

THE NECESSITY OF THE METHODOLOGY FOR DEVELOPING THE DIGITAL COMPETENCES OF FUTURE ELEMENTARY SCHOOL TEACHERS

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Abstract

Teaching is a complex activity. Competent teachers apply broad, deep, and integrated sets of knowledge and skills as they plan for, implement, and revise instruction. The use of information communication technology must be carefully planned and put into a pedagogical framework. It requires the teacher to possess good pedagogical and didactical knowledge.

Key words: media, pedagogical framework, pedagogical and didactical knowledge, online information and sources

Аннотация

Преподавание – сложная деятельность. Компетентные учителя применяют широкий, глубокий и интегрированный набор знаний и навыков при планировании, реализации и пересмотре обучения. Использование информационно-коммуникационных технологий должно быть тщательно спланировано и включено в педагогическую основу. Это требует от учителя хороших педагогических и дидактических знаний.

Ключевые слова: СМИ, педагогическая основа, педагогические и дидактические знания, онлайн-информация и источники.

Annotation

O'qitish murakkab faoliyatdir. Vakolatli o'qituvchilar ko'rsatmalarni rejalashtirish, amalga oshirish va qayta ko'rib chiqishda keng, chuqur va birlashtirilgan bilim va ko'nikmalar to'plamini qo'llaydilar. Axborot-kommunikatsiya texnologiyalaridan foydalanishni puxta rejalashtirish va pedagogik asosga kiritish kerak. Bu o'qituvchidan yaxshi pedagogik va didaktik bilimga ega bo'lishni talab qiladi.

Kalit so'zlar: ommaviy axborot vositalari, pedagogik asos, pedagogik va didaktik bilimlar, onlayn ma'lumotlar va manbalar

As a professional practitioner, the teacher is likely to become a role model or standard for his or her students. It is expected that creativity should be given space at work in an active search for new knowledge and new methods. The use of information communication technology must be carefully planned and put into a pedagogical framework. It requires the teacher to possess good pedagogical and didactical knowledge and be able to apply this in such a way as to promote learning processes. The information communication technology Competencies are a set of technology standards that define proficiency in using computer technology in the classroom.

Importance of information communication technology Competency for Teachers Teaching is a complex activity. Competent teachers apply broad, deep, and integrated sets of knowledge and skills as they plan for, implement, and revise instruction. The acquisition of technology knowledge and skills must be connected with the development of a broader array of competencies. The NETS-T Project (National Educational Technology Standards for Teachers) describes what competent teachers should know and should be able to do with technology in the context of broader teacher competencies. The NETS-T standards are categorized as follows: technology operations and concepts teaching, learning, and the curriculum assessment and evaluation productivity and professional practice social, ethical, legal, and human issues planning and designing learning environments and experiences Basic Technology Competencies The technology competencies are organized into five aspects: productivity, research, communication, media and presentation. Productivity Produce and manage learning documents. This includes composing standard educational publications such as parent newsletters and handouts for students and class lists; teaching students how to prepare their own documents on a computer. Analyze quantitative data. This includes administrative work such as putting student test scores into a spreadsheet and analyzing them, as well as preparing curriculum materials with digital tables and graphs of curriculum content. Organize information graphically. He or she can use specialized graphic organizer programs, as well as general tools such as word processors or presentation programs, to create digital representations of educational information. Research Use effective online search strategies. The teacher chooses the most appropriate research tools and databases, and applies the most effective search techniques, to produce useful and safe online resources in the classroom. Evaluate and compare online information and sources. Once located, the teacher knows the difference between authoritative and untrustworthy sources, how to ascertain authorship, and how to find sources with different points of view and then can teach these skills to students. Save and cite online information and sources. The teacher knows a variety of methods for bookmarking and saving valuable online resources so that may easily be found later and employed in learning materials. Communication Communicate using digital tools. These include email, instant messaging, mobile colleagues, and knowing how to organize and manage these tools in the classroom. Collaborate online for learning. Takes advantage of the tools listed above plus blogs, wikis, chats, audio and videoconferencing to bring outside resources into the classroom and to encourage academic collaboration among students. Publish learning resources online. From a simple teacher's web site to a complex curriculum wiki to the online posting of student projects, to podcasting, the teacher has mastered an array of tools and techniques for publishing learning materials online. Media Differentiate instruction with digital media. This includes an awareness of assistive technologies for disabled students as well as the ability to use a computer to prepare and present academic ideas in a variety of forms for better learning by all students. Capture and edit images, audio, and video. The teacher can use digital still and video cameras, edit their output on a computer, and produce learning materials that range from simple slide shows to the archiving of student presentations and performances. Produce digital multimedia educational experiences. The teacher can combine media from a wide array of sources into a useful presentation of academic content, and can teach this skill to students. Presentation Create effective digital presentations. Using common tools for preparing slide shows, videos, and podcasts, the teacher can create presentations that follow the principles of communication, and can apply these principles to the evaluation of students' digital work. Deliver digital multimedia presentations. Using common devices such as computers, projectors,

and screens, the teacher can set up classroom presentations and arrange for students to do the same. Employ new media devices for learning. From large Smart Boards to tiny iPods, the teacher can incorporate a variety of digital devices into the instruction in the classroom. Those are the skills that just about every teacher needs, no matter the subject or grade. Beyond these are the more specific technical skills required of a high school math teacher or a teacher of visually-impaired students, competencies that would be embedded into specialized courses and programs. Strategies for Preparing Teachers to Use Technologies Teachers' progress through a series of five predinformation communication technologyable stages as their expertise in technology adoption and integration evolves. Encouraging Teachers to Acquire Necessary Skills: For many teachers, having access to technologies is not viewed initially as a benefit. Teachers may consider technologies yet another demand on their time, a set of tools they did not ask for and do not know how to use. Providing sustained support for Teachers' use of Technologies: Teachers to acquire knowledge and skills in how to use technologies. Once teachers begin to acquire such skills and begin to use technologies, there is a need to provide support to teacher use of technologies. Evaluating Teacher Use of Technologies: The issue for education policy makers concerns the extent to which a teacher uses technologies effectively, which is an important criterion in evaluating a teacher's performance. Basic effects of digitalized environment on the teaching learning process In this digital era, a teacher working in higher education institute has to understand difference between "learning about" and "learning to be" and implement the later for the effective learning outcome among the learners. Proper involvement of the learner ought to be ensured in the discipline which is meant for learning to be-i.e., if a learner is enrolled in teacher education programme he should have direct exposure of teaching skills. The digital periphery can be accommodating to learner for the content exploration to work out lessons in a digital form and teacher's role from technical to teaching point will be crucial. Teachers have to make the available support structures and systems for them to develop skills like interactive learning, collaborative learning and independent learning among the students. The teachers' role expands to nurture critical thinking, creativity and scientific temper among the students to transform them into life-long learners and innovators. Some of the effects of digitized environment on the teaching learning process are: → Improves quality of student work and practical examples through visualisation → Improves poor handwriting and languages skills through word processing → Facilitates self-pacing with increased capacities to deal with individual learning styles as students can work at the pace and intensity suitable to their needs → Enables collaborative learning with little indication of the isolated learner → Encourages use of peer coaching and peer reviews → Develops communication skills and awareness of different audiences → Enhances information consistency and accuracy adding to authenticity of learning tasks, with pragmatic and advanced information → Augments learner motivation through practical activity, visual demonstrations and improved modes of presentation → Promotes independent learning and individual preferences for process, outline, method and design → Furnishes learners more control → Learners are able to produce high quality multimedia products → Transforms teacher learners' learning, and be ready to make changes when their practices, planning tools and assessment rubrics → Boosts opportunities for classes to advance and for learner experiences to shape results → Can inspire students to be committed to learning and to contribute in learning activities → Can develop students' higher-order thinking: their ability to apply knowledge and skills → Helps to analyze challenging problems, grasp broader concepts, and devise new ideas and solutions.

The main task of teachers is teaching and supporting the learning of learners. They should therefore (also) have skills to allow them to design their teaching using digital media, i.e., digitalise their teaching. This encompasses teachers planning the use of media in the teaching and learning process, using digital media appropriately and effectively and trying out new digital formats and methods. While this skills area has been imparted for many years in ongoing training in the use of digital media, the DigComEdu brings into focus digital partial competences in the three other areas “supporting learning”, “collaborative learning” and “self-managed learning”, that have up to now often been too little considered in teacher qualifications. Teachers should have skills for using digital media to support individual, self-managed and collaborative formats; they should also be able to design their digital teaching so that media help the learners in completing joint tasks, in interacting and in joint knowledge generation within and beyond lessons.

Teachers should be aware that digital teaching offers greater potential for orientation towards learners. The DigComEdu calls this “empowerment” of the learners which is a much more plastic description of potential (see Figure 2). Thus, digital media can help to make lessons more accessible and inclusive, they can be used for individualisation and differentiation of teaching and learning– if the teachers have the necessary skills.

Before the corona pandemic, there was often a lot further training on offer aimed at beginners and somewhat less for teachers with a higher level of digital competence. After the corona pandemic, that no longer appears adequate; teachers now have much more experience and thus new skills – but in vastly different areas. (Further) development of skills in the area of digital competence must therefore be much more differentiated than previously. DigCompEdu can help here, too, to a certain extent – it is not just a reference framework, it is also a progression model for self-assessment of digital skills. The competency framework can thus help teachers to both determine their current digital skills and identify their desired skills gains through, for example, further training events or assess them after further training actions.

The promotion of digital skills of teachers in the context of schools can be undertaken at various levels. On the micro-level, teachers can, with the support of school leaders, take organise regular exchanges of subject-specific experiences (including between different schools) in relation to digital media. Another good route could be independent further training of teachers by providing the necessary digital resources and support (for example by experiences colleagues). On the macro-level, the development of a media concept or a media education concept is recommended. Such a concept should be worked out in discussion with all teachers and contain specific aims and actions, take subject-specific and school circumstances into account and enable sustainable promotion of digital skills.

CONCLUSION

In this digital era, teachers’ role has shifted from mere preacher to the manager of students social and emotions behaviours; mentor for their learning and over-all development as a balanced citizen; motivator for slow learner and a fast learner in digital environment. He has to keep watch on the time spent by learners for their proper time management which make certain that the learner utilizes optimum e-recourse. He has to address social and emotional issues that affect learning stalls.

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