



# POLICY NOTES

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## Digital Citizenship Competencies (DCC) Promotion Through ICT Training for Teachers and School Heads in the Philippines

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### Overview

Education in the 21st century is crucial to maintain, sustain, and expand the global benefits and opportunities of a knowledge-based society and economy. Information and communications technology (ICT), an enabling technology, has become one of the basic building blocks of modern society (UNESCO, 2002). However, developed countries are given more opportunities to enjoy the advancements in ICT than developing countries (Kubota et al., 2018).



## Salient Points



- In the Philippines, ICT advancement is given high importance to achieve growth in the education sector (ChildHope Philippines, 2021).



- The transition to online learning transformed the way by which training for teachers is delivered. Training programs are now frequently conducted online, making them more accessible anytime and anywhere.



- The provision of relevant, timely, and needs-based training for teachers and school heads is essential to promote digital citizenship competencies among learners.



- School heads and teachers can benefit from topics aligned with educational trends in terms of technological advancement, such as, but not limited to global practices on promoting digital citizenship competencies in schools; basic troubleshooting; integrating ICT in teaching and learning pedagogies; blended teaching and learning strategies; software applications; and certification courses on particular ICT skills.

The Philippines recognizes the value of ICT advancement in achieving growth in the education sector that would better prepare students for the future (Kim & Lee, 2020). The Department of Education (DepEd) through its Educational Technology Unit (ETU) provides support for the digitization and mobilization of teaching-learning materials for basic education. Moreover, during the COVID-19 pandemic, DepEd partnered with the Department of Information and Communications Technology (DICT) to support the education sector in areas related to broadcasting, Internet connectivity, and digital security to ensure the continuous delivery of education.

Digital citizenship is defined as the norms of behavior about the use of technology. Digital citizenship is likewise seen as “a way to prepare students, children, and technology users for a society full of technology” (Ribble, 2010 as cited by Hollandsworth et al., 2011). Given the sheer support for digital citizenship in the Philippines, it is important that students are prepared and equipped for the changes ushered by this new educational trend. Through the provision of appropriate and timely training, teachers and school heads could more easily adapt and adjust to fast-paced educational advancements. Training teachers would equip them with knowledge and skills on how to use technologies in teaching and learning and allow them to respond to their students’ needs, problems, and concerns more appropriately with the use of technology.

Developing and enhancing teacher skills in teaching digital citizenship competencies, though, comes with challenges and investment costs. This is evident in both pre-service and in-service training (continuing education) programs where there is limited research on teacher preparation for ICT education (i.e., how they are trained, and how to develop teachers’ professional competency).

Based on the study, teachers have limited theoretical understanding and professional skills, knowledge in the effective use of ICT in teaching, knowledge, and skills in digital content evaluation, understanding of 21st century skills (21CS), knowledge and experience with global citizenship education, and confidence and pedagogical skills. Training and other interventions provided by the school and DepEd are also not enough, thus, contributing to inefficiencies in promoting digital citizenship competencies (DCC).

This policy note draws on the results of the study “School Case Studies on promoting Digital Citizenship Competencies (DCC) among selected Southeast Asian Ministries of Education (MOE)” by SEAMEO INNOTECH. It aims to initiate policy conversations and promote an understanding on the status of Philippine teachers’ and school heads’ training needs aimed at helping foster DCC among learners. It also aims to help provide evidence-informed school-based interventions to guide school-level practices as well as relevant and concrete information on how to further support the development of digital citizenship through responsive policies and programs.

## **Various Upskilling and Reskilling Initiatives to Enhance the Competencies of Teachers and School Heads**

The shift to online learning has transformed the way teacher training is delivered. Since most training programs are now delivered online, many teachers can easily access various training anytime and anywhere. In line with this, the COVID-19 pandemic contributed to this sudden shift which necessitated learning continuity using remote learning modalities.

As evident from the case of a special science high school in the Philippines, a portion of the school fund is allocated for the in-service training (INSET) of teachers at the start of the year. The INSETs usually cover topics on the use of technology in the classroom.

These are designed and developed by the school’s division office based on teachers’ training needs assessment using an online self-assessment tool. Global citizenship education is also integrated in lessons. This initiative of integrating global citizenship education started with 19 schools across the country and was sponsored by UNESCO.

Training programs for teachers on operating systems other than Windows are also being provided through partnerships and collaborations between DepEd, the local government unit (LGU) and/or private companies within the locality. Often, not all teachers are able to attend the training outside the school. Sometimes, the school head needs to justify to the division office the reason and the need for such training to be able to send one teacher to the training. However, whenever the teachers miss a division-wide training or a schoolbased learning action cell (LAC) session, a recording of the session is provided to them.

Moreover, the school’s division office also provides training on the use of any available learning management system (LMS). According to the DepEd Central Office, elementary and high school teachers are trained in the use of LMS, since higher education institutions (HEIs) using learning platforms such as Moodle are tapped to conduct trainings. The teachers are taught how to use the available LMS efficiently and effectively with the support of HEIs.

In terms of continuing education and in-service training, the school emphasized the need for supporting the teachers in their professional and personal development. The United Nations Educational and Scientific Organization (UNESCO) 2012 OER declaration stipulated that schools are encouraged to use Open Educational Resources (OER). Currently, the OER are being handled by the Information and Communications Technology Services (ICTS) of the Department, the same office that oversees the conduct of ICT capacitybuilding training for teachers. These OER training programs focus on the use of Augmented Reality (AR), Virtual Reality (VR), Moodle, offline assessment, and the curation of story-telling software.

DepEd believes that it is crucial to have bottom-up training on topics such as OER. In line with this, the use of OER is being strengthened at the teacher level, where in school head conducts training on the quality assurance of OER with the assistance of the DepEd Central Office. Through this innovative approach, the school head SEAMEO INNOTECH Policy Notes 3believes that if the teachers can develop the required competencies, they could easily influence other school administrators to learn the same skill.

According to teachers, it is necessary for school leaders to understand the IT-related background and experiences of teachers to determine the possible need for ICT related training and workshops. The teachers mentioned that they attended some ICT workshops such as Be Internet Awesome and Comptech Fusion Bootcamp. In addition, they participated in Interactive Whiteboard Solution Master Training, Robotics Olympiad, and other specialized training seminars and workshops provided by the Department of Science and Technology (DOST). Teachers felt compelled to enhance their ICT skills because they taught in a science high school, where there are very high expectations for teachers to know more about different technologies. Narrating another memorable, yet rather outdated training experience, some teachers also recalled attending a 3-month training on Nuclear Science provided by the Philippine Nuclear Research Institute (PNRI). The program focused on the integration of Physics and technology and discussed concepts such as data gathering and analysis using sensors, among others.

Further, according to the DepEd Central Office representative, PLDT-Smart has regularly conducted a Gabay Guro program for both public and private schools since 2018. PLDT-Smart Foundation's Gabay Guro or 2G is an education arm and a flagship project of the PLDT-Smart Foundation. Its mission is to provide programs anchored on the seven core pillars such as digital innovations to equip teachers and school staff with an innovative mindset and connectivity, and computerization to extend support to teachers through the donation of computers. These programs are designed to hone and improve the welfare of Filipino teachers nationwide.

One teacher also narrated that a group of ICT experts share their professional expertise with ICT teachers from different regions in the Philippines. Different perspectives in teaching ICT from their personal experience are discussed in this group. Further, teachers also share their expertise in different fields like elevated levels of programming or web design, and their different perspectives in teaching free and open-source software. Based on what they learn from this community of practice, teachers try to modify their instructional strategies to maximize student learning.

DepEd also has programs for school heads in terms of technology leadership. They conduct an annual DepEd Cyber Expo Conference as a venue for promoting awareness on the latest technology tools among schools and schools' division office officials. The DepEd Regional Office also offers training programs on how to manage ICT projects, as well as in providing technical assistance and support on ICT.

Apart from the training programs at the national, division or regional level, teachers also receive support from their school head to further their professional development. The school head's support extends to allowing teachers to participate in DepEd Division sponsored training; encouraging ICT teachers to finish their master's degrees; and requiring ICT teachers to have TESDA National Certificates (NC) as proof of competency, among others.

Moreover, the school head shared that measures to integrate technology components in blended learning modalities, as well as in teacher INSET activities, were adopted in support of capacity building initiatives. As part of enhancing the skills of teachers in developing digital citizenship competencies, the school head also conducts teachers' performance monitoring, coaching, and mentoring by doing classroom observations, asking teachers to execute demonstration teachings even during INSET, and more importantly, giving feedback, and by processing all assessment and evaluation to each teacher as part of the teacher's professional development.

## Highlighting the Need for Additional ICT Training for Teachers and School Heads

Some teachers have misconceptions about the proper use of technology. According to the school head, sometimes, teachers think that they are already “21st century teachers” if they use PowerPoint or if they incorporated a video, software, or an application in the lesson plan. This limited understanding is a result of teachers’ irregular use of equipment and lack of understanding of the software and tools that they use in the classroom. This is exacerbated by pressures to apply technology in the teaching demonstration and observations.

The DepEd Central Office representative also observed that there is limited awareness related to copyright issues and proprietary rights among teachers. Since they use open-source software resources, teachers need to understand the issues and concerns pertaining to copyright. Since the Internet is very accessible for teachers, they easily rely on the available online resources to contextualize the materials that would fit the needs of the students. In some instances, teachers do not always check and verify for possible copyright infringements when they access and use information from the Internet. This suggests the need to conduct information awareness training activities that focus on copyright, intellectual property, data privacy, and the ethical use of information.



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Moreover, the lack of continuity and sustainability in the use of programs or platforms across all schools was also observed by the DepEd Central Office representative. DepEd recommended the use of Microsoft Office tools even if some teachers are already training on how to use the Google Workspace. This caused confusion among the teachers. This was also observed in the school year 2020–2021 by the school head of the Philippine school. The school head shared that she understands that not all principals and teachers can use technology so the sudden shift in the use of the software will be cumbersome for most of them. This will also have repercussions on learners, who would then also have to familiarize themselves with new learning management platforms.

In addition, it was reported that there is a lack of ICT programs for the empowerment of the school administrators at the national, regional, or division levels. The DepEd Central Office representative suggested that the National Educators Academy of the Philippines (NEAP), being the training arm of DepEd, should lead in those transformational programs.

In terms of the pre-service curriculum for teacher education, DepEd recognizes that some HEIs or TEIs provide outdated instructional technology courses for future teachers. Findings also revealed that digital citizenship is not fully integrated in the DepEd curriculum. This becomes more apparent because of the absence of guidelines in developing digital citizenship competencies. Since the pre-service training on ICT received by the teachers and school heads has most likely become outdated due to evolving complexities in digital technologies, additional training is needed for them to cope with the fast-paced advancement of technology.



***It is crucial to provide relevant and timely training and programs for teachers and school heads that are aligned within educational trends, and which can appropriately address the technology concerns of students.***

Fostering digital citizenship is a concerted effort among education stakeholders. Thus, it is crucial to provide relevant and timely training and programs for teachers and school heads that are aligned within educational trends, and which can appropriately address the technological concerns of students. Further, the PTA representative and the DepEd Central Office representative both agree that teachers need to widen the learners' horizon by developing the skills of the students in using the Internet and multimedia. Students in the representative school need skills in using the Internet and computers in school subjects such as programming languages and computer hardware and software. According to the Robotics teacher, they need to use the Internet and computers for programming and for getting some additional details regarding the use of hardware and software for Robotics technology. Moreover, to maximize the schools' blended learning experience, the school head promotes the use of several learning management systems (LMS) such as Neo LMS, Google classroom, Quipper, Schoology, etc. The use of LMS is very helpful, especially in teaching Mathematics since the students can share their videos in the LMS and show their solutions to some Mathematical problems. With all these advancements, it is imperative to equip the students with a wide range of skills, or capabilities in preparation for their future success.

## Policy Options

This policy note suggests a set of recommendations for education stakeholders, specifically the teachers, school heads, and the Department of Education, which may be taken into consideration to further enhance the promotion of digital citizenship competencies in the Philippines.

- Consider the provision of training and programs for teachers and school heads to strengthen their capacities in identifying and providing appropriate approaches to respond to technology-related concerns/issues of students.
- Strengthen the pre-service training in teacher education for ICT by revisiting the pre-service curriculum in teacher education programs and training so that teachers will be prepared and equipped before they enter the teaching profession. This may be done by regular review/ update of the technology courses (e.g., Technology for Teaching and Learning 1 (TTL1) and Technology for Teaching and Learning 2 (TTL 2)) in the existing curriculum for teacher education.
- Strengthen partnerships between DepEd (TEC and NEAP) and the different TEIs through CHED in designing curriculum that will prepare teachers based on the expectations, needs, and realities from the ground.



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