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Individuell fördern mit digitalen Medien

Chancen, Risiken, Erfolgsfaktoren

Abstract

Today's children and youth are growing up with digital media. From smartphones to tablets to notebooks, the array of devices used in modern life are increasingly shaping the lives of the next generation. Examining the research findings of the past 15 years, Heike Schaumburg (see Part 1) describes the opportunities and risks – for both individuals and the classroom – associated with digitization. Digital media clearly provide opportunities for individuals by improving their access to information and improving communication and participation. But they also pose risks such as internet or computer game addiction and cyberbullying. There is also the risk that unequal access to digital media and web habits can increase social inequality.

In order to take advantage of the opportunities inherent to digital media while also managing its risks, children and youth must acquire the appropriate media literacy skills. Even so-called digital natives do not acquire these skills automatically, as the ICILS study has demonstrated.

Schools ultimately bear responsibility for teaching media literacy and are tasked with addressing the digital divide. Schools in Germany today face the challenge of helping adolescents become self-directed and critical users of digital media for productive and creative purpose.

In addition to the need to develop media literacy as an “indispensable key qualification” (KMK 2012), schools can harness the educational potential of digital media for teaching and learning. Digital media offer, for example, considerable opportunities for individualized learning and differentiated instruction. Learners can be supplied with a greater variety of differentiated materials or choose themselves materials according to their interests. Multimedia also provide learners alternative means of accessing information. Individualized feedback can also enhance encouragement across skill levels.

The benefits of digital media can be taken advantage of only if and when schools have the resources to realize this potential. This depends primarily on teachers' skills and willingness: teachers must be equipped not only with didactic skills and education expertise, but also with technical skills, that is, they themselves must be

media literate. Only then can they use digital media in an educational setting from which every student benefits. Teachers must therefore have the opportunity to acquire or expand their skill set through training and shared curriculum development. They need resources and time to plan and develop lessons with digital media.

The study designed by Richard Heinen and Michael Kerres (see Part 2) underscores the need for a systemic assessment of schools in order to ensure that digital media's potential in fostering an individual-focused learning culture is being tapped. Individualized support and the integration of media should therefore be viewed as correlated aspects of school and curriculum development. The traditional pillars of school development (organizational, personnel and instructional development) must be extended to include technical development.

Teaching media literacy and integrating digital media into educational processes at schools requires the presence of a reliable and practical IT infrastructure that is conducive to learning. A conducive-to-learning infrastructure refers here to the presence of IT equipment that is not only geared to the educational needs of learners and educators, but is also smoothly integrated into the classroom and home use, thereby allowing for flexibility. Such an infrastructure allows for the use of learning scenarios, which bear several advantages such as self-directed learning or adaptive learning.

The study by Andreas Breiter, Björn Eric Stolpmann and Anja Zeising (see Part 3) describes the technical, organizational and fiscal conditions required to provide such a conducive-to-learning and practical IT infrastructure. In doing so, they draw on a multilevel model of media integration that takes into account the complexity of the German education system while also considering the impact of various actors. Whereas a school and its teachers are responsible for educational tasks that are to be carried out with analog and digital media, they must do so, however, in ways commensurate with conditions and curricula prescribed at the state level of government. However, municipal education authorities are generally responsible for providing basic IT infrastructure.

The study shows that the task of integrating media into education is a complex process involving all levels of the education system and therefore cannot be carried out by schools or local education authorities alone. This is true in particular with regard to addressing issues such as Bring Your Own Device (BYOD) or cloud computing, which must be carefully considered in terms of both technical requirements and data protection.

In the second part of the book (see Part 4), Jöran Muuß-Merholz draws on a collated sample of case studies of digital media use in different schools to show that the wide range of possibilities inherent to digital media use for individualized learning are in fact being applied.

Muuß-Merholz shows that in all cases, the use of digital media is not an end in itself. Teachers are instead interested in making use of the didactic opportunities inherent to digital media while extending their repertoire of teaching strategies. The question is not: "How can I use digital media in the classroom?" but rather "How

can I as a teacher design lessons so as to efficiently support students in their learning?” Digital media have expanded the palette of possibilities for teachers to choose from. Teachers can decide if and when the use of digital media makes sense in their lesson planning (e.g., for certain lessons or phases) as an addition or alternative to conventional media which, overall, contributes to the variety of methods and media available.

Setting clear goals for the use of digital media and combining this with didactic considerations are key to ensuring success. Digital media can expand the spectrum of activities available to teachers and help create an educational environment that would involve considerable more effort in an analog setting.