Republic of Djibouti and co-sponsored by UNESCO-ICHEI.

Conference Participants were UNESCO experts and other relevant international organizations, government officials of the ministries of education/higher education from Eastern African countries. Dr. HAN was invited to chair the 3rd Parallel Scientific Committee Session in the theme of “ICT-enabled Higher Education Innovation and Enhancement of National Education Systems”. Mr Elioda Tumwesigye, from Ministry of Science, Technology and Innovation, Uganda shared the country experience of Uganda; and Dr. Djama Mohamed Hassan, President of the University of Djibouti presented on ODeL (Open Distance e-Learning) as a cornerstone for building inclusive knowledge societies.

In the meantime, at the Exhibition of Eastern African Higher Education, the display booth of UNESCO-ICHEI attracted attention from participants of international organizations and various educational institutions. They were very interested in the newly established UNESCO Category 2 Institute and expressed willingness for future cooperation.

During the Conference, Dr. HAN had in-depth discussion with Ms. Ann Therese NDONG JATTA, the Director of UNESCO Regional Office for Eastern Africa. Ann expressed appreciation for Dr. HAN’s excellent chairmanship. Moreover, she praised highly of UNESCO-ICHEI’s contribution to higher education development of Eastern African countries. She expected that both sides should work together to facilitate the substantiation of UNESCO-ICHEI’s Digital Education Link Programme in Eastern Africa.
Quality assurance is the main source of mutual trust and is therefore essential to the mutual recognition of higher education qualifications among countries in the region. As UNESCO is advocating for the ratification and implementation of the 2011 Asia-Pacific Regional Convention on the Recognition of Qualifications in Higher Education (2011 Tokyo Convention), transparency measures such as the establishment of national information centers (NICs) and equivalency arrangements based on bilateral agreements can play important roles. Quality assurance-based recognition arrangements can ultimately help to make recognition much easier and pave the way for greater mobility of students across borders in the future. In this regard, effective quality assurance is important for building mutual trust and underpins confidence in qualifications in Asia-Pacific and worldwide.

It is against this background that UNESCO, as the only UN agency with a mandate in higher education, will organize the International Conference on Quality Assurance in Higher Education in Paris, France in early 2018. To prepare, regional conferences will help take stock of innovative quality assurance policies and practices, identify gaps and challenges, and explore common agendas for future collaboration. The Asia-Pacific Regional Conference on Quality Assurance in Higher Education is one of the regional preparatory conferences and will be expected to contribute to the 2018 International Conference on Quality Assurance with rich and diverse inputs from the region. The specific objectives of the regional stocktaking effort are below.
Meeting objectives

The aim of the Asia-Pacific Regional Conference on Quality Assurance is to inform and shape the 2018 international conference on quality assurance in higher education organized by UNESCO. In particular, the aim is to map the current status, needs, innovative practices and challenges that are related to quality assurance in higher education in the Asia-Pacific region. In doing so, the conference will:

- Take stock of innovative policies and practices at system, institution, subject and programme levels in Asia-Pacific, with an aim to produce a consolidated regional report on quality assurance in higher education;
- Build understanding of the links between QA, NQF and recognition, including providing concrete support and capacity building for the ratification and implementation of the 2011 Tokyo Convention;
- Raise awareness about quality assurance of nontraditional modes of learning (e.g. MOOCs, blended learning, etc.);
- Connect multiple quality assurance initiatives in Asia-Pacific to promote synergies and cross-fertilization.

Sub-themes

The following sub-themes for the conference focus on the dynamics of quality assurance in higher education in Asia-Pacific:

- New impetus for strengthening quality assurance in higher education
- External quality assurance mechanisms
- Internal quality assurance mechanisms and a culture of quality within HEIs
- Bridging the links between internal and the external quality assurance processes
- National qualifications frameworks and exploring connections with quality assurance, credential recognition, and students’ mobility
- Quality assurance of private higher education institutions
- Quality assurance of qualifications obtained through non-traditional modes (e.g. MOOCs and blended learning)
- International cooperation and regional harmonization efforts in Asia-Pacific
**Expected outputs**

As a result of this intensive workshop, expected outputs include:

- A collection of 10 country case study reports on quality assurance in higher education from Asia-Pacific region
- Regional synthesis report to be submitted to the UNESCO 2018 International Conference on Quality Assurance in Higher Education in Paris
- Shenzhen statement on Quality Assurance in Higher education in Asia-Pacific region

**Organizers and Donors**

The meeting will be jointly organized by the UNESCO Asia-Pacific Regional Bureau for Education in Bangkok, UNESCO in Paris, in collaboration with the Chinese National Commission for UNESCO and the UNESCO International Centre for Higher Education Innovation (UNESCO-ICHEI) in Shenzhen, P. R. China.

**Participants**

The meeting will be attended by government officials, QA practitioners and researchers from member states in the Asia-Pacific region, representatives from international and national professional bodies, international organizations and NGOs and other higher education stakeholders.

**Web**

http://www.unescobkk.org/fr/education/higher-education/nqfap/quality-assurance-of-higher-education-in-asia-pacific/