



**Communication, literacies,  
multilingual and critical thinking  
skills and competences for teaching  
and learning in the digital age  
2020**

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## Communication, literacies, multilingual and critical thinking skills and competences for teaching and learning in the digital age

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### INTRODUCTION

*This research paper aims to offer a basis for policy development and implementation at different governance levels and to inform the work of the European Commission (EC) on the new roles and competences required of teachers and school leaders in the digital age for inclusive quality education in all European Union Member States. To do this, we bring together recent education research with inspiring practice and policy and the views of various education stakeholders.*

It has been developed by members of the European Education Policy Network (EEPN) project partnership, based on resources and examples identified by partnership members. The paper aims to offer a policy and research framework for the analysis of practical examples of inspiring practice, especially for policy transfer and policy learning.

The current paper, together with similar research carried out in interlinked fields that also require new roles and competences for teachers and school leaders in the digital age, feeds into the work of EEPN to formulate and promote policy recommendations in the field of teacher and school leader careers as well as to the future work of EEPN until 2023. The primary aim of this work, starting with desk research, is to promote co-operation, policy development and implementation at different governance levels. It supports the European Commission's policy work to assist teachers and school leaders by providing research evidence and evidence-based policy recommendations for European, national, regional and local levels.

### Research question

When bringing together research, policy and practice, we aim to offer an analysis of various approaches and frameworks in order to identify new roles and necessary competences in the wide and intertwined fields of communication, literacies, multilingualism and critical thinking for teachers and school leaders in the context of the digital age. In this regard, we are looking into both the relevant competences of teachers and school leaders as professional traits and the roles in and competences required for supporting skills and competences development in their students. This is specifically in the area of communication, literacies and critical thinking, using multilingualism as a scaffold, in the context of the digital age in order to go beyond existing frameworks and research.

We focus on the following areas within this broad concept:

- School leaders' and teachers' competences, with the Key Competences for Lifelong Learning Framework and LifeComp at its core and specified for school leaders and teacher roles.
- Teaching and learning for developing communication and critical thinking skills and competences, multiple literacies and utilising multilingualism in the context of the digital age.

### INTERNATIONAL AND EUROPEAN POLICY CONTEXT

The digital age has changed communication in many ways, and this change has been constant and constantly accelerating for over 20 years now. The availability of digital technology, information online and various channels available has modified the ways of communication as well as requirements at both the sender's and the receiver's end. (Compare Elicitplus 2014–2017 and European Council, 2018). The traditional notion of literacy, meaning reading/writing literacy, has transformed into a multiple literacies approach (Golubeva, 2017, Mills, 2016). As digital technology made it possible for people to keep in contact with their families and friends as well as institutions such as the school, the mobility of people



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has increased, and being multilingual and plurilingual became much more present in the lives of people. At the same time monolingual schools are also becoming outdated with technology being increasingly available for supporting mutual understanding. Multilingualism accompanied by multiculturalism has also proven to be a vehicle for improved critical thinking. Multiculturalism is conveyed also through increased research skills and historical reasoning as is shown in the research of Van Drie and Van Boxtel (2008). In follow up research, they discussed three approaches to bridge the gap between theory and practice and support prospective and experienced (history) teachers in realizing historical thinking in the classroom. Firstly, historical thinking should be a core component of the teacher education program, secondly, engaging prospective teachers in educational design research supports this and thirdly, a professional development program that starts with the collaborative analysis of how students reason historically (van Boxtel, C., van Drie, J., & Stoel, G., 2020). With Sendur in their team, they continued their research but turned their focus on the importance of addressing communication by using Content Language Integrated Learning (CLIL).

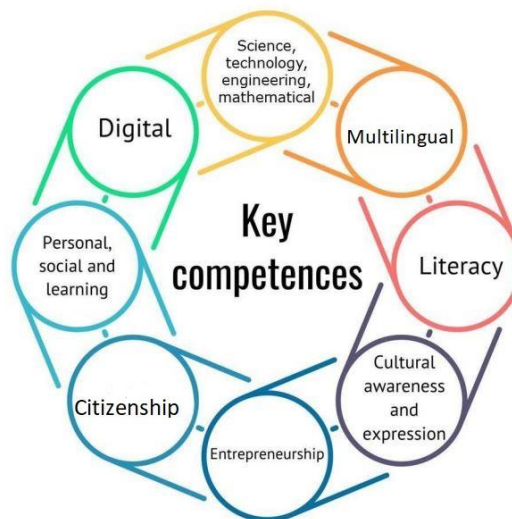
Communication and critical thinking have been identified as two of the six global competencies to be considered in learning design in change leadership of teachers and school leaders (Fullan et al., 2020). There is no denying that communication has changed in the last two decades, and teachers need to keep up with changes while preserving what is still important in order to stay relevant in the education of today's children. Success to re-engage students and find solutions for major challenges of education (World Bank 2018) largely depends on the level of teachers and school leaders encompassing digital technologies in daily school life. This opens the floor for interaction between students and teachers to co-create lessons and lesson materials. (Könings, Seidel & Van Merriënboer, 2014) This results in a major change of education delivery, hence stimulating students to become more active in learning and leading to better learning outcomes. (Livingston and Sefton-Green, 2016).

While recent school closures and switching to distance learning most probably changed education for good, communication between school leaders and staff as well as between school and students have been transformed and the two-way communication between parents and schools intensified (Brossard et al., 2020). The Covid-period has also shown how crucial trust based and open communication is. Controversial scientific facts were more often combined with fake news, false information was broadcast or published as news for fraudulent or politically motivated purposes. The fraudulent aspects were not recognized by people. Another example is the more and more professionally made deep fake videos of a person in which their face or body has been digitally altered so that they appear to be someone else. This is typically used maliciously or to spread false information. It implies the need for a growing awareness for all and an increased need for critical thinking in schools (Wansink, 2019).

The 2015 publication, *Rethinking Education* by UNESCO has defined education as a common good, and while it makes everybody responsible for education, it also calls upon all, including teachers and school leaders to become lifelong learners themselves to also improve as educators. Building the necessary education framework that has children's learning at its heart implies a major change in communication. While the whole child approach acknowledges learning happening at all stages and venues of a child's life, it is of utmost importance to strengthen communication about learning with school leaders and teachers as trusted professionals, and parents as the responsible agents for providing every child the education they need. They are to be considered as key stakeholders not only at school, but engaging in the whole learning ecosystem (Varsányi, 2014).

This is a major change as compared to traditional teacher/school leader roles and implies empowerment and support needs on the professionals' side as well as on the others (Livingston and Sefton-Green, 2016). At a European level, three of the European Union's eight interlinked key competences necessary

for all members of a knowledge-based society are literacy (“ability to identify, understand, express, create and interpret concepts, feelings, facts and opinions in both oral and written forms, using visual, sound/audio and digital materials across disciplines and contexts. It implies the ability to communicate and connect effectively with others, in an appropriate and creative way”), multilingualism (“ability to use different languages appropriately and effectively for communication. Language competences integrate a historical dimension and intercultural competences. ... As appropriate, it can include maintaining and further developing mother tongue competences, as well as the acquisition of a country’s official language(s)”) and personal, social and learning to learn competence (“the ability to reflect upon oneself, effectively manage time and information”) and these are all related to the core notion of communication. (European Council, 2018).



*Figure 1 Key Competences for Lifelong Learning*

LifeComp, a new conceptual reference model developed for the European Union by the Joint Research Centre is supposed to define skills, knowledge and competence within the personal, social and learning competence. The fact that two of its main branches are communication and critical thinking clearly shows the importance of these areas as well as their being interlinked with other competences. As this paper is focusing on new roles and competences of teachers and school leaders, we need to focus on a) the necessary circumstances for teachers to acquire or develop their own skills in these areas and b) teacher professional skills and competences for scaffolding related learning in their students, also in collaboration with other educators in the lives of the learner to ensure consistency. In this regard, a parallel paper on collaborative teaching and learning is of high relevance for communication.



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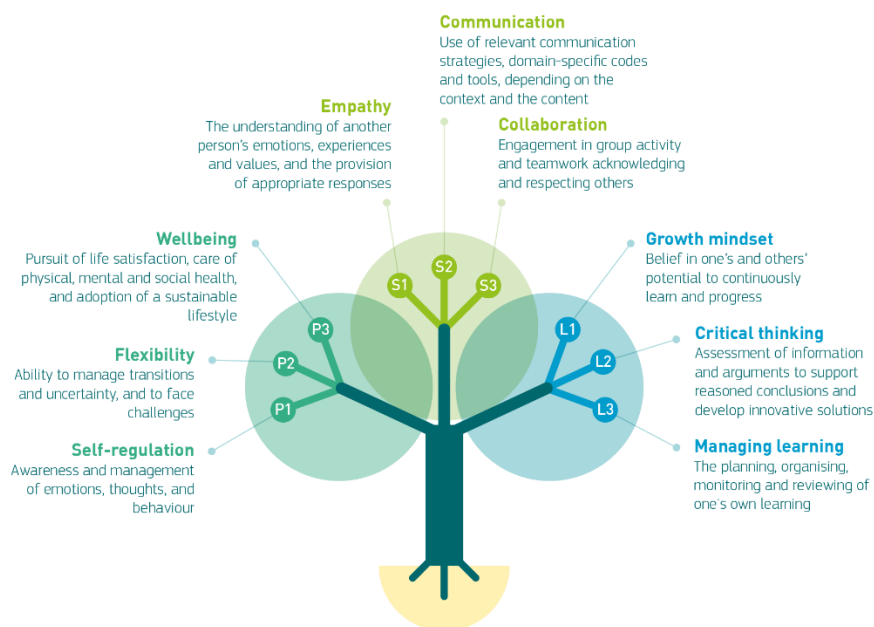


Figure 2 The LifeComp Conceptual Reference Model

In the *Rome Declaration* in March 2017, EU Member States re-affirmed their commitment to providing young people with the 'best education and training'. The European Council called for training and education systems to be 'fit for the digital age' in October 2017. At Gothenburg Summit in November of the same year, the Parliament, the Council and the Commission proclaimed the *European Pillar of Social Rights*, which includes the right to quality and inclusive education, training and life-long learning. The Communication 'Strengthening European Identity through Education and Culture' is the European Commission's contribution to the discussion based on the EU Leader's Agenda on education and culture at the Gothenburg Summit setting out a vision for a *European Education Area* and announced a dedicated *Digital Education Action Plan*, currently in a public consultation stage.

Of further importance to the current research is the *European Council recommendation on Validation of non-formal and informal learning* (2012). It outlines that citizens must be able to demonstrate their learning acquired through non-formal and informal means. The recommendation encourages Member States to put into place national arrangements for validation. These arrangements are meant to enable individuals to increase the visibility and value of their knowledge, skills and competences acquired outside of formal education and training: at work, at home or through voluntary activities.

## RESEARCH DESIGN, METHODS AND MATERIAL

The current research is a result of a mix of internal and external desk research. For internal desk research, partners in the EEPN network provided descriptions of current research as well as inspiring practices and policies in their own fields and/or countries. Some of the material provided was only available in the form of internet links, and thus the internal desk research was directly linked with the external one: internet search for more research and practices for comparison, as well as analysis of



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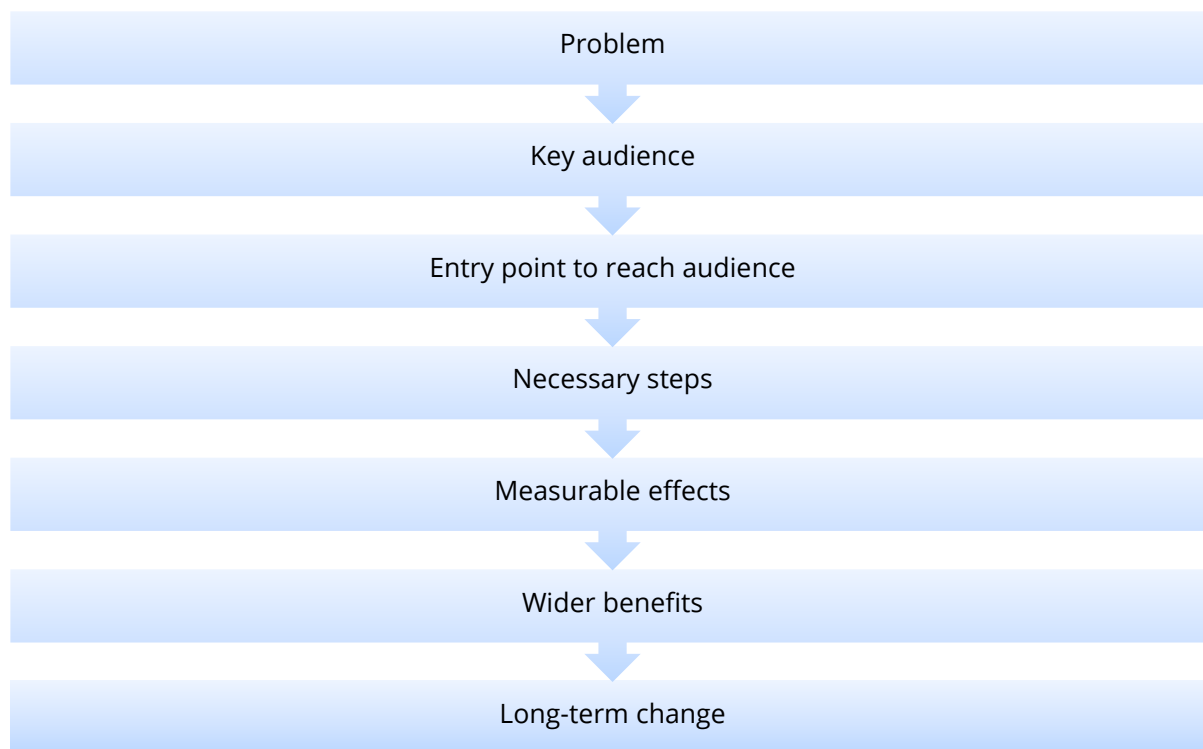
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existing EU documentation in the field. In the case of resources available in languages beyond the linguistic scope of the research team, we were relying on details provided in English by network partners.

The choice of examples analysed for the current research was based on the recommendations of EEPN project partners rather than on the research into the effectiveness or impact of the practices. At the same time, the main focus was on offering a diverse pool of examples to show diverse approaches leading to similar results to raise awareness of diversity and cultural differences.

When designing the research, the above listed crucial aspects were taken into consideration. An effort was made to choose examples for analysis in all fields and with different scopes (local, regional, national). The guiding principle at analysing the practices was to explore how various examples are related to and rooted in research evidence. The aim was to offer an analysis on the basis of the methodological framework Theory of Change (ToC). This methodological tool is used by many different organizations ranging from governmental bodies to (large) corporates and NGO's to support the processes of policy and project development. However, ToC was initially developed as an evaluation tool. In this process, the ToC model's outcomes – and with that, impact – in an 'outcome pathway' (Taplin et al., 2013). The ToC framework works as follows:



*Figure 3 – Theory of Change Model*

An important step in evaluating projects from the framework of the ToC is identifying what (pre-) conditions must be put in place to reach these goals. The success of this model is to be able to demonstrate progress by evaluating the outcomes as evidence to what extent the goals are achieved. Through six different questions, key assumptions will be defined that together answer the question: "What is the long-term change you see as your goal?" In this way, the ToC methodology provides a structured description and elaboration on the questions what, how and why. In doing so it shows how a





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specific project contributed to a desired change and how that development can be expected in a particular context.

Our scope was limited, thus the choice of examples analysed does not indicate that they are to be considered 'the best', but rather as an inspiring collection. However, the added value of the current research is that it is based on the knowledge and experiences of the diverse network of EEPN, and thus not restricted to the outreach of the research team.

## CONCEPTUAL BACKGROUND

LifeComp identifies communication as one of the three social competences while critical thinking is assigned to the learning to learn group (JRC, 2020.).

### Communication

- S2.1 Awareness of the need for a variety of communication strategies, language registers, and tools that are adapted to context and content
- S2.2 Understanding and managing interactions and conversations in different socio-cultural contexts and domain-specific situations
- S2.3 Listening to others and engaging in conversations with confidence, assertiveness, clarity and reciprocity, both in personal and social contexts

### Critical thinking

- L2.1 Awareness of potential biases in the data and one's personal limitations, while collecting valid and reliable information and ideas from diverse and reputable sources
- L2.2 Comparing, analysing, assessing, and synthesising data, information, ideas, and media messages in order to draw logical conclusions
- L2.3 Developing creative ideas, synthesising and combining concepts and information from different sources in view of solving problems

Communication is defined by six key elements, each of them bringing new challenges to teacher and school leader roles, and implying personal as well as professional competence development. In the case of the sender, transmitting the message and the receiver, receiving and decoding the message, it is of utmost importance to be aware of the socio-cultural context, a main driver of change in communication. Subsequently, the message needs to be formulated in a way that ensures understanding, taking the situation fully into account. Traditionally, the code, the language and its register used, was defined by the school, and this poses one of the main challenges. In order to ensure inclusion in education, the code needs to be adjusted to the needs of the learner as well as to those of the co-educators and the community. The choice of channel, and in a growing number of cases the choice of interconnected channels requires the professional to understand how emerging channels work, which traditional ones are to be preserved and promoted, but also to explore the access of their communication partners to





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various channels. The experiences of Covid-related school closures clearly show that this is an area of development among teaching professionals (Schleicher, 2020).

The presence of digital technologies in the classroom and in everyday life enables new ways of communication with a vast amount of information being transferable at low cost and long distance. Social media, especially within the context of education is a group of channels that are still being explored and subsequently often exploited beyond desirable levels (Chih-Hui, 2019). It is of very high importance to implement communication in a way that does not lead to unintended interpretations.

The current mix of online and offline communication, accompanied by a more and more wide-spread multicultural reality, makes it necessary for education professionals to adapt their communication to a variety of socio-cultural contexts (CoE, 2016). Teaching professionals also need to support their students in developing a communication mix that aligns with various contexts of their lives (JRC, 2020). With teachers working in increasingly diverse settings and having the obligation to communicate with their students, peers and local communities, an open and respectful attitude is necessary. However, this again implies new competences for professionals as it is no longer enough to have a high level of self-awareness, especially of how their own socio-cultural background influences the way they perceive the world around them, but it is also necessary to be able to shift temporarily into another perspective and to listen to others authentically (Deardorff 2011).

This in itself entails a high level of critical thinking by analysing information, beliefs or knowledge, with an ongoing reconstruction of one's thinking (JRC, 2020). Critical thinking also entails an awareness of the influence of one's personal values on communication as well as evaluating elements of the communication process by others. (For example, the Learning to Disagree project of Euroclio (2020) decided to create an interactive online learning course for all learners, including teachers and school leaders to use various communication methodologies in and outside class environments but also to offer assessments that allow all learners to assess their progress.)

For teachers, one of the most important and most difficult critical thinking competence is L2.1, being aware of the limitations and biases in one's knowledge. In the digital environment fact verification is often more difficult and teaching professionals both need to be aware of the various ways and methods of fact-checking and need to be able to support their students (and often also their families) in doing so. With a vast amount of information being available at all times, it is a major teacher role to help students distinguish between real facts, propaganda, opinions, and rumours, but teachers must have the same competence (Vosoughi, Roy, Aral, 2018). Radstake stresses that in teaching in diverse classrooms, it is important to work with teachers to find common ways to discuss sensitive topics possibly leading to tense situations. (Radstake, 2009)

The digital age also led to a redefining of the notion of literacy. Individuals 'read' the world and make sense of information by means beyond traditional reading and writing, thus having multiple literacies. These multiple literacies include linguistic, visual, audio, spatial, and gestural ways of meaning-making (Mills, 2015.). Central to the concept of multiple literacies is the belief that individuals in a modern society need to learn how to construct knowledge from multiple sources and modes of representation. (Seel, 2012) In a diverse school environment, teaching professionals' awareness of diversity also leads to higher levels of multiple literacies in themselves as well as an increased level of support they can offer to their students. (Pijpers, 2021)

The importance of promoting understanding and developing an intercultural dialogue and peace was stressed by Deardorff in the Intercultural Competence Model (Deardorff, 2011) and acknowledged by Fernando Reimers in his Rete Dialogues, a professional learning community for global citizen education



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(Reimers, 2020) and by the DICE Model of Developing Intercultural Competences through E-learning of EFIL (<https://efil-dice.org>). In this regard intercultural communication and citizenship are interlinked. A parallel paper will focus more on Citizenship education itself.

Among others, Kamakshi Rajagopal at the Itec, imec research group at KU Leuven is addressing one of the educational challenges: for pupils to gain a sense of ownership over their learning. They develop an i-Learn programme access to tools supporting personalized learning (Rajagopal, 2020) and interaction design (Rajagopal, 2020–2). In the future Designing Virtual Mobility as transformative learning experiences (Erasmus + grant no. 2017-1-DE01-KA203-003494) will become more important as the workplace will become more intercultural and rely upon collaboration. Soft skills need to be practiced and intercultural leadership competences can be developed through virtual reality as mentioned in the research of Hickman and Akdere (Hickman and Akdere, 2018).

Multilingualism, an ability to communicate in different languages and entailing the awareness of different cultural codes is an enabler of critical thinking in itself. (Cenoz-Gorter, 2014) At the same time, introducing multilingual practices in the classroom supports the learning and communication of students – especially if digital technology is being utilized (Dixon, 2018). It does not only lead to better learning, but also using their mother tongue helps students to formulate their messages as well as decode them better. Although the UN Convention of the Rights of the Child ensures the right to education in the mother tongue, it is not a reality in EU Member States yet. However, digital technology makes it possible to use multiple languages in the same classroom, but it requires a major change in teacher role from lecturer and learning “controller” to learning facilitator. (Nuthall, 2005) Teachers’ multicultural awareness and sensitivity also increases their own critical thinking. Based on the Council of Europe’s Reference Framework of Competences for Democratic Culture (CFCDC, 2018), Varsányi developed a Cultural and Linguistic Identity Portfolio (also called CLIP) that allows students in primary and secondary schools to assess themselves. For teachers it provides a valuable guide to assist students to take charge. It is an outcome of Networking European Citizenship Education Focus Group Competences for Democratic Culture. (NECE, 2020; Varsányi, 2020). Elicitplus therefore stressed the importance of developing a portfolio for all citizens (Elicitplus 2014–2017).

## **ANALYSIS OF CHOSEN EXAMPLES**

### **Open School Doors**

Open School Doors (OSD) is a programme developed through an Erasmus+ KA2 project funded between 2017 and 2019 aiming at reducing disparities in learning outcomes affecting learners with disadvantaged backgrounds and improving their school inclusion with special focus on newly arrived migrant children primarily by enhanced home-school communication. The programme is based on experiences with failed parental engagement as a result of misunderstandings and mostly unconscious bias by teachers.

Apart from inspiring and motivating teachers and school leaders to cooperate with parents with a migrant background and creating constructive and sustainable partnerships with them, the most important pillars of the programme directly target teacher and school leader professional development needs. The training programme developed within the project is for teachers and school leaders and supports them in acquiring positive mindsets and skills that will enable parents’ motivation to also get more engaged in schooling. The training framework developed is based on needs analyses, desk research and a localised approach. The programme is aiming at preparing teachers to deal with foreign cultures and their specific features in a sensitive and goal-oriented way. The programme builds on digital



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technology not only in training design, but also focuses on social media as a good means of communication migrant parents are comfortable using and that can support bridging linguistic gaps.

The starting point of the project was the need for main professional actors of the education system (teachers and school leaders, but also non-teaching school staff) to be empowered and trained to promote stakeholder engagement, especially school-parent partnerships. The main target group of OSD are school leaders and teachers responsible for classroom level (class heads), but other teachers and school staff working in counselling and support systems as well. At the time of the project, needs analysis clearly showed a lack of adequate skills for the digitally supported integration of migrant families in education.

The project was first implemented in the United Kingdom, Germany, Greece and Austria, where local partners could carry out needs analysis and engage teachers and school leaders in training through their established status in teacher training. Implementation was supported by the engagement of parent leaders in these countries and beyond.

The development of the programme started with a user needs analysis of secondary research as well as primary research with interested schools and their staff. During the secondary research phase, the team analysed available research for conceptualising home-school interactions, by analysing models of parental engagement as well as the impact of social class, ethnicity, intersectionality and post-colonialism on building the myths of hard-to-reach parents. On utilising digital technology, research was done on technology use of disadvantaged families as well as literacies of both families and school staff with special focus on digital literacy. Finally, the research looked at utilising third spaces as a vehicle for better communication. The consortium also carried out an analysis of related inspiring practices before developing their own tools. Each national partner provided an analysis of their national policy and practices and there was an overview of relevant European policies, too. In the primary research phase, each partner carried out focus group discussions to further refine research findings.

Based on this research, a training framework was developed for face-to-face and online delivery, focusing on self-reflection of teachers, first making them think and explore, then plan and take action. It focused on various aspects important for communication and especially digital communication: vision and values, places and spaces, literacies and digital literacy, and communities and culture. The training has been translated and localised for the contexts of participating countries, although only one German version was produced (while offering enough flexibilities to reflect the multiple realities of various German and Austrian federal states as in both countries there are major variations). The training programme was refined and finalised based on a thorough evaluation of pilots in all countries.

While a guide of good practice was made available for inspiring teachers and school leaders, the consortium also developed user-friendly information material for parents and communities to help them understand what they can expect in an OSD school. This was nationalised to reflect realities of the participating countries and made available in the official language of the country as well as in the languages of migrants, such as Arabic, Farsi and Turkish, but also languages of Eastern European minorities, an often-neglected group.

An assessment report, based on input from over 100 participants after the training and half a year later, clearly shows that the approach based on self-reflection has led to systemic changes through mindset change. Participating schools embraced the use of digital technology and have enhanced their communication with vulnerable families. The results clearly show an increased level of inclusion and more conscious communication that also had the indirect effect of enhanced communication in and by the school in general.



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While the primary target groups of the project were teachers and school leaders, the ultimate target groups and beneficiaries are disadvantaged parents and their children. It has proven to be a successful tool to enhance the engagement of parents from all social backgrounds and ethnic groups leading to proportionate participation in school decision-making and development processes, and representation in the parental boards of participating schools. It enhanced communication in a culturally aware and multilingual way, accompanied by the right choice of communication channels that helped to overcome previously unbreakable barriers, especially in participating Greek and German schools. The outcomes of the project clearly show the need for localized approaches that can then lead to success rather than trying to impose methodology successful in certain cultural contexts. In the case of OSD, the participation of a UK partner and subsequent experiences in other country contexts clearly show that a well-working methodology should not be considered as “best practice”, but rather as inspiration and it should be translated to local realities.

As a wider benefit of the project, parent representatives coming from disadvantaged backgrounds and mostly having very low levels of language proficiency in the language of instruction also became included in the social, political and external networks of the school. By increased multicultural awareness as well as awareness of their own unconscious biases and prejudices, teachers’ communication with students also became more successful supporting the overall aim of enhancing learning outcomes.

### Learning points:

1. Self-reflection of teachers is an important starting point in renewing communication, especially in a multilingual, multicultural context.
2. Culturally aware, multilingual communication and critical thinking, especially related to stereotypes on the teachers’ side leads to better inclusion and improved learning outcomes.
3. The role of teachers as co-educators alongside parents and families is a new role that needs specific competence development.

### Multiple literacies in Finnish education

One of the seven transversal competences introduced to the Finnish educational system through recent curricular reform is multiliteracy. It is defined in the Core Curriculum for Basic Education in Finland (2014) conjoined with ICT competences. Given the autonomy of schools that forms a basis of the Finnish school system, it is interesting to see how this has been conceptually contextualized in local curricula. This case study is based on a scientific analysis (Palsa-Mertala, 2019) on the topic and focused on the teacher competences related to implementing this policy in local practice. The fact that in Finland all teachers have at least one Master’s degree in the subject that they teach has proven to be a successful approach to strengthen the pedagogical content knowledge (PCK) necessary for curriculum innovation. Tuithof states that PCK knowledge at Master’s Level is highly significant in curriculum innovation (Tuithof, 2017).

The relative lack of guidance and the obligation to develop local curricula implies that teachers and school leaders must have related knowledge, skills and competences. It is especially true as local curriculum development happens in various ways and with the participation of multiple local stakeholders. It requires school professionals to have a strong professional stand on multiple literacies and relevant communication skills to deal with such a new and complex issue. “Even though the Core Curriculum offers guidelines for the preparation of local curriculum to a certain extent, local education providers have extensive autonomy, and the preparation process of the local curriculum can take various forms, depending on the context. For example, the stakeholders taking part in the preparation process can vary,



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and in addition to educational professionals, parents and local non-profit organisations can also take part.” Palsa and Mertala analysed 219 local curricula and found that 28% of them contained a contextualized multiliteracy element. The conventional content analysis revealed different ways in which the transversal competence of multiliteracy was conceptually contextualized. In this phase, four types of contextualisation were found: emphases, specifications, descriptions and expansions. The contextualised versions mainly considered support for identity construction, understanding cultural communication and developing critical thinking and learning skills.

However, it is not clear from research how new teacher roles and competences are identified and reflected on after curriculum design. This should be an important next step as researchers understood the differences in contextualization aiming to steer school practices as well as prioritising certain aspects. It is an apparent conclusion, having seen that 72% of schools did not contextualise their curriculum in the field of this new and relevant element that there is a need for training and support for teachers and school leaders to develop their own competences to be able to support the learning of children.

### Learning point:

1. Clear curricular expectations in the field of communication, multilingualism and critical thinking are not always accompanied by identifying related teacher roles and competences.
2. The success of the most forward-looking policy initiatives depend on accompanying professional support and the clear identification of new teacher roles and competences related to them.

### Implications of multilingual educational contexts on teacher education – the example of Luxembourg

Luxembourg is officially trilingual: Lëtzebuergesch, the national language, is mostly used for informal interaction. French and German are used for administrative and legislative matters by law since 1984, whereas various other languages linked to migration and internationalization have in recent decades become more and more noticeable, too. In secondary education, German and French are the official languages of instruction (langues véhiculaires). Their use has been redefined in the ministerial guidelines of 2010. A crucial distinctive feature of Luxembourg’s secondary education is that in most cases learners’ and teachers’ first languages (Lëtzebuergesch, or e.g. Portuguese or any other language) do not correspond to the official languages of schooling or instruction. This means, for example, that most subject teachers have to teach their subjects in two languages, in German and French, neither of which is a first language for the great majority of learners. It also means that learners acquire subject knowledge and competences through both German and French, the two main languages of schooling.

The University of Luxembourg offers a course in initial teacher education addressing these challenges: *Multilingualism, knowledge development and cultural perspectives on learning: a course for language sensitive subject teaching*. The aim of this course is to define, develop and integrate teachers’ language competences and general teaching competences by focusing on their strategies for using language (and eliciting learners’ language use) to construct knowledge in the context of various subjects. The course was developed exploring and intending to answer the following questions:

- How can subject teachers be prepared (through initial teacher education and later professional development) for complex linguistic learning situations?
- How can teachers be assisted to expand professional proficiency in their second languages, in particular in the languages they use for teaching?



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- What information/theories/concepts, skills/ competences, strategies and techniques do they require to further their students' language competence/ skills and awareness of cultural perspectives in learning situations?

It takes a dual focus on multilingualism by supporting student teachers in the development of language competences *for teaching* and equipping them with competences for learners' development of language competences *for learning*. In the context of the current research paper the first focus is more relevant. While the trainee teachers are fluent speakers of the languages of instruction (C1 or above), the context of teaching pose new, pedagogically oriented linguistic challenges (e.g. scaffolding, interacting, monitoring, assessing, repairing). The course implements an experiential learning approach that also makes it possible for teacher trainees to also acquire a learner's perspective. It implements a multiple literacies approach that covers the wide spectrum between traditional reading literacy and sociocultural practice.

During the training a comparative, practical approach is utilized for analysing and comparing tools for subject literacy development, such as school books and learning resources, comparing teachers' subject literacy in several languages, comparing subject literacies in their cultural context, and discussing and analysing the creation of 'third spaces' in learning communities.

The limitation of the program is that it considers the language of instruction as the only language of interaction according to the realities of the Luxembourgish context. This largely limits how much of the possibilities of communication are utilized.

### Learning points:

1. When diversity is properly addressed, related teacher roles and competences are easily defined and dealt with.
2. The narrow focus on the language of instruction leads to missed opportunities in communication.

## DENISE and CLIP

### Denise

De Nieuwe Internationale School van Esprit (DENISE) offers widely accessible international education of high quality with broad awareness of the collective responsibility for the world we live in. They try to achieve this by offering a broad international curriculum in combination with the Dutch curriculum as the school is located in The Netherlands. This is similar to other bilingual schools. Using a variety of educational programs, they are aiming to ensure that every student can be served according to their own needs and personal choices. Teachers speak Dutch and English (not always native). Students are assisted to follow their own career path. DENISE is also a school where parents actively participate and help form the school's international profile. Parents are invited to share their language and culture in the schools.

The school offers bilingual education in Dutch and English in a way that helps develop their students' speaking, reading and writing skills building on their existing (first) language skills that is often neither Dutch nor English. Students who enter school at a later age, i.e. due to migration, receive language classes.

Besides the academic learning goals DENISE also puts great emphasis on the students' personal development. Qualities such as cooperation, thoughtfulness, resilience and adaptability are fostered in a systematic way. This is in line with the LiveComp policy guidelines. The focus on inclusion is strong. Unlike in other schools, they participate at subject lessons at their own level. They are invited to join in





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their own language and to learn by sharing and exchanging. Varsányi (2020–2) piloted this multilingualism project in DENISE and explained the outcomes during a Multinclud (2020) meeting for school leaders and teachers: **Making Space for Multilingualism in Schools: Five simple steps.**

1. Hang up welcome posters
2. Label items and concepts
3. Explore your students' language repertoire
4. Send out vocabulary lists
5. Let students prepare for assignments in the language of their choice and hand in the final paper in English/Dutch or other.

Furthermore, DENISE places high value on intercultural competence development. Their students learn to interact and cooperate with each other, to be respectful and open towards others, to solve problems together and to consider issues from multiple perspectives. Students develop skills required for complex researching and recording, for presenting and for using a range of media forms to present learning. They also focus on personal and international skills that offer students a base for future work opportunities.

### **CLIP**

Students take leading roles in learning in DENISE. This inspired Varsányi (2020–2) to initiate and pilot a personal portfolio for students, that allows students to hold all their experiences. The portfolio is based upon the 'Open mind – learning to live Democracy' that follows the 'butterfly' model of the Council of Europe. (Open Mind) The Cultural and Linguistic Identity Portfolio (CLIP) contains a number of activities built around certain CFDC (2018) descriptors. CLIP invites students to reflect on their backgrounds and identities and trace their development in democratic competences by using self-assessment before and after using the portfolio. It can be used as an integrated part of the policy of the school system to address the intercultural competence by following a curriculum. As is obligatory in all bilingual schools, teachers support students' self-directed learning. For teachers CLIP provides a valuable guide to assist students to steer their own career building. CLIP is an outcome of Networking European Citizenship Education (NECE, 2020; Varsányi, 2020).

Through the IPC students learn to engage with the material in meaningful and exciting ways. This also applies to learning the knowledge, skills, attitudes and entrepreneurship to actively participate in society as a citizen of the world. For this the school offers an approach that follows the international and personal goals of IPC and IMYC.

The international goals:

- Knowledge and understanding of their own national culture in a global as well as 'inter-national' context.
- Understanding and awareness of the interdependence and independence of peoples.
- Understanding and awareness of the interdependence and independence of countries.
- Awareness and notion of essential similarities between peoples and countries of the world.
- Developing skills to deal with people who are different from you.

This approach implies a complex set of teacher roles and competences from overcoming linguistic barriers to applied intercultural competences. The school thus has a strong commitment to team





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building and collaborative teacher training. This is based on a clear leadership vision and its systematic implementation.

### Learning points:

1. Using multilingualism as an asset for better and more inclusive learning needs commitment and leadership.
2. Stakeholders supporting each other play important roles in implementing a culturally diverse education programme built on respect and communication.

## EPAS

The European Parliament Ambassador School Program aims to create a permanently increasing network of schools across the European Union. European Parliament Liaison Offices through Europe stimulate schools to carry out teaching activities that raise awareness of Europe, European democracy and citizenship at large.

Schools and school leaders who want to strengthen the European and international awareness and stimulate language education at a high level at their school, often choose to join this program. They can, but do not need to be bilingual schools, neither native language and English, nor another combination.

The network started in The Netherlands in 2009 but it has become a network of European schools. Schools can collaborate within their country and between countries. This can be done using exchanges of activities, lesson materials or using eTwinning. The network organises seminars for teachers in Brussels. Teachers can engage in collaboration activities with peers from different countries, experience the work of the parliament and meet policy makers. There is a set of free lesson modules that follow the Common Framework of European Competence. This is the base of all bilingual schools and is the base of the CFCDC. (CFCDC, 2018).

The program is based on and stimulates the initiative of students. They are in charge. As junior ambassadors they host a European and international corner in their school. They co-create activities in school to stimulate European and international awareness during a European Day and/or Week. This offers the opportunity to learn to collaborate, co-create and present themselves in a national meeting or in an international meeting in Brussels and/or Strasbourg. Together with a teacher who is open to stimulate the student initiatives, experts from outside school can be asked to be guest speakers or to enter into a debate, lecture or game. Language development and multilingualism play important roles during activities like Euroscola or when contacting other European political and/or judicial institutions.

Most schools have a EPAS curriculum. This includes subject parts and open activities to join. The students can place these activities as badges and/or certificates in their Europass Portfolio or School-own Portfolio.

Being partner in this EPAS network, students, teachers and school leaders are asked to reflect regularly on their learning outcomes. This allows the school to renew their membership in the EPAS network.

The program enables students and teachers to develop critical thinking, teamwork and problem-solving skills, but it also helps participants raise concerns about issues concerning the European Union and develop their ideas for a better Europe in the context of multilingualism and multicultural EU policy. Politics & Democracy, Crime & Justice, Economy & Sustainability, Climate Change are general themes that are chosen to cover. These topics are often combined with social studies subjects.



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The network organises topic and network meetings for teachers and students. Teachers and students gain a growth mindset as they develop a larger awareness of international cooperation. They practise their skills in knowledge, attitude and entrepreneurship during formal and informal learning situations. When preparing for activities the students need teachers to assist them but mainly to help them manage their learning.

### Learning points:

1. Language development and/or multilingualism help students and teachers alike to gain valuable experiences for personal growth.
2. School leaders need support to be able to embrace an approach that entails students taking a leading role and to acknowledge the value of such programmes for teachers taking part.

### In Europe Schools

In Europe Schools is a European exchange project in which students film their recent history, and research and compare themes like difficult histories, climate change, migration and gender equality. In 2019, Dutch national broadcaster VPRO joined forces with EuroClio and launched the In Europe Schools project! Inspired by the VPRO-television series, *In Europe – History Caught in the Act*, presented by Dutch best-selling author Geert Mak, VPRO and EuroClio developed four interactive online Educational Toolkits on the Modern History of Europe with topics including: Difficult History, Migration, Climate Change and Gender Equality.

Approaching teaching and learning from a transnational perspective, encouraging multi-perspectivity hold a high value both students, but supports teachers to gain new knowledge and skills before starting the programme.

Teachers' primary role is that of a supporting facilitator. Teachers also play a different role as they have taken the entrepreneurial task to develop all activities and materials for the students in a small learning community. They co-create with expert journalists, moviemakers etc. and gain expert knowledge to enhance their own learning.

Then they need to present a balanced view of a case study. This creates the opportunity to develop their critical thinking skills and communication and research skills.

Teachers receive their own training, pedagogical content knowledge (PCK) and networking online. Not to teach the student the knowledge part – as all student groups decide on their own topics of research – but to gain knowledge on ICT and collaboration with colleagues abroad. The following related programmes of Euroclio are aiming at starting a movement to connect teachers to gain this knowledge on teaching in the digital age:

Euroclio Historiana Webinar Series: To learn how to develop quality e-learning activities in co-creation of Historiana, Euroclio and Europeana. → <https://www.euroclio.eu/event/webinar-for-advanced-users-of-historiana-2/>

Euroclio. Inspiring History and Citizenship Educators: Past Times – Talking and Teaching History: Podcast Episodes as: #1 History and Digital Media Literacy. → Via Spotify: <https://anchor.fm/euroclio>

REThink Euroclio Webinar Series and World Café: Lest we forget. Networking, practices, and the relevance of remembrance education today. → <https://www.euroclio.eu/event/remembrance-education-for-thinking-critically-webinar-series/>



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Their practice of empathy in communication has proven to be useful in the period of forced remote teaching.

### Learning points:

1. For students and teachers to co-create there is a need for professional autonomy and freedom for teacher and student alike to create room in the set school curriculum. Very often the topics can be linked to subject-based lessons though.
2. School leaders need to embrace students to take this leading role and offer time to take part in these activities and/or to organise these activities.
3. School leaders can encourage teachers to engage in European and international networks for subject-based teaching and cross curricular teaching. They learn and inspire each other using various online networks to open up lifelong learning opportunities. Language and PCK levels will enhance.

### Learning Studios – OMO

A Learning Studio is a Studio of learning within the Academic Teacher-Trainer School Network (AOS) of OMO. OMO, an association for secondary education in the Brabant region of The Netherlands, has introduced this system of Learning Studios as a different way of training future teachers. It combines the Lifelong Learning project with the Educational Master programme of universities. In so-called “Learning Studios,” student teachers, experienced teachers and teacher educators learned through exploratory activities, leading to new insights, “familiarized knowledge” and expanded practices. Their learning is interactive, and research based. Experts in the field of education and beyond are invited to share their recent research, give feed forward and conduct research on the system of the Learning Studios itself. (Imants, Meijer, Blankestijn, 2020) Students and pupils of the schools are being consulted regularly.

A Learning Studio consists of (at least) six student teachers, one teacher of each of the three participating secondary schools, one teacher trainer from a university and/or one teacher trainer of the University of Eindhoven, Tilburg or Nijmegen and the University of Applied Science of Fontys and HAN. They meet weekly. The participants often teach different subjects. In total there are five Learning Studios that meet every six weeks as a whole to share the research process. The learning outcomes are shared and transferred at the end of the academic year in peer groups of student teachers, teachers of the secondary schools and universities as a whole. The results are also published within the educational community of the teacher training centres.

The innovation is that the learning of the student takes centre stage. After researching this learning by interviewing, observing and testing the students, they do desk research in the studio and develop their own learning questions. This question derives from the co-creation of all participants in the Learning Studio. After the research, the student teachers and teachers develop new (cross-curricular) lesson materials and lesson plans.

The participants of the Learning Studios were open to the input of individual students and pupils in the classes. This led to research and lesson materials addressing inclusion, multilingualism, ICT-research skills and multi-perspectivity. As all participants have an equal input and they co-create and collaborate, the exchange of knowledge and (digital) skills stimulate a growth mindset. To share experiences and manage the learning, a common language was necessary. Learning Studio's North-East Brabant used the PCK method of communication identified by Tuithof (2017). PCK is a method to communicate about the transformation of content knowledge to pedagogical products and teaching strategies for specific



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students. It is identified within history teaching but is has wider use. As there were several history teachers in this Studio, this approach supported the learning. All participants used the approach during the critical thinking research tasks.

One of the outcomes of the Learning Studios is a Citizenship curriculum that starts in all OMO schools from January 2021. It is a Relay-Race curriculum where each subject passes the baton of citizenship awareness by addressing a dilemma in their subject lesson. It is mentioned here because there is special attention to communication with the dialogue form. Learning this dialogue method allows for teachers and students to give room for inclusion and addressing sensitive issues in the classroom. It is the aim of teacher training workshops that accompany the introduction of this curriculum. Another learning aim of all subject teachers of the OMO school network is to share lesson materials and to communicate about the project via the <https://www.burgerschapsestafette.com> website. All 34 OMO schools on 74 locations are participating.

#### Learning points:

1. Professional coaching as well as shared leadership during the learning sessions support better communication and better outcomes that are protected by regular time and space.
2. Appreciation of diversity and uncertainty among participants allow for inclusion.
3. Practical and active participation of school leaders, various teacher training institutions and universities in efforts and discussions promote dissemination and spin-off. Universities also have a role in doing research about process and effectiveness.

## CONCLUSIONS

Research presented in the first part of this paper clearly show that the wide-spread use of digital devices in communication as well as other direct and indirect impacts of the digital age have changed the realities of communication in education. Restrictions introduced under the context of the Covid pandemic can be identified as an accelerator. Teachers, as leaders of learning need to have well-founded competences to communicate well in today's realities. Firstly, they need to understand and utilise multilingualism and the digital support elements of it. Secondly, they need to lead learning in all fields. Thirdly, they need to include critical thinking in an age of misinformation and fake news. Research provides a somewhat detailed picture of what areas teachers need competence development in, but this is rarely manifested in practice and projects. While it was relatively easy to identify and analyse research and also to find relevant policies linked to new roles and competences of teachers and school leaders in the field, the overwhelming majority of case studies identified by EEPN partners was solely focusing on school students' skills and competences. Some of them had an element of teacher training aiming for better teaching of necessary skills. Impactful initiatives that allow for the teacher to learn to open up the curriculum and give students the room to take charge of their own development take time. We did not find many examples of schools that provided this time. Also, we did not find many programs for teachers to learn to co-create with students, parents and other experts or be 'agents of change' in their school. Teacher researcher teams, working with their own questions on learning are rare.

We have found research evidence supporting common sense assumptions on the need for teachers to have relevant communication and critical thinking skills to be able to help their students develop them. We found some programs to develop communication skills in the field of multilingualism and critical thinking, but these were limited. While the concept of multiple literacies is gaining ground in curriculum design, related teacher and school leader roles and subsequent training needs are not clearly identified and tackled. Available research, for example the Finnish policy implementation case study clearly show that the best intended policy initiatives targeting school students may be side-tracked if they are not accompanied by teacher competence development. Supporting today's learners in developing transversal skills and competences is not possible without teachers developing themselves in the same field. In Europe, EPAS and Learning Studios do offer possibilities, but to ensure sufficient time for it seems to be a necessary next step.

While the differences between cultural traditions of school systems remain a driving force behind renewing education along these lines, only some school systems consider the growing cultural diversity of their students and try to redefine themselves. More and more students are hindered in reaching their full potential in various fields while struggling to navigate a linguistic environment foreign to them. Teacher training far too often still focuses on control that makes multilingual practices more difficult to become rooted in schools around Europe.

The digital age has coincided with a growing diversity in schools in Europe, with this diversity partially being made possible by the availability of digital connections and solutions. A rapid change in everyday communication and realities in general have often left the school relatively unchanged, but this cannot be maintained after school closures. Systemic problems have stepped into the limelight especially in the months of forced home schooling – for researchers, education professionals, parents, children and policy makers alike. The collaboration between the school, teachers, parents and students as co-creators can strengthen the motivation of all involved to engage in a growth mindset.

A gap identified is a clear identification of teacher roles and related skills in this crucial field. The LifeComp, together with the Key Competences for Lifelong Learning Framework offer a good scaffold to do this. This paper has made an attempt to identify some of these roles and find hiatuses in teacher and school leader professional development, but it does not go beyond awareness raising of this gap and the need to work collaboratively on this. Based on the research presented above as well as the researchers' experiences with exploring relevant case studies and the lack of such available cases, we have formulated some tentative policy recommendations as follows.

## RECOMMENDATIONS BASED ON THE CONCLUSIONS

1. There is a need to commission and finance further research on teacher and school leader roles and competences in communication, multiple literacies, multilingualism and critical thinking as well as the role of non-teaching staff in it. This includes bringing together experts on educational research, teachers and student teachers with a role for students and parents.
2. Policies should incentivise teachers' and school leaders' experiential learning, both pre-service and in-service to support the identification of roles and development of necessary skills in these fields, and thus making it possible for teachers to become role models for their students. It would strengthen the learning process if the student teachers and teachers (LLL) can develop their own learning objectives.
3. The use of languages students are proficient in is to be promoted by policy alongside the available technical solutions and relevant teacher training.
4. Policy should support a holistic approach considering teachers and school leaders as learners and also other school stakeholders - especially parents, students and local communities - as potential educators. Co-creation in innovative heterogeneous learning communities with people from different backgrounds is helpful. International mobility is important to bring education stakeholders, especially teachers, school leaders, policy makers, parents and students together in order to co-create.
5. Self-reflection plays a critical role in the success of implementing inclusive, multicultural, multilingual policies, and this needs to be supported by any policy aiming for deeper changes in school.

## REFERENCES

- Bates, A. W. (2015). *Teaching in the Digital Age: Guidelines for Teaching and Learning*. BCcampus
- Brossard, M., Cardoso, M., Kamei, A., Mishra, S., Mizunoya, S., Reuge, n. (2020). Parental Engagement in Children's Learning: Insights for remote learning response during COVID-19, Innocenti Research Briefs no. 2020-09, UNICEF Office of Research – Innocenti, Florence
- Carretero, S., Vuorikari, R., & Punie, Y. (2017). DigComp 2.1: The Digital Competence Framework for Citizens with eight proficiency levels and examples of use. Joint Research Centre, European Commission.
- Castner, D. J., Schneider, J. L., & Henderson, J. G. (2017). An ethic of democratic, curriculum-based teacher leadership. *Leadership and Policy in Schools*, 16(2), 328–356.
- Cedefop (2014). *Terminology of European education and training policy: a selection of 130 terms: 2<sup>nd</sup> edition*. Luxembourg: Publications Office. <https://www.cedefop.europa.eu/en/events-and-projects/projects/validation-non-formal-and-informal-learning/european-inventory/european-inventory-glossary#V>
- Cenoz, J., Gorter D. (2014). Focus on Multilingualism as an Approach in Educational Contexts. in: Heteroglossia as Practice and Pedagogy, *Educational Linguistics* 20, DOI 10.1007/978-94-007-7856-6\_13
- CFCD (2018) Council of Europe's Reference Framework of Competences for Democratic Culture volume 1, 2, 3. <https://rm.coe.int/prems-008318-gbr-2508-reference-framework-of-competences-vol-1-8573-co/16807bc66c>
- Chih-Hui, L. (2019). Motivations, Usage, and Perceived Social Networks Within and Beyond Social Media. *Journal of Computer-Mediated Communication*, 24(3), 126–145.
- COM (2018) 189: *Key Competences for Lifelong Learning*
- COM (2012) 398: *Validation of Non-Formal and Informal Learning*:
- COM (2016) 381: *A New Skills Agenda for Europe*.
- COM (2017) 673: *Strengthening European Identity through Education and Culture*.
- COM (2018) 22 *The Digital Education Action Plan*
- COM (2020) 625: *Achieving the European Education Area by 2025*
- Council of Europe (2016). Competences for democratic culture. Living together as equals in culturally diverse democratic societies. Council of Europe Publishing.
- Deardorff, D. K. (2011). Promoting understanding and development of intercultural dialogue and peace: A comparative analysis and global perspective of regional studies on intercultural competences. Report of the State of the Arts and Perspectives on Intercultural Competences and skills. UNESCO. Paris.
- Dixon, K. (2018). Seven reasons for teachers to welcome home languages in education. *Voices Magazine*, The British Council
- Elicitplus (2014–2017). Juceviciene, Palmira, Teachers' self-reflection on European Competences: the empirical study <http://www.elicitplus.eu>
- Euroclio (2020) <https://www.euroclio.eu/project/learning-to-disagree/>
- Fullan, M., Quinn, J., Drummy, M., Gardner, M. (2020), "Education Reimagined; The Future of Learning". A collaborative position paper between New Pedagogies for Deep Learning and Microsoft Education. <http://aka.ms/HybridLearningPaper>
- Golubeva, I. (Ed.) (2017). *Education for European Literacy, Democratic Citizenship and Intercultural Understanding*. Tanárok Európai Egyesülete. Veszprém



- Hansen-Pauly, M-A. (2014). Teacher education: Language issues in multilingual educational contexts: Sensitising Subject Student Teachers for Language Issues and Cultural Perspectives, Council of Europe, Strasbourg.
- L. Hickman and M. Akdere (2018) "Developing intercultural competencies through virtual reality: Internet of Things applications in education and learning," *2018 15th Learning and Technology Conference (L&T)*, Jeddah, 2018, pp. 24–28, doi: 10.1109/LT.2018.8368506.
- Imants, Jos, Meijer, Paulien C., Blanckesteijn, Erik (2020), *Expansive Learning in Teacher Education's Hybrid Spaces: The Challenges and Possibilities in and Beyond Learning Studios*.  
<https://www.frontiersin.org/articles/10.3389/feduc.2020.00064/full>
- Konings, K. D., Seidel, T., & van Merriënboer, J. J. G. (2014). Participatory design of learning environments: integrating perspectives of students, teachers, and designers. *Instructional Science*, 42(1), 1-9. <https://doi.org/10.1007/s11251-013-9305-2>
- Langeloo, A., Lara, M. M., Deunk, M. I., Klitzing, N. F., Strijbos, J. W. (2019). A Systematic Review of Teacher–Child Interactions With Multilingual Young Children. *Review of Educational Research* August 2019, Vol. 89, No. 4, pp. 536–568 DOI: 10.3102/0034654319855619
- Lau, J. Y. F. (2011). *An Introduction to Critical Thinking and Creativity: Think More, Think Better*. New York: John Wiley & Sons Inc.
- Livingstone, Sonia and Sefton-Green, Julian (2016), *The Class. Living and Learning in the Digital Age*  
<http://opensquare.nyupress.org/books/9781479824243/>
- Lundberg, A. (2019) Teachers' beliefs about multilingualism: findings from Q method research, *Current Issues in Language Planning*, 20:3, 266–283, DOI: 10.1080/14664208.2018.1495373
- Mendelowitz, B., & Dixon, K. (2016). Risky writing: Working with a heteroglossic pedagogy to deepen pre-service teachers' learning. *Perspectives in Education*, 34(1), 120–134.  
<https://doi.org/10.18820/2519593X/pie.v34i1.9>
- Mills K. (2015). *Literacy Theories for the Digital Age*. Channel View Publications.  
<https://doi.org/10.21832/9781783094639>
- Mult!include (2020) *Multiplying evidence based strategies for inclusion*. Mult!include Consortium
- NECE (2020) <https://www.politik-lernen.at/necefocusgroupcdc>
- Nuthall, G. (2005). The Cultural Myths and Realities of Classroom Teaching and Learning: A Personal Journey. *Teachers College Record*, 107(5), 895–934
- Open Mind (2020) in <https://www.laddermenschen.at/index.php/open-mind>
- Palsa, L., Ruokamo, H. (2015). Behind the concepts of multiliteracies and media literacy in the renewed Finnish core curriculum: A systematic literature review of peer-reviewed research. *Seminar.net*
- Palsa, L., Mertala, P. (2019). Multiliteracies in local curricula: conceptual contextualizations of transversal competence in the Finnish curricular framework. *Nordic Journal of Studies in Educational Policy* 2019, Vol. 5, No. 2, 114–126
- Paul, R. W., & Elder, L. (2002). *Critical Thinking: Tools for Taking Charge of Your Professional and Personal life*. New Jersey: Financial Times Prentice Hall.
- Pijpers, R. (Ed.) (2021) *Handboek digitale geletterdheid* <https://www.kennisnet.nl/publicaties/werken-aan-digitale-geletterdheid-van-visie-naar-praktijk/>
- Radstake, H. (2009). *Teaching in diversity: Teachers and pupils about tense situations in ethnically heterogeneous classes*. Garant Publishers
- Reimers F.M. (2020) *A Professional Perspective and Global Education*. In: *Educating Students to Improve the World*. SpringerBriefs in Education. Springer, Singapore. [https://doi.org/10.1007/978-981-15-3887-2\\_5](https://doi.org/10.1007/978-981-15-3887-2_5)

- Rösner, L., & Krämer, N. (2016). Verbal Venting in the Social Web: Effects of Anonymity and Group Norms on Aggressive Language Use in Online Comments. *Social Media + Society*, 1–13.
- Sala, A., Punie, Y., Garkov, V. and Cabrera Giraldez, M. (2020). LifeComp: The European Framework for Personal, Social and Learning to Learn Key Competence, EUR 30246 EN, Publications Office of the European Union, Luxembourg
- Schleicher, A. (2020) The impact of COVID-19 on education, OECD.
- Scott, G. (2015) Teaching and communicating science in a digital age. *F1000Research*, 4:83
- Seel, N. M. (Ed.) (2012). *Encyclopedia of the sciences of learning*. London-New York: Springer
- Sendur, K. A., van Drie, J. P., & van Boxtel, C. A. M. (2020). Historical reasoning in an undergraduate CLIL course: Students' progression and the role of language proficiency. *International Journal of Bilingual Education and Bilingualism*. <https://doi.org/10.1080/13670050.2020.1844136>
- Starkey, L. (2020) A review of research exploring teacher preparation for the digital age, *Cambridge Journal of Education*, 50:1, 37–56, DOI: 10.1080/0305764X.2019.1625867
- SWD (2018) 12 The Digital Education Action Plan
- SWD (2018) 13 Common values, inclusive education and the European dimension of teaching
- Tuithof, Hanneke (2017) *The characteristics of Dutch experienced history teachers' PCK in the context of a curriculum innovation*. Response Network, Amsterdam
- Taplin, Dana H., Hélène Clark, Eoin Collins and David C. Colby. (2013). *Theory of Change Technical papers: A series of papers to support development of Theories of Change based on practice in the field*. ActKnowledge. New York
- Van Boxtel, C., van Drie, J., & Stoel, G. (2020). Improving Teachers' Proficiency in Teaching Historical Thinking. In C. W. Berg, & T. M. Christou (Eds.), *The Palgrave Handbook of History and Social Studies Education* (pp. 97-117). Palgrave Macmillan. [https://doi.org/10.1007/978-3-030-37210-1\\_5](https://doi.org/10.1007/978-3-030-37210-1_5)
- Van Drie, J., & van Boxtel, C. (2008). Historical reasoning: towards a framework for analyzing students' reasoning about the past. *Educational Psychology Review*, 20(2), 87-110. <https://doi.org/10.1007/s10648-007-9056-1>
- Varsányi, M. (2014) From Class to Community: A collection of cooperative activities for the ELT classroom. The Round <http://the-round.com/resource/from-class-to-community/>
- Varsányi, M. (2020) Cultural and Linguistic Identity Portfolio <https://www.human-ed.org/resources-and-tips>
- Vegas, E., Winthrop, R. (2020). Beyond reopening schools: How education can emerge stronger than before COVID-19. Brookings Institute
- Veugelers, W., de Groot, I., & Stolk, V. (2017). Research for CULT Committee – Teaching Common Values in Europe (IP/B/CULT/IC/2016-021). European Parliament, Policy Department for Structural and Cohesion Policies.
- Vosoughi, S., & Roy, D., Aral, S. (2018). The spread of true and false news online. *Science*, 359, 1146–1151. <https://doi.org/10.1126/science.aap9559>
- Wake, J. D., Dysthe, O., & Mjelstad, S. (2007). New and Changing Teacher Roles in Higher Education in a Digital Age. *Educational Technology & Society*, 10 (1), 40–51.
- Wansink, B.G.J. (2017). Between fact and interpretation - Teachers' beliefs and practices in interpretational history teaching. Utrecht University Repository