GUIDELINES FOR SCHOOL LEADERS
Mobile learning and cloud services - teacher induction and continuing professional development
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These guidelines for school leaders are a result of the work of the Future Classroom Lab Regional Network (FCL Regio). The project aims to better support the integration of ICT in teaching and learning through the development of Future Classroom Scenarios and pedagogical videos designed to guide policy makers, educators and school leaders in the proficient use of technology and innovative pedagogical techniques. FCL Regio wishes also to find new ways to allow for a more active participation by decision makers in regions in pan-European activities. Funded by the European Union Erasmus+ programme, the project has started in September 2015 for a duration of 36 months.

According to the Communication on school development and excellent teaching (2017), the pace of technological and digital change is having a profound effect on our economies and societies. Schools need to respond better to this new reality by various reform efforts, including promoting more opportunities for exchanging experiences and mutual learning.

During the second year of the FCL Regio project, it has been considered of outmost importance that in-service teacher training and newly qualified teacher induction programmes would be key elements, not only to reflect about, but also to be addressed immediately by school leaders and policy makers. Many countries are in fact facing several challenges to provide relevant and high quality professional development opportunities to their teachers and, although induction training opportunities (early career support) to beginning teachers can help to tackle this matter, these are still far from being universally available across Europe.
Besides providing teachers with professional development opportunities, it is also needed to consider other elements such as finding more innovative ways of integrating ICT in the classroom, using cloud services or implementing innovative techniques and methodologies that can help teachers to more efficiently use digital technologies in the classroom. To this end, teachers from Italy, Spain and Sweden have been reflecting during this second year of the project about the importance of integrating digital technology in their daily practice and creating pedagogical scenarios which will help other teachers to better integrate programming, mobile learning and collaboration in their daily practice.

From a policy perspective, the FCL Regio project drafted recommendations for policy makers who are attempting to develop and implement ICT strategies for schools (the recommendations can be consulted online here). Based on this document, the project has developed a list of suggestions that school leaders can use as guidelines in their own context.
1. Prioritise pedagogy when integrating ICT in the classroom

School leaders should emphasize the importance of pedagogy when considering integrating ICT in the classroom. It is important to define the rationale behind the new methodologies with a holistic approach that consider the whole curriculum. They should enhance collaboration between teachers, and promote job shadowing and self-reflection for an increasing level of teachers' self-efficacy.

1.1. Underlying the pedagogical value of every innovative approach

Research shows that there is limited use of ICT by educators in their practice due to personal (e.g. self-confidence, training) social (e.g. social norms, policies) or environmental factors (e.g. resources, infrastructure). Teacher training programs should focus on mitigating these factors and emphasize a valuable use of technology within a pedagogical context, harmoniously structured within the whole curriculum. This will help to create a base for moving from considering new technologies burdensome tools to seeing them instead as strategic learning tools and opportunities to serve the educational goal. A profound reflection about how to plan, implement, and sustain the use of educational technology within the school to advance teaching and learning is needed and strongly recommended.

1.2. Developing digital competences of teachers

According to the European Framework for Digital Competence of Educators (DigCompEdu), educators need a broader and more sophisticated set of competences, skills and values in order to face the current rapidly changing demands. Besides, the OECD's TALIS study (2013) showed that 18% of trainers and teachers feel that they need more ICT skills for teaching, and those who received more professional development opportunities claimed to work more effectively. It is therefore important to support educators to acquire the relevant digital competences that will help them to keep up with the needs of the 21st century students. To this end, school leaders could adapt the European Framework for Digital Competence of Educators to their specific needs.
1.3. Integrating ICT in a cross curricular way and as an empowering tool

ICT can be an opportunity to link together subjects and disciplines and to enhance the impact of cross-curricular activities. The collaboration among teachers of different subjects and students of different levels is very effective in increasing motivation and engagement and this is something school leaders should promote among the educators. Students and teachers can learn from each other and become actively involved in the learning process. An example of student’s collaboration while practicing a foreign language can be appreciated in the following pedagogical scenario, where two schools from Trentino in Italy used CLIL (Content and Language Integrated Learning) and peer learning to develop both their linguistic and programming skills.

“I would recommend collaborative projects to other teachers, and I would recommend collaborative projects of this kind where schools at different levels also work at distance, certainly yes, I would encourage other colleagues to try.”

Francesca Noceti,
Teacher, Istituto Comprensivo di Strigno e Tesino, Italy
https://www.youtube.com/watch?v=VGn2x1kDzQk&feature=youtu.be
2. Provide professional development opportunities for the whole school staff

School leaders should make sure that all school staff, and not only teachers, follows a coherent pathway of professional development to ensure the capacity building of the school as an organization.

2.1. Creating tailored-made and personalized training opportunities

Headmasters should ensure that different profiles of school staff are provided with tailor-made training opportunities, in order to be able to develop the relevant pedagogical and digital competences and skills, and play their specific role within the school digital transformation. Moreover, the training should be adapted to the teachers and the rest of the school staff considering their individual situation, their level and their needs.

Targeted instruction is necessary in every professional development opportunity provided to ensure that teachers know how to set goals for themselves and maintain the focus to achieve them. In order to support professionals to evolve their life-long task of professional development, differentiation constitutes a paramount factor in the teacher-training field.

2.2. Encouraging teachers’ self-reflection and self-assessment

In order to be able to take ownership of their professional development, teachers should be encouraged to reflect on and assess their working skills and competences.

A tool that can help teachers in this effort is the TET-SAT tool. This online self-assessment tool aims to help teachers to reflect on their pedagogical practice using ICT, to develop their digital pedagogical competence and to self-direct their learning, identifying learning needs, setting goals, and inviting teachers to monitor and to improve their competences. The self-assessment tool can be accessed online here.

SELFIE is another digital self-assessment tool on fostering effective learning by an innovative use of educational technology. The tool, developed by the European Commission, is based on the framework for digitally competent organizations and it sets out seven areas that need to be addressed when using digital technologies, e.g. leadership and governance practices, infrastructure, content and curriculum and teacher training. More information about the SELFIE tool can be found here.
3. Bring newly appointed teachers up to speed and support in-service teachers continuous professional development

School leaders should provide mentoring programmes for newly appointed teachers to encourage and support them at the beginning of their professional career. Peer-to-peer learning and online communities are instead precious ways to engage all teachers in the school continuous innovation process.

3.1. Establishing effective induction and mentoring programmes

In some countries, newly qualified teachers are facing considerable challenges when entering the profession. Despite the education and training path they follow, which is not always sufficient to cater for their practical needs, teachers are easily discouraged by the lack of support and tend to drop out from teaching. When induction programs are not sufficient in helping beginning teachers to cope with early career challenges, school leaders should provide them with comprehensive accompanying programmes. This could be done by appointing mentors who can guide and support teachers in increasing their self-confidence and self-efficacy. It is important to select mentors not only for their experience, but also for their openness to change and for their familiarity with innovative teaching and learning practices.

3.2. Facilitating peer-to-peer learning and support

Innovation in education and training depends largely on empowering and connecting educators, and this is something that can be easily achieved through peer learning. Learning from colleagues establishes a school-wide or region-wide commitment to the journey of professional development and builds a community of trust among faculty. Peer-to-peer learning strategy aims at developing a teacher community of risk takers who share their pedagogical successes and failures and are more inclined to join the process of trial and error. School leaders should therefore encourage and support collaboration among their educators to further strengthen connectedness by utilising European platforms such as European Schoolnet Academy or School Education Gateway.
3.3. Connecting formal and informal learning communities

The establishment of connected, cooperative and supportive learning communities in schools or regions proves to be a key element in the continuous professional development of teachers. The Caffè Digitale, digital café, organised in Trento (Italy), for instance, constitutes an effective and smart initiative that provides informal professional development opportunities for educators in Italy. In Galicia, Spain, through the Observ_Accion initiative, teachers are developing their competences by job shadowing each other at local, regional, interregional and international level. According to Scuola Nuova 21 in Italy, schools can implement formal or informal networks of institutes and communities and organise workshops and trainings to support the educators to reflect and develop their professional qualities throughout their careers.
4. Leverage e-learning for school staff professional development

School leaders should encourage online professional development opportunities such as MOOCs, online and blended training courses. It is important also to recognize the effort teachers put into these courses and possible officially accredit them.

4.1. Promoting effective and sustainable forms of online training

The current trend of MOOCS (Massive Open Online Courses) constitutes an effective solution in the way of customizing and facilitating the professional development trainings offered widely. Moreover, school leaders should encourage teachers to create digital portfolios, in order for them to keep track of their progression, and to share their diaries in the school website so to get visibility and recognition for the work done. This can also help parents understand the multi-dimensional background of their child’s educator.

A best practice has been identified in the initiative called Animatori Digitali, digital animators, undertaken in Italy. These professionals, appointed among teachers in each school, together with the head teacher and the administrative director, play a strategic role in spreading innovation at school, starting from the contents of the Piano Nationale Scuola Digitale (Digital School National Plan), as well as of the Piano Provinciale Scuola Digitale (Digital School Provincial Plan) of the Autonomous Province of Trento. In exchange, the working hours are reduced from their lecturing time.

4.2. Recognising formally MOOCs and other online courses certificates

The head masters and school leaders should formally recognize certification of online training courses within the different national education systems and encourage teachers to undertake these regularly during the school year. To this end, school leaders could contract experts who could train the teachers in all the schools.

The online platforms “School Education Gateway” and “European Schoolnet Academy” support peer exchange and sharing of innovative teaching and learning practices involving ICT, offering a great opportunity for personalized and blended learning while supporting innovation in school.
5. **Choose the right digital educational resources and training courses**

School leaders should make sure that the digital content teachers are using in their classrooms is properly validated by the relevant institution, linked to the curriculum and adds an extra pedagogical value to the learning and teaching process.

### 5.1. Contributing to the validation process and the assessment of training programs

During the FCL Regio project, institutions and school stakeholders particularly highlighted the need of increasing collaboration between school leaders and policy makers in a joint effort to validate digital content. In addition, teacher training programs should be properly validated by the relevant institutions in order to provide teachers with the most efficient and updated practices that they can use with their students.

Besides, local authorities should collaborate with educational companies and suggest validated solutions to the regional schools. A great example of such a case is the Öckerö municipality in Sweden, where a platform for gathering educational digital content has been created and is widely used among regional schools for this purpose. Another example is the case of the Toolbox and the Mschools initiative, which offers a site where teachers evaluate mobile apps that can be used in classrooms. Teachers can find these evaluations explaining weak and strong points these apps present when being used, as well as a showcase of experiences with a rich description of their goals, and step-by-step implementation guidelines.
5.2. Consistently supporting the school vision through concrete actions and goals

Schools that drive clear vision for innovation and advanced pedagogical practice supported by technology and goal setting are more likely to be successful than those where educational change is driven by the sudden availability of funds. Peer-to-peer learning is an effective way to learn and boosts the development of a common understanding among education stakeholders within a region. Thus, school leaders are responsible for rethinking the school vision and spread the word among educators within the school community, particularly among educators.

5.3. Assessing the impact of professional development programmes

School leaders should reflect about, measure and analyse the real impact of training programs, and plan alternative training opportunities accordingly.

Improving the quality of education and training is a key concern in the policy debate on education both at national and European level but also at regional level, and various initiatives are targeting this topic. Evaluation of these interventions is necessary to reflect on the process and its impacts and redesign the next one.

School leaders should reflect about the training programs, which are currently in place in the school, measure and analyse the real impact they have on teachers. To this end, they are expected to provide evidence of effectiveness from a qualitative point of view, and suggest alternative training programs in case the ones, which are in place, are not proved to be effective enough.
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