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## DigiTeal – Digital Teaching Literacy



### IO1.A2 – NATIONAL REPORT

**Developed by:**

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## INFORMATION ABOUT OUTPUT

Output: IO1 – DigiTeal Framework  
Activity: IO1-A2 : National Report

## PROJECT INFORMATION

Project acronym: DigiTeal  
Project title: Digital Teaching Literacy  
Project number: 2020-1-UK01-KA226-SCH-094429  
Sub-programme or KA: KA2 Cooperation for Innovation and the Exchange of  
Good Practices  
Sector: School Sector



## 1. General Introduction

On 11<sup>th</sup> March 2020, Tedros Adhanom Ghebreyesus, the Director of the World Health Organization made an announcement never heard before in the history of the organization and of the world – the start of the COVID-19 pandemic. As a result, worldwide a series of measures to prevent the spread of the COVID 19 virus were taken, including long term quarantine, limitation of travel, working from home, and the shift to online teaching.

As in many countries worldwide, as part of the consequences of the pandemic lockdown schools in Germany closed in March 2020 and only partially re-opened in May. Teachers were confronted with the need to adapt to online teaching with little or no preparation.

The DigiTeaL project brings together five partner countries (United Kingdom, Cyprus, Greece, Germany and Romania) that work together to:

- 1) pinpoint the needs and problems faced by teachers while teaching online;
- 2) create practical, applied resources for the use of teachers, using best practices;
- 3) offer teachers information about the non-technical classroom management of online teaching and solutions to problems that might occur during online classes; and
- 4) inform teachers about an internationally recognized online assessment system that can be adapted for students regardless of the subject that is being taught.

This report was developed as part of the DigiTeaL project and reflects the level of digital literacy of German teachers 2 years after the start of the COVID-19 pandemic. This report is structured in 4 sections, followed by a conclusion and bibliography. The first section provides a snapshot of digital initiatives adopted during the COVID-19 pandemic and explores the current state of online teaching in Germany, the second section explains the methodological approach and data collection process, section 3 provides an analysis of the data collected in Germany and section 4 summarizes good practices related to online teaching.

## 2. State of the Art regarding Online Teaching

It's a Friday, the 13<sup>th</sup> of March 2020, that goes down in German history. After a meeting of the Conference of Ministers for Education the day before, all the federal states decided to close the schools for the time being. They are supposed to open on April 20, after the Easter holidays.

(<https://www.deutschlandfunk.de/rueckblick-2020-chronologie-eines-schuljahrs-in-der-100.html>)

Until the Easter holidays – this is how the infection process is to be shut down. The question that arises for teachers, parents and students: what will happen between now and then?

There were 8. 38 million pupils in general education schools in Germany in 2020

(<https://de.statista.com> ), who needed to keep access to education during the pandemic and the school closures. This presented the authorities, the schools and the teachers with different challenges. Some schools were better equipped to start online teaching and home schooling than others.



The German education system is already quite complicated: educational matters are decided on a federated state level and not centralized for the whole country. There are 16 federated states and thus 16 ministries of education that operate mostly sovereign. This means there are vast differences between the individual federal states when it comes to education. It is therefore difficult to speak for the whole country when it comes to the state of art regarding online teaching.

Moreover there is a significant link between social background and educational success in Germany, somewhat due to the differentiation between lower and higher secondary schools and the grammar school – it doesn't only depend on the educational achievement which school the students visit, but also their social situation and the area that they live in. According to studies, “[...] social background and parental income are more of a deciding factor when it comes to a child's education than actual school performance” (<https://www.dw.com/en/german-study-finds-link-between-social-background-educational-success/a-15805347>) and this is mirrored in the corona situation and the homeschooling.

Too many students did not have school for months and no homeschooling, because they did not have the right equipment or their particular school did not manage to provide support and solutions and this was the case for many lower secondary schools and schools for children with special needs. On the other hand, children from well situated households had a clear advantage during the closure of schools.

Some schools manage surprisingly well, the teachers get creative and the schools can provide support for the less well situated students. One example of a great management is a primary school in Bonn (North Rhine-Westphalia), a film about that school gives a very detailed picture about the online teaching there: <https://www.youtube.com/watch?v=OEj2fYy3Wlc>

There “Kulturminister Konferenz” – the Standing Conference of the Ministers of Education and Cultural Affairs (<https://www.kmk.org/kmk/information-in-english.html>) provides support and information about learning platforms, tools for online teaching and focal points for all the different federal states of Germany concerning online teaching but in the end every school has to manage the situation on its own in its very unique way.

### 3. Needs and Gaps of Teachers in relation to Online Teaching

#### 3.1 Questionnaire Results

This section will present the results of the questionnaire in the following form, in order to ensure the consistency between the national reports and make the compilation of the results easier:

1. Number and background of the respondents
2. Presentation of Digital Skills Results
3. Presentation of Managing Online Learners Results
4. Presentation of Online Safety and Privacy
5. Good Practices Results



## 1. Number and background of the respondents

The first section of the survey deals with the demographic data of the respondents. This creates a picture of the conditions and prerequisites under which the participants answered the questions.

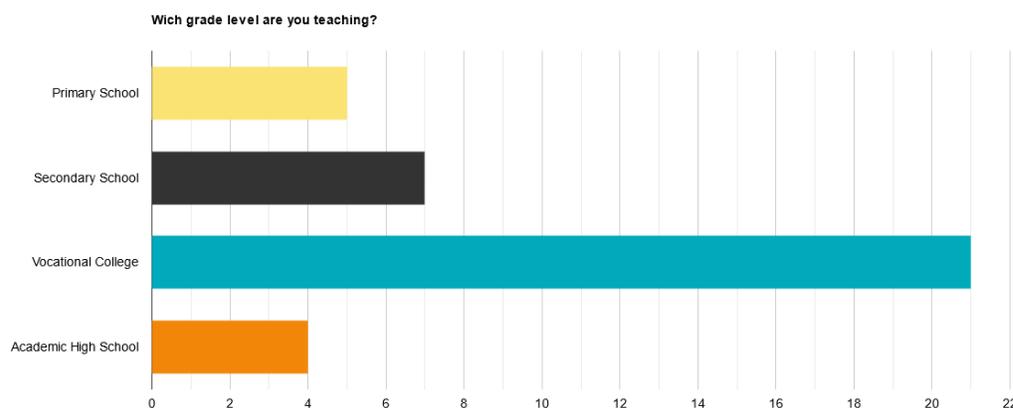
The questionnaire has been answered by 37 teachers, of which 64.9% were female - and 35.1% male - people. It is clear that none of the respondents opted for other information than male or female.

The age of the respondents ranges from 29 to 64 years. The age of 37 is represented by three persons, so it is the most common age in this questionnaire. All the other age groups are represented on average once or twice.

More than half of the respondents (56.8%) work in the field of vocational education and training or at vocational colleges. The others work in roughly equal proportions in primary school, secondary school or academic high school.

*Figure 1: Which grade level are you teaching?*

The question about which classes or grades the respondents teach, offered a very wide variety of information. A large proportion (11.5%) stated that they teach grades 1 to 4 in primary school.



The majority, however, are in grades 5 to 12/Q2 (31.7%). The other participants teach in a wide variety of areas. For example in the 1st - 3rd year of apprenticeship at a technical college (FH), or 10th - 12th grades up to the university entrance qualification and other vocational school classes. Some are also found exclusively in the area of grades 5 to 10 or in the area of the upper secondary school.

In the field of vocational schools, the activities are divided into a very wide variety of areas. From work at a business school to dual training courses to supervision of students in bachelor's degree programs. The fields of activity are very diverse.

## 2. Presentation of Digital Skills Results

The second area deals with the digital skills of the teachers. This also shows which technologies are available and how they can be used by the participants.

Regarding how confident the participants of the survey are, concerning home-schooling, one can see that the majority (56.8%) seems to feel safe. Whereas only 5.4% say they feel very unsafe. The rest are split between those who feel somewhat safe and those who feel very safe.

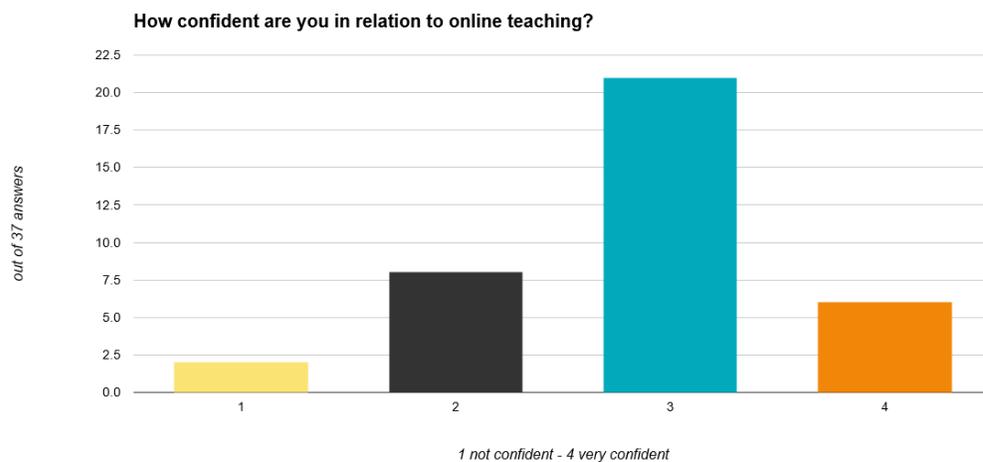


Figure 2: How confident are you in relation to online teaching? (1 Not confident – Very Confident 4)

Concerning the question which learning management system is used by the respective institution, there were many other choices given by the respondents besides the ones suggested.

What is striking is that 33.3% of the respondents state that their institution does not use learning management systems. Among those who indicate that they do use such systems, a majority of 42.3% use the "IServ" system. The systems "Moodle" and "Microsoft Teams" are still used by 9.1% of the institutions. The system "Schoul.cloud" is only used by 6% of the institutions. "360Learning", "Svelte LMS" and "TalentLMS" were three of the proposed systems, but these are no longer to be found among the respondents' statements.

## 2. Which learning management system does your institution use?

33 answers

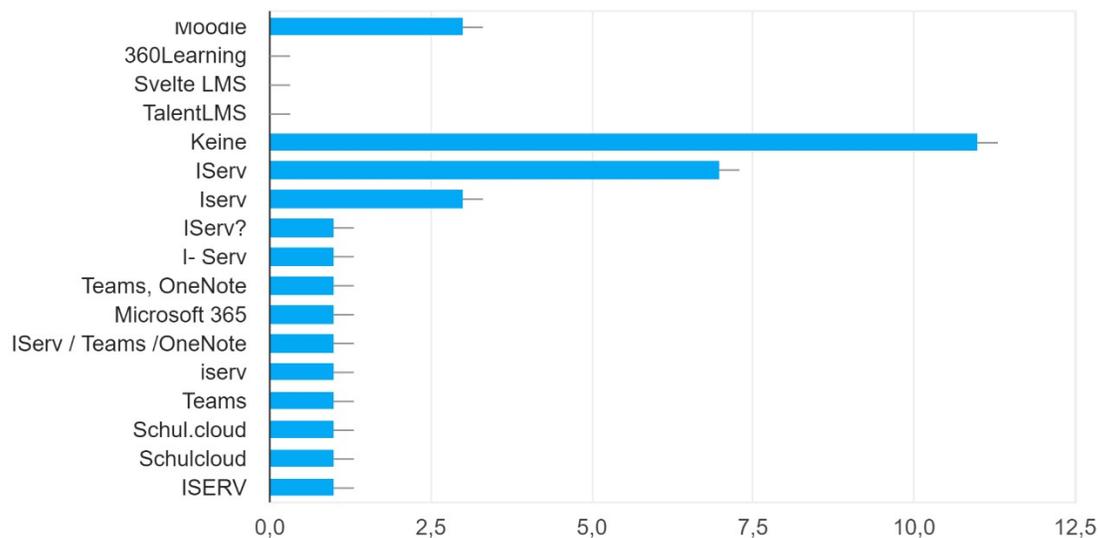


Figure 3: Which learning management system does your institution use?

The information on the options that the respondents themselves use to conduct their online teaching shows a clear tendency. The system "IServ" was again clearly the most used system. Almost half (45.8%) of the respondents stated that they use the system for their online teaching. At 37.4%, the "Microsoft Teams" system is also used quite frequently. The "Zoom" system is used by 14.3% of respondents for their online teaching. "Jitsi Meet" is also represented with 8.7%.

Looking at the extent to which digital technologies are used to improve interaction with learners, it can be seen that there is not much versatility here. Quiz" with 68.8% and "Padlet" with 65.6% are the main technologies used. It also shows that brainstorming charts and online boards are

used by 31.3% each. There are also a few other indications of tools used to enhance online learning. However, these are only used by individuals.

When asked whether and in what form teachers use digital technologies to create appealing digital content, the data is also sobering. It turns out that 62.5% of teachers do not use any kind of technology to make online teaching more engaging. Canva is the only tool most used, at 15.6%. 6.3% of the teachers use Powtoon for their online lessons. Only a few each stated that they use different programmes such as PowerPoint, Smart board or Photoshop.

Equally clear is the question of whether the teachers are aware of the Open Badges system as a validation method. No one stated that they use the system, only 5.6% know about the program but do not use it. The remaining 94.4% are not aware of the system.

#### 6. Are you aware of the Open Badges System as a validation method?

36 answers

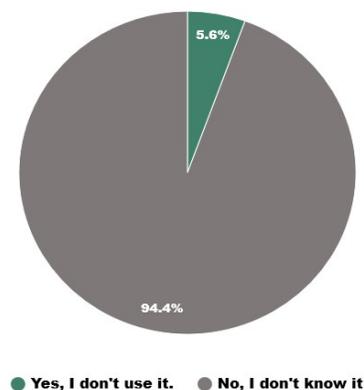


Figure 4: Are you aware of the Open Badges System as a validation method?

The final question about difficulties during the experience of online teaching shows that the most common problem is poor internet connection (82.9%). However, this is not the only difficulty that is increased like this. 62.9% of the teachers said that their lack of digital knowledge and skills causes problems.

One teacher each stated that the pupils and students were indeed sometimes not fit enough or technically ill-equipped.

In addition, the teachers' lack of equipment is a cause of difficulties. 45.7% stated a lack of

equipment and 17.1% a lack of suitable software as the cause.

### 3. Presentation of Managing Online Learners Results

The third area deals with the management of online learners and the effect of online learning.

If you regard the effect online lessons have on the motivation for learning, the consequences can be very different.

A majority of 56.8% of the participants sees a decrease in the students' motivation while 16.2% did not notice a difference compared to classroom lessons. Only a minority of 8.1% reports an

improved motivation in the students.

Other participants could not give a conclusive answer. They noticed having to give new incentives for the students' motivation the longer the lessons were held online (2.7%).

The participants were also asked to assess how the online lessons affected the students' fatigue.

Most participants (55.6%) suspect increased fatigue compared to face-to-face lessons. 27.8% cannot detect a difference. A significant group of 13.9% state being unsure about the difference. One participant attributes the fatigue to the general Corona situation and not the online lessons in particular.

The grades can give an insight into the consequence of online teaching on the students' performance.

A large group of 31.4% observes a decline in performance through worse grades while an equally large group (31.4%) does not notice a difference. Only a small number of participants report improved grades and performance (5.7%). Interestingly many participants did not give a generalized answer but observed the performance differing greatly and being very dependent on the individual student.

When asked whether they take specific measures to limit the students' screen time, 54.1% of participants answered with "Yes" and 45.9% with "No".



#### 4. Do you take any steps to limit learners' screen time? (Hands-on Activities, Frequent Breaks)

37 answers

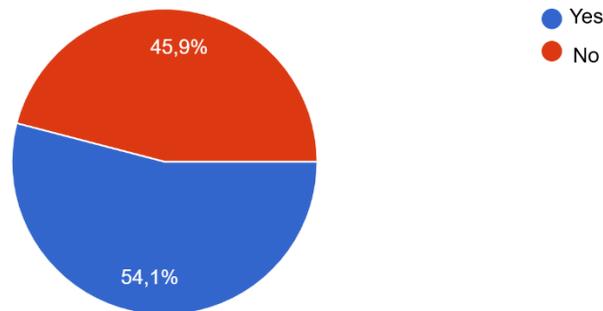


Figure 5: Do you take any steps to limit learner's screen time?

Those who claim to do so employ very different approaches. These efforts range from regular breaks to games involving movement, phases for individual offline working, teamwork in breakout rooms and tasks that don't require a PC.

Lastly, we take a look at the advantages of online teaching.

The majority of participants (46.9%) report especially well-performing students adjusting easily to distance learning. Another 15.6% view online teaching as more neurodiverse and being easier for students with ADHD, autism or legasthenia.

In addition to that a small number of participants describe online teaching as beneficial for more quiet or shy learners.

#### 4. Presentation of Online Safety and Privacy

The fourth area deals concisely and precisely with questions about online security and data protection.

A clear majority of the respondents (73%) stated that they were aware of the GDPR Policies, while 27% of the participants were not.

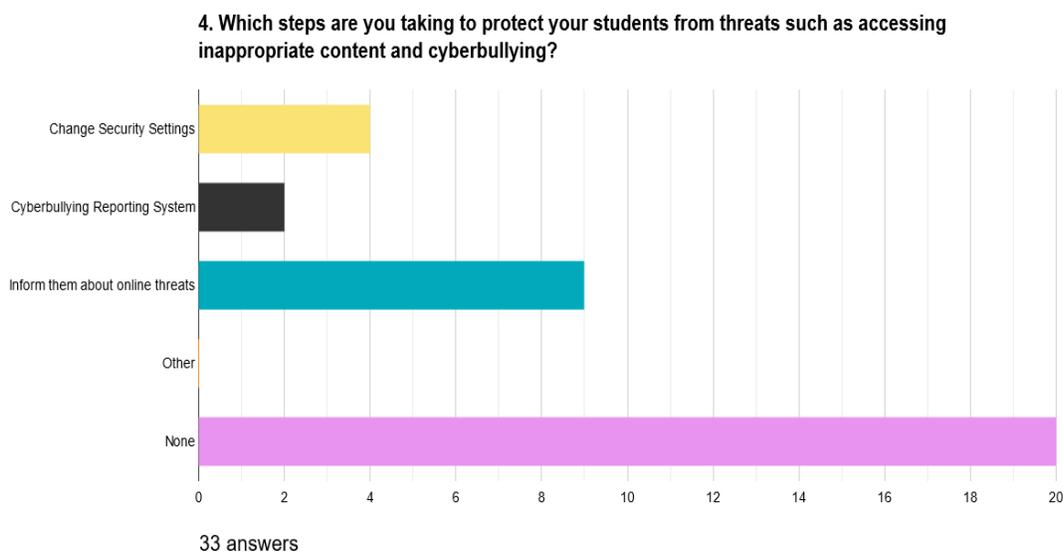
In order to protect the privacy of students during online lessons, each of the respondents takes concrete measures. The majority (94.6%) says that they do not share photos or information of students. Another large proportion (64.9%) teach students about personal data. In addition,

more than half of the respondents (37.8%) use tools to protect personal data. Also, a few participants (18.7%) ask for consent to record the session.

It is not uncommon that disruptions occur during online classes. In order to minimize them as much as possible, the respondents take various measures.

At 63.9%, the majority avoid sharing links to online video conferences on social networks. In addition, 44.4% say that they create a password that enables access to the sessions in the first place. A large proportion (58.3%) also first check the learners' names before they accept them to join the video conference.

To protect learners from inappropriate content and cyberbullying, a surprising majority (60.6%) take no precautions. Just 27.3% inform and educate the students. The minority change safety settings (12.1%) or install a reporting system for cyberbullying (6.1%).



*Figure 6: Which steps are you taking to protect your students from threats such as accessing inappropriate content and cyberbullying?*

## 5. Good Practices Results

As in many other areas of life, communication and sharing remain essential during the Corona pandemic.

For example, 91.9% of the teachers surveyed said they shared tips and best practices with other colleagues during the COVID 19 pandemic. Only a very small percentage of 8.1% choose not to.

Tips and practices that have proven to be very effective since the beginning of distance learning include using slides in PDF format, using Padlet, not overloading online lessons with tools, teaching in shorter units, encouraging independent work, having explanatory videos created, working according to the flipped classroom concept and finally, not waiting for the ministry to create professional requirements in a timely manner or in advance, but taking your own initiative

### 3.2 Focus Group Results

The interviews of the Focus Group participants took place between the 29<sup>th</sup> of April and the 1<sup>st</sup> of May 2022.

The Focus Group participants have had different experiences regarding online teaching but overall, they were more on the positive side. It depends greatly on the group they were teaching. It works particularly well with self-organized students that can learn independently and work well in groups. Everybody agreed that online teaching is a great alternative to live teaching and that a lot was possible, much more than they could have imagined before. Although the personal contact is more difficult or lacking in online teaching, the students were happy to have the possibility to connect, cooperate and interact with each other while still in lock-down.

For all the participants the beginning of the pandemic and the sudden need to organize online lessons was not easy. Everything was new, they have never done it before. Even with the technical possibilities available, the start was difficult, they all had to invest a lot of work and learn a lot to provide good teaching. It was also difficult to introduce rituals and rules, there were conflicts among the students at first. The difficulty there was that the teachers were not always aware of the conflicts because they took place in private chats (e.g.: whatsapp or other messenger apps). In general they had to get used to the fact, that they could not see all that was going on (students not understanding, having difficulties, being distracted, not paying attention at all) and not having the usual appearance, effect on and control over the students as when being with them in the same room. The students could turn off their camera and microphone and all of the participants said that it is a very uncomfortable feeling to be speaking



to a lot of black screens, like talking into a void. With good classroom management they could improve this situation and students would get used to sit in front of a camera over time.

But there are still very shy students who wouldn't really participate or students, that fall behind and need better instructions and more support and it was difficult to provide just that.

Interestingly everybody agreed, that managing the online classroom was not more difficult than managing a real one, sometimes even easier and with less bureaucracy involved.

When discussing the question "If online teaching is the future of education, what areas/ skills would you like to develop further in order to be better prepared as an educator?" the participants took a detour and stated, that online teaching is definitely not the future of education, because of the lack of interpersonal connection with the students. But it can be a great addition to live lessons (e.g.: for more in-depth work or group work). Then the participants stated that they want to be more prepared in general, have a big pool of exercises and materials that are ready and can be reused more often. They want to stay up to date, learn more methods and tools and attend trainings and events.

As for tips and good practices, there were a lot, so we tried to summarize.

Regarding the use of online tools, the tip is to always try and test them before using them with students. Do not implement too many tools at the same time. Don't just use them because you can and don't jump to 10 different websites or tools but use them appropriately for the group and reuse same tools for different purposes. This way your students have the chance to get used to the tools and are not overwhelmed. It is better to master few tools and to use them with purpose than to try a lot that you as teacher are not proficient in. When introducing a tool for the first time you need to practice with your students and plan enough time to do so.

Also important is to be aware that the "acting stage" the teacher has is only the size of a screen for the students. You only have the screen to draw attention to yourself and keep the focus on your content. That means you need a good (technical) equipment (camera, microphone) but also a suitable surrounding (quiet, clean background without distraction). It is also absolutely important that there are a lot of practical phases (movement, student activation, exercises, opportunities to go out, learn somewhere else, use breakout sessions, ...).

Another important issue is that students need good technical/digital skills and a lot of practice. Being a digital native does not automatically mean being digitally competent.

You also must see even more that the students work in groups, that there are few phases in plenary sessions and that the promotion and support of individual students takes place in small groups. You have to be very well prepared (materials, tasks, organisation, multimedia, links, photos, ...) and that this preparation takes a lot of time. Don't underestimate it!

One last tip was also to "Just do it!", be courageous and try different things. It is often easier than you think and you get in quickly if you put in the work.



## 1. Good Practices in relation to Online Teaching

This section will present training programmes/ initiatives at a local/national level directed to teachers/ educators, in order to develop their skills and competences in relation to online teaching.

<b>GOOD PRACTICE 1</b>	
<b>Name</b>	Education portal "MUNDO"
<b>Description (50-70 words)</b>	<p>In view of the short-term need for digital teaching materials for schools, the Federal Government and the federal states have agreed to provide a media portal for freely accessible educational media and thus promote the development of a common state educational media infrastructure.</p> <p>On behalf of the 16 federal states, the Institute for Film and Image in Science and Teaching (FWU) has designed the joint media portal MUNDO. The portal, which is funded by the DigitalPakts Schule, provides all pedagogical experts, pupils and legal guardians with quality and licence-proven teaching media from different sources with free access from the start of the 2020/2021 school year.</p> <p>MUNDO (<a href="https://mundo.schule/">https://mundo.schule/</a>) is continuously being expanded to include new learning content and functionally expanded. The background exchange platform SODIX (<a href="https://www.sodix.de/">https://www.sodix.de/</a>) ensures that federal states, broadcasters and other content producers can make these educational media available and the federal states can import this content into their own regional portal.</p>
<b>Key Stakeholders/ Provider (If applicable)</b>	
<b>Level (Organisational, Regional, Local, National)</b>	National, federal state level
<b>Link/ Website</b> <a href="https://mundo.schule/">https://mundo.schule/</a>	<a href="https://mundo.schule/">https://mundo.schule/</a>



<b>GOOD PRACTICE 2</b>	
<b>Name</b>	“So geht MEDIEN” – This is how MEDIA works
<b>Description (50-70 words)</b>	<p>With videos, audios, quizzes, interactive maps and texts, the innovative website of ARD, ZDF and Deutschlandradio explains how media works and why public service broadcasting exists. The topics are designed for the classroom and offer complete lesson sequences with many ideas, in which the students themselves have to become active and produce small contributions themselves, for example with camera and microphone.</p> <p>“so geht MEDIEN” deliberately relies on the “medium” Internet to convey media competence. Digitization is advancing rapidly and many young people are primarily using their smartphones to get information. Ideally, a teacher uses “this is how MEDIEN goes” online in class and occasionally assigns tasks to pupils that they solve with their smartphone or tablet – for example, one of the many quizzes. Since schools cannot always be up to date with the latest technology, the vast majority of content is also available for download.</p>
<b>Key Stakeholders/ Provider (If applicable)</b>	
<b>Level (Organisational, Regional, Local, National)</b>	National
<b>Link/ Website</b> <a href="https://www.br.de/sogehmedien/footer/navi/so-geht-medien/das-projekt/index.html">https://www.br.de/sogehmedien/footer/navi/so-geht-medien/das-projekt/index.html</a>	<a href="https://www.br.de/sogehmedien/footer/navi/so-geht-medien/das-projekt/index.html">https://www.br.de/sogehmedien/footer/navi/so-geht-medien/das-projekt/index.html</a>

<b>GOOD PRACTICE 3</b>	
<b>2. Name</b>	Impulse for distance learning
<b>3. Description (50-70 words)</b>	The impulse paper is intended to provide teachers and seminar trainers with information on the didactic organization of “learning at a distance.” A recording of an online seminar with



	<p>the authors and interested guests is also available for each impulse:</p> <ul style="list-style-type: none"> <li>&gt; As much empathy and relationship work as possible, as many tools and apps as necessary.</li> <li>&gt; As much trust and freedom as possible, as much control and structure as necessary</li> <li>&gt; As much simple technology as possible, as much new technology as needed</li> <li>&gt; As much asynchronous communication as possible, as much synchronous as necessary.</li> <li>&gt; As much open project work as possible, as many small-scale exercises as necessary</li> <li>&gt; As much peer feedback as possible, as much feedback from teachers as needed</li> </ul>
<b>4. Key Stakeholders/ Provider (If applicable)</b>	Ministry of Schools and Education of the State of North Rhine-Westphalia
<b>5. Level (Organisational, Regional, Local, National)</b>	Federal State level
<b>6. Link/ Website</b> <a href="https://mundo.schule/https://www.br.de/sogehmedien/footer/navi/so-geht-medien/das-projekt/index.html">https://mundo.schule/https://www.br.de/sogehmedien/footer/navi/so-geht-medien/das-projekt/index.html</a>	<a href="https://www.schulministerium.nrw/impulse-fuer-das-lernen-auf-distanz">https://www.schulministerium.nrw/impulse-fuer-das-lernen-auf-distanz</a>

## 7. Conclusion/ Summary

From the start of the COVID-19 pandemic the German education system has made a huge leap towards digitization within a very short time. The structural issues and the fact, that each federal state is responsible for the administration of the schooling system highlighted just how different the conditions and the situations are on a federal state level and on a regional level. While some regions simply have no access to a stable internet connection others have a vast diversity of technical possibilities.

The Standing Conference of the Ministers of Education and Cultural Affairs has made a great effort in providing and uniting information and resources for teachers all over the country. Nevertheless with structural deficits and no time for proper teacher training the schools and their teachers had to take initiative and stand up for their students, in order to provide access to education. Many many teachers worked to a state of exhaustion during several months and the lack of teachers in general in the country

has made the situation even more severe.



The distributed questionnaire in which we tried to identify the needs concerning online teaching of educators in Germany has been answered by 37 teachers. The significant issues which they have encountered regarding distanced teaching are “bad internet connection” (82,9%), “lack of equipment” (45,7 %) and “lack of digital competences and skills” (62,9%). Surprisingly 69 % stated that now they feel confident or very confident when it comes to online teaching, which is reassuring as we look towards the future of online teaching in Germany.

## 8. References

- Deutsche Welle (www.dw.com). (o. D.). *Educational deficiencies*. DW.COM. Accessed on the 1st February 2022, retrieved from <https://www.dw.com/en/german-study-finds-link-between-social-background-educational-success/a-15805347>
- Das Distanzlernen an der OGS Gottfried Kinkel Schule Bonn 2020/2021*. (2021, 3. November). [Video]. Retrieved from YouTube. <https://www.youtube.com/watch?v=OEj2fy3Wlc>
- Information in English*. (o. D.). www.kmk.org. Accessed on the 1st February 2022, retrieved from <https://www.kmk.org/kmk/information-in-english.html>
- Rückblick 2020 - Chronologie eines Schuljahrs in der Coronakrise*. (o. D.). Deutschlandfunk. Accessed on the 1st February 2022, retrieved from <https://www.deutschlandfunk.de/rueckblick-2020-chronologie-eines-schuljahrs-in-der-100.html>
- Statista. (2022, 24. Januar). *Schüler an allgemeinbildenden Schulen nach Bundesländern im Schuljahr 2020/2021*. Accessed on the 1st February 2022, retrieved from <https://de.statista.com/statistik/daten/studie/1321/umfrage/anzahl-der-schueler-an-allgemeinbildenden-schulen/>

