

TEACHERS, TEACHER EDUCATORS AND TEACHER EDUCATION IN THE DIGITAL ERA (FUTURE DIRECTIONS OF CONTINUING PROFESSIONAL DEVELOPMENT AND THE WAY FORWARD)

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ABSTRACT

Focusing on the central role of Continuous Professional Development (CPD) in the digital era, this article addresses three most essential components of the CPD. First, the necessity of CPD for school teachers is discussed. Then follows the discussion on issues and problems of CPD in remote areas. Illustrations on matters related to CPD practices in school education on remote areas in Japan and United Kingdom are then presented to conclude the article.

I. INTRODUCTION

The purpose of this paper is to consider how our contemporary state-of-the-art digital technology is going to contribute itself to school education specifically by focusing on Continuing Professional Development (CPD) for schoolteachers. This paper will create a future image or model of teacher education or CPD in the digital era by exploring the digital technology which is currently available.

Nowadays, CPD is the high-profile issue in professional education in general because it is indispensable and significant for the development of professionals⁽¹⁾.

One of the interesting features of CPD in professional education such as for schoolteachers and medics can be discovered that contemporary advanced-technology will or can play or even has already started to take a vital role in CPD in some

regions. In other words, CPD in the 21st century is trying to move towards the direction of providing all the professionals with equal opportunities.

In this paper, the following three features are focused on under the heading of CPD for professionals: 1. The necessity of CPD for schoolteachers. 2. Issues and problems of CPD in remote, rural areas. 3. CPD practices in school education on remote islands in Japan and in the United Kingdom.

Before moving into the considerations of the central issues, let us look at the present situations of Information and Communication Technology (ICT) in terms of school education and professional expertise of schoolteachers.

II. PRELIMINARY

In some advanced countries, schools are equipped with a number of digital tools and devices such as tablets or iPads, digital textbooks, Interactive Whiteboards or Interactive TVs. ICT has brought pupils and teachers different or varieties of learning styles which did not exist before. More effective teaching and learning are achieved in many classrooms now. However, there are pros and cons to everything, which means that ICT has also produced some concerns such as the digital divide⁽²⁾ and technoference⁽³⁾. It is indispensable to pay closer attention to overcoming the cons or eliminating them. This is the initial step to take when intending to introduce new technology to school education.

Next, let us look at one important aspect which relates to CPD for schoolteachers:

Professional expertise. The followings are some factors which consist of it:

- Reflective practice is prioritised, and enhancing reflexivity is included III the attainment targets⁽⁴⁾.
- Problem-solving with confronting complexity and uncertainty is the frontline issue for schoolteachers⁽⁵⁾.
- Case-based knowledge is the core element.
- Schoolteachers have more tacit knowledge.
- Networking the gains from previous cases/experiences with the present conditions and situations is critical.

As is seen, their professional expertise involves more than knowledge and skills in our ordinary senses. Therefore, when considering CPD for schoolteachers, these factors should be highlighted.

In the following sections, each of the three features referred to in Section I is going to be discussed.

III. CPD FOR SCHOOLTEACHERS

a. The necessity of CPD for school teachers

CPD is prioritised in professional education for schoolteachers in many regions. This belief is justified by William: "Every teacher needs to improve, not because they are not good enough, but because they can be even better."⁽⁶⁾ It is supported again by the Department for Education (DfE) which states: "As the most important profession for our nation's future, teachers need considerable knowledge and skill, which need to be developed as their careers progress."⁽⁷⁾ In short, professional knowledge and skills need to or rather must be updated for their better or improved practices.

As the document by the DfE suggests, the pivotal necessity of CPD is inherent to and derives from the factors relating to professional expertise that is described in the previous section: In order to fulfill their work properly, they need to develop, enhance and improve their professional expertise.

However, it is not always easy, or it is rather difficult for schoolteachers to access CPD in some cases.

b. Issues and problems of CPD in remote, rural areas areas

Overall, it is observed that the conditions and situations of schoolteachers in remote, rural areas are similar beyond their context. The previous research ⁽⁸⁾ reveals that both in Japan and in Scotland schoolteachers tend to confront similar dismal conditions and situations even to access or to obtain their minimum CPD opportunities. The limitations that they confront include:

- 1) Unstable and unreliable transportation between remote islands and the main island/land.
- 2) The high cost of transportation between them.
- 3) Long travel hours between them.
- 4) Shortage of staff members to cover and/or difficulty in finding supply teachers.
- 5) Lack of professional dialogues and discussions on their professional issues (lessons) with their colleagues because of a single-hand practice, which leads them to professional isolation.

Here now, let us take a close look at the details of conditions and situations of schoolteachers on remote islands in Japan and the United Kingdom because all of these hurdles are commonly discovered.

Remote islands in both countries have difficulties in managing appropriate and effective CPD for schoolteachers because, in the extreme case, each primary school holds the minimum number of teachers, depending on the number of pupils: In Japan only three teachers including one headteacher be-

long to one primary school on an island, and in the United Kingdom, which is even worse, only two teachers including one headteacher belong to one primary school on an island in Scotland. Each lower secondary school on remote islands in Japan holds only one teacher of each subject or even in worse cases it does not have teachers of all the subjects, and in the United Kingdom exactly the same situations can be found.

One of the best ways to carry out CPD at school on a regular daily practice basis in Japan is so-called “Lesson Study”, which is a case-based method for CPD at school to develop and enhance professional expertise: To exchange views of lessons, to discuss them being based on a specific subject and to share practices. It can be regarded as being equivalent to a case conference in hospitals. Historically, there has been plenty of evidence published to support the necessity of CPD which is based on cases ⁽⁹⁾.

There are fewer problems in implementing Lesson Study in urban areas because each school holds more than one specialist: Schools have some teachers belonging to one specific department, which enables them to share their practices on a daily basis.

However, a hurdle in conducting a case-based CPD is intrinsic to small schools especially those which are located in remote, rural areas because the number of teachers is often so limited, let alone their poor accessibility to the venues of CPD offered by the Lo-

cal Authority (LA). Hence, in Japan, it denotes that the teachers who work in the secondary schools on remote islands cannot implement Lesson Study at school on the basis of their subject specification. Additionally, in order not to miss their lessons at school, because of a small number of teachers or only one subject teacher of each subject, the teachers there are required to stick to their school, which deprives them of attending CPD sessions on the main island/land.

As shown above, the lack of the chances of CPD causes a serious problem for the pupils because they may only have limited, reduced or even out-of-date quality of education. In other words, there arises a huge disparity between the pupils living in urban areas and those in remote islands, which is not preferable and not justified from the viewpoint of fairness in public education.

In order to solve this kind of problem, it is invaluable and also effective to employ contemporary technology such as the Internet and video-conference systems: Technology-enabled communication platforms should be launched and established in remote, rural areas. As a matter of fact, some of the problems previously described are solved both in Japan and in the United Kingdom with technology-enabled communication platforms. In the next section, the aspects of CPD on remote islands with contemporary technology are considered.

c. CPD on remote islands in Japan and in the United Kingdom

Scotland has been far more advanced in making use of high-quality present-day technology than Japan. In school education, online CPD is provided, which is called “Glow digital learning for Scotland” (Scottish Schools National Intranet) and plays the dominant and vital role. It is a major national ICT and telecommunications programme managed by Education Scotland.

“Glow” can be accessed by mainly two different stakeholders at school: Pupils and teachers. “Glow for learners” allows learners to work in a variety of ways, from collaborating with peers to working individually at their own pace, while “Glow for educators” assists teachers to enrich and enhance learning across the curriculum and allows them to share teaching materials, design online resources and activities to engage learners and take part in professional learning opportunities ⁽¹⁰⁾. Hence, CPD in Scotland is partly implemented with online resources.

The details of Glow are explained in the following official document by the Scottish Government ⁽¹¹⁾:

The role of Glow in Career- Long Professional Learning

The Scottish Government and Education Scotland allow all educators to access a variety of digital tools and services through Glow. These digital tools and services are available at no cost to educators and can be used to share informa-

tion and opportunities and support career-long professional learning. For example:

- **Yammer** is an online discussion and collaboration tool that allows educators to make connections and share resources in a secure social network. Users can connect with a range of others to share knowledge and advice as well as joining or creating groups for people that share a common interest.
- **Glow TV** can provide national interactive broadcasts allowing professional dialogue between the host and the participants.
- **Glow Meet** is an online meeting tool to allow educators to easily engage in professional dialogue, share documents and deliver presentations.
- **Glow Blogs** can be used by schools and local authorities to share information and facilitate professional working and interaction. In addition to digital tools and services, Glow also allows educators to access a range of professional learning communities. These nationally available online spaces allow educators to share resources, work collaboratively and take part in online discussions across a range of curriculum areas and educational topics.

Another remarkable online system for broadening learning by pupils and creating CPD opportunities by teachers in Scotland is called “eSgoil”. Its brief

explanation is found in the same official document by the Scottish Government⁽¹²⁾:

The Western Isles Council has traditionally encountered unique challenges when delivering education. The isolated rural locations of many schools, small school rolls and difficulties in teacher recruitment have made it difficult to offer a wide subject choice to their learners.

In response to these challenges, the Western Isles Council with support from Education Scotland, the Scottish Government and Bard na Gaidhlig are developing an eSgoil (e-school). This new school will have a hub located in Stornoway which will be linked to all other secondary schools in the Western Isles. This will allow entire classes or individual tuition to be delivered through online distance learning which will utilise live video streaming and a range of digital tools and services available through Glow.

The effect of this new eSgoil will be that every secondary school learner in the Western Isles will be able to access an increased range of subjects in both English and Gaelic. Learners will continue to undertake core subjects in the main school setting however, through the eSgoil, they will now be able to access subjects that were previously unavailable to them. Furthermore, this arrangement will also support professional development

(*sic*) as educators will be able to access career-long professional learning opportunities using the eSgoil's infrastructure.

As is obvious from these two citations, "Glow" offers the conditions and situations not only for the teachers to assess the opportunities to develop and enhance their professional expertise that is described in Section II but also for pupils to supplement their disadvantages of learning. Thereby, schoolteachers on remote islands can avoid professional isolation.

Moreover, even on the remote islands in Scotland, ITE is offered to the local people and is implemented with a video-conference system (13), which enables the islands to securely recruit the teachers working there.

In the school education context in Japan, two LAs in Kagoshima Province which is located in the south western part of the country have started a pilot project of lesson observations, Lesson Study and joint lessons with other schools within the same LA areas by using an inter-island video-conference system. This is a powerful, valuable way for CPD of schoolteachers and also for learning by pupils: Teachers who work in secondary schools have chances to observe lessons of the same specific subject carried out by other schoolteachers in different schools in the same LA region, while pupils have chances to share their learnings or performances with other pupils there. Specifically in the subject such as music, because

of the small number of pupils in one school, they usually have difficulty in having an ensemble with different musical instruments or performing music. By connecting schools with the video-conference system, a different environment of learning is created.

As is obvious again here, with the contemporary advanced digital technology, issues and problems for schoolteachers of professional expertise can be sorted out as well as the enhancement of the quality of education for pupils.

d. Concluding remarks

In this paper, being based on a couple of innovative examples of the use of digital devices for CPD, it is considered how the use of ICT can create the grounds of CPD for schoolteachers by referring to a couple of platforms available at present, which signifies the future directions and the way forward of CPD. The use of digital devices mentioned in this paper can also create a better learning environment for pupils. In other words, two different good fruits from one single tree can be obtained. This is really a profit and advantage to introduce ICT to school education.

In the Indonesian context, the ways of CPD mentioned above or school education should be accelerated to be introduced because there are 922 permanently inhabited islands out of 13,466 islands in total (14), which is approximately three times more than those of Japan. In addition, the urban population is only 55.3 per cent (15), which denotes that almost half of the entire

population lives in rural, remote areas. There is a huge reasonable demand for installing ICT in education.

Notes

(1) One typical example of the necessity of CPD for professionals is displayed in the official document for medical doctors (p.7) by the General Medical Council (GMC) in the United Kingdom. The following is one quote from this:

The aims of CPD

2. Your CPD activities should maintain and improve:

- a. the quality of care you give your patients and the public.
- b. the standards of the teams and the services in which you work.

3. Your CPD should keep you up to date and competent in all the work that you do. It should affirm what you do well, address areas requiring improvement and explore new knowledge, skills and behaviours.

The necessity of CPD for school teachers is discussed in Section III. 1. in this paper.

(2) *Collins Online English Dictionary* defines it as “the gap between those people who have internet access and those who do not”.

(3) *Collins Online English Dictionary* defines it as “everyday intrusions and interruptions due to technology devices such as smartphone, etc.”

(4) In the United Kingdom • the document by the Department for

Education (DfE) (p.10) refers to “reflection” by saying: “includes opportunities for experimentation, reflection, feedback”.

(5) See the best-known work of Donald Shon, *The reflective practitioner*.

(6) The Department for Education in the United Kingdom, p.3.

(7) Ibid.

(8) Kizuka, M., et al.

(9) First and foremost, the works of Donald Shon must be recalled.

(10) Retrieved from <https://glowconnect.org.uk/>

(11) *Enhancing Learning and Teaching through the Use of Digital Technology: A Digital Learning and Teaching Strategy for Scotland*, p. 18.

(12) Ibid., p.10.

(13) The University of Highlands and Islands offers ITE distance learning course for Postgraduate Diploma in Education or Professional Graduate Diploma in Education (PGDE) by the combination of video-conference and face-to-face lectures and online study.

(14) Retrieved from <https://www.cia.gov/library/publications/the-world-factbook/geos/id.html>

(15) Retrieved from <https://www.cia.gov/library/publications/the-world-factbook/geos/id.html>

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