



# How to Design an Intervention to Raise Digital Competences: ALL DIGITAL Week – Dortmund 2018

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**Abstract.** The article describes and evaluates a local campaign to support digital skills of marginalized persons. Due to the increasing digitization which is taking place all over the world, it becomes necessary to support the expansion of people's digital competences and close the “digital gap” that causes multiple disadvantages for certain groups of people. In March 2018, eleven students of Rehabilitation Science at University of Dortmund (Germany) conducted five different courses for disadvantaged persons in Dortmund. The courses lasted around two hours and aimed at raising awareness for the potentials and pitfalls of digital tools used in the everyday life of people from different target groups. In total, 417 people attended these courses, mostly 6 to 10 participants per course. The article describes the best practices in designing, developing, conducting and evaluating these courses. An extensive survey (338 participants) is used to analyze successful means in delivering courses on IT topics to diverse target groups. The student activities were linked to the “ALL DIGITAL Week”, a pan-European campaign that organizes courses in 25 countries with more than 92,460 participants. The “Get Online Week” Dortmund 2018, which is part of the European “ALL DIGITAL” campaign and carried out in Germany, is listed as an example in this article, to show how a project to raise digital competences can be designed and what is essential for a successful implementation. The article closes with recommendations for conducting alike interventions in other circumstances.

**Keywords:** Digital inclusion · Digital gap

## 1 The Societal Problem Situation on Digital Inclusion

Within the last years, there has been a vast development within the world of digital media that has fundamentally influenced and changed our society and everyday life, resulting in a new type of society - the information society [1–3]. The information society in the European context is characterized by increasing economic growth as well as a broad modernization on the most diverse levels. The main reason for this development is the use of modern information and communication technology such as smartphones [4]. Such devices are easily accessible, can be carried close to the body due to their size and are therefore permanently available [5]. Also, their functions multiply continuously within a process of media convergence [6] leading to a changed consumer behaviour. However, the increasing use of digital devices is not only developing due to the media convergence, but it is also a consequence of the ever more digitizing society, which affects all our areas of life [7]. The term “digitization”, on the one hand referring to the technical transfer of information from analogue to digital storage [8] which allows editing with the computer [9], is also referring to changes semantic layers [10], as it also refers to the process of introduction of digital technologies or application systems based on them. Following this approach, the ever-digitizing society represents the main cause for the rapid digitization of areas that were previously unrelated to the digital world. For example, 61% of Europeans use online banking, while 72% of them access the news online [11]. With 81% of Europeans using the internet at least once per week and 72% going online every day [12], the internet has become an integral part of the everyday life [5]. Also, the digitization of the social and recreational area leads to many advantages. Nowadays, digital participation is strongly connected with social participation, since the use of digital media allows changes within society and provides opportunities for new connections between people [10].

While millions of people in Europe, but also worldwide frequently use the internet, 13% of the Europeans have never dealt with it [12]. Within Germany, 19% do not even use the internet from time to time [13]. These people can be described as “offliners” and their existence refers to the still unequal distribution of internet usage. The differing use of digital media often results in different participation opportunities within important and scarce social resources [14]. Wealth, education, (social) security, health as well as individual autonomy can be assigned to these resources. These social inequalities have far-reaching consequences which affect the social participation of each individual.

The efficiency of access is, according to Wilson [15], characterized by a variety of factors, including access to digital media, the ability to use them, costs, design, self-initiative, potential language barriers and public internet access [28]. All of this contributes to the broadening of the so called “digital divide” within our society [16]. As the concept of social inequality only includes socially anchored forms of favoritism or pre-emption and therefore does not refer to physical heterogeneity or different biological systems [14], it cannot be used to fully explain the digital divide. To include other aspects and to ascertain which factors influence the differences in digital media usage, countless studies, such as the “Digital Economy and Society Index” (DESI Index) [11] as well as the “D21 Digital Index” [13], have researched the correlations between sociodemographic data and individual media usage. The latter, which is based

on a large representative survey among 20,500 Germans aged 14 years and older, annually provides information on the digitization of the German society on a federal level. The current report from 2017/2018 e.g. states, that young people with a high level of education have a much higher degree of digitization, that high levels of income and education correlate with high levels of digitization and, that professionals are more digital than those who are not working [13].

What is particularly striking about the results of the index is that people with disabilities are not counted as one of the risk groups threatened by digital exclusion. This does not seem to be plausible, as especially for this group of people, the internet is of greater relevance and allows them to participate in social, cultural and professional life in a self-determined manner, thus suggesting an increased degree of independence [17]. Also, the right of complete accessibility is assured in federal laws like the Disability Equality Act [18] as well as the Convention on the Rights of Persons with Disabilities [19] and includes aspects like the full availability and usability of infrastructure and equipment [18] – which also includes information and communication devices [19]. In the context of digitization, this means that everyone, regardless of physical or mental limitations, should be able to participate equally within our social system.

However, digital devices and media can lead to new barriers and confront users with challenges [20] and especially the group of people with disabilities often faces insurmountable barriers when using the Internet. These are as diverse as the types of disabilities themselves and are linked to these as well as to their individual age. Numerous studies therefore differentiate between blindness, visual impairment, hearing loss, deafness, motor impairment, reading and spelling impairment and learning and mental disabilities [21]. Overall, the studies showed that significantly more people with impaired vision, hearing and physical activity use the Internet than people in the subgroup with learning difficulties [22]. Also within the subgroup of people with an disability, age is a significant negative factor correlating with internet usage – however, “in every age group, fewer respondents with disabilities regularly use the internet than the average population” (own translation) [22].

On the basis of these findings, which show that people with disabilities represent a risk group and are particularly affected by digital exclusion, it is necessary to dissolve at least the environmental barriers in order to guarantee all people unlimited participation in the media offerings. Consequently, environmental barriers for digital participation of people with disability as a risk group of digital exclusion have to be dismantled. The ever-changing application and use of the internet demands an ongoing re-experiencing and valuing of opportunities and risks. It seems to be crucial to intervene at an early stage and prevent people with disabilities from not participating due to their material, social or attitudinal environment. Competitions for good barrier-free websites like the “Bee Competition” [21] are one possibility; however, it is also possible to address the level of end-users – not just people with disabilities but all people at risk of digital exclusion. Since interest in further training in the digital sector is low, a systematic acquisition of knowledge through training does not take place on national level [13]. Thus, despite years of progressive digitization, Germany fails to achieve its goal of enabling all people to connect to the digital society.

## 2 The Intervention

The annual campaign “ALL DIGITAL Week” (ADW), first held as “Get Online Day” in 2010 in the UK, is one of the measures to counteract the progressive digital divide. It digitally empowers people and challenges Europeans to learn, participate, share and create. The campaign is organized by the pan-European non-profit association “ALL DIGITAL” which represents around 25,000 organizations in the field of digital education in Europe. Its main focus lies in supporting Europeans with insufficient levels of digital skills. Every year thousands of different events and activities that support the digital transformation are held all over Europe within one specific week in March – the “ALL DIGITAL Week”. In 2017 about 170.000 first time internet users in Europe were reached by the event [23]. Behind the European structure of the campaign are the national partners that organize events in the member states. For Germany, “Stiftung Digitale Chancen” (SDC) organized the “ADW” in 2018 for the sixth time and coordinated 69 digital competence centers who participated by conducting different events and workshops focused on digital inclusion. Important for the realization of the single initiatives is the “European Digital Framework for Citizen” (DigComp) [24], which provides a common understanding of planning such initiatives topic as well as a guideline “ALL DIGITAL” created for adapting the framework [25].

In 2018, as in the previous three years, eleven students from the “Faculty of Rehabilitation Studies” at the “Technical University Dortmund” organized local events in Dortmund as part of the national “ADW” in Germany. They implemented five different concepts on developing digital skills, organized various local events and evaluated them afterwards [23]. To guarantee a successful process, their work was guided professionally by Dr. Bastian Pelka from the “Sozialforschungsstelle Dortmund”. The time frame of the project extended over nine months, beginning in October 2017 and ending in July 2018, starting with a phase of planning and designing, leading to the implementation of the courses and ending with the phase of evaluation. The realization of the project was possible by working together with different institutions like schools, libraries, a penal institution, workshops for people with disabilities, rehabilitation centers and others which were often already known for their participation in previous years. The courses took place in the premises of the participating institutions and they were the ones who enlisted the participants, who were interested in the courses. The telecommunications provider “DOKOM21” was an official sponsor, who helped the participants getting access to the internet during the courses by supplying hotspots.

All courses were free of charge and took two hours each. This time frame was set so that the courses could be a short introduction of the topic and induce a further follow up with the content that was part of the respective course. This method was chosen so that as many courses as possible could take place and a large number of participants could be reached. Another reason is that the main aim was to raise the participants’ interest, to close a first gap and give an opportunity to connect to the field of digital media. Most of the addressed target groups were chosen because they have a greater need to improve their digital skills and are more likely threatened by digital exclusion. In some institutions, the length of the course was shortened to 90 min due to the ability of the participants to concentrate. In the first phase of the organization of the “GOW”, six

different concepts for courses concerning the improvement of digital skills for various target groups were designed. Each concept had its own theme and aim and was conducted by two or three members of the project group. To present the course ideas and by that obtain cooperation partners for the project, a contact day that took place in December was organized. Various institutions that came into question for realizing the “GOW” 2018 in cooperation with the students were invited in writing. Employees from 25 different institutions attended this event and made appointments for courses they wanted to offer to their clients. After the contact day, it was decided to realize five out of the six concepts due to the interests and requirements that were shown by the institutions during the event:

- **“Sexual Education with help of Digital Media”**: The course aimed to show students, people with disabilities, parents and educational professionals how to use websites on Sexual Education.
- **“Facebook, Instagram and Co. - How can I deal with hate on the Internet?”**: The course contained information on how to behave respectfully in social networks and mainly addressed adolescents (12 years and older) as well as people with mental disorders.
- **“What does my child do on the internet? The digital world easily explained.”** contained preventive educational exercises focused the contents children come across while surfing the internet. Target group were parents and educational professionals.
- **“Get ready for your future! - Job and Apartment Search online”** addressed job and apartment search on the web. It included digital research competences and e.g. writing an online application and addressed students, refugees and people in disadvantaged situations (e.g. prisoners, people with a mental illness, homeless).
- **“From dial to touchscreen - Lead-in to the media use of tablets, smartphones and computer”** aimed to provide a first contact with the named devices as well as a basic knowledge on digital communication. The target group included seniors and people with disabilities.

### 3 Methodology

The following section is going to introduce the methodology, which was used to investigate to what extent the course concepts were successfully implemented. In addition, a description of the sample will be presented which gives an overview of the survey participants

#### 3.1 Research Design

To evaluate the courses scientifically, a combination of qualitative and quantitative research methods was used. After every course, a questionnaire was filled in by all the participants. The questionnaire was constructed and pretested by the project group. A month after the project week, members of the participating institutions were interviewed about the sustainability of the course content. The aim of these research

methods was to find answers to the three established research questions which are determined to be decisive for the research process:

1. To what extent does the participants' interest increase in integrating the course topics into their everyday life?
2. How can digital competences be improved sustainably by participating in a course during the "Get Online Week"?
3. How can the satisfaction of all participants and institutions be achieved?

The main goal was to assess, if the courses that took place were able to improve digital skills for the participants sustainably and by that formulate recommendations for other following projects with similar aims. This research target is based on the assumption that a successful campaign will work if it reaches the interest, sustains the competencies sustainably and reaches the satisfaction of the participants. The appropriate methods for this purposes can either be qualitative or quantitative as well as a combination of both, depending on the context. Therefore, quantitative and qualitative research are not contradictory and hence can be used complementary [26]. The decision to combine those two methods harbors different advantages and disadvantages, which are both research-practical and of substantive nature. For those who cannot focus on a long interview or feel comfortable with it, questionnaire surveys are more useful. They include a distance to the researcher and minimize his influence, are more anonymous, easier to carry out, to evaluate and to compare [27, 28]. On the other hand, qualitative surveys are more suitable for people who are willing to verbalize their thoughts [27]. For example, a guided interview can provide room for the respondent to articulate individually and the resulting qualitative material is much richer and detailed and uncovers detailed interrelations [27]. It is however problematic that guided interviews require more time, as fewer people can be interviewed. Moreover, the individual utterances of the respondents are harder to compare than within the results of a questionnaire [27]. The questionnaire mainly aims to collect the demographic data of the participants in order to create a picture of the target group and to evaluate the experiences of the participants and the individual evaluation of the courses. In addition to that, the expert interviews aim to assess the satisfaction of the participating institutions and to gain insights into possible sustainability and an increase of competences. By including all perspectives into the analysis, a meaningful evaluation of the course is to be created.

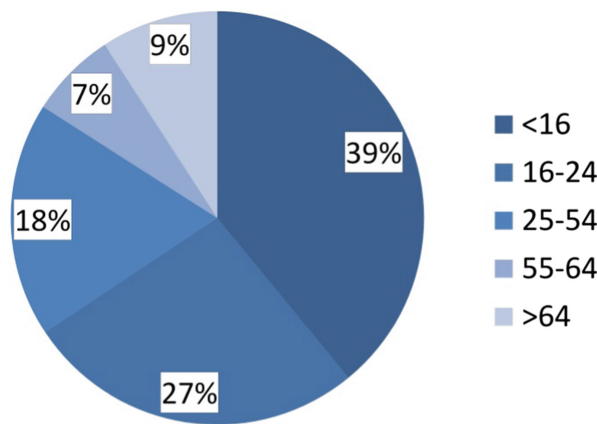
With the conducted interviews and the questionnaire, information concerning the category "course evaluation" was gathered, which contains six subcategories: course structure, presentation, content, time management of the courses, expert knowledge of the instructors and topic relevance for the participants.

The following subchapter showcases the sample of the questionnaire.

### 3.2 Description of the Sample

During the "Get Online Week" 2018 in Dortmund, 417 participants took part within at least one of the 43 courses, from which 338 filled out a questionnaire. The gender distribution of the sample proved to be balanced with 52.7% women, 46.7% men and 0.6% alternative genders (4 participants did not provide information on their gender).

However, the distribution of disabilities and age show some conspicuities: Nearly half of the participants had an disability (49.2%) – with the most prevalent kind being speed impediment with 59 participants - and the average age was 28 years with the age group “younger than 16” being the biggest (see Fig. 1). As the concepts of the courses offered during the “GOW” aimed to reach specific target groups and the involved institutions also had distinct clientele, this distribution was however also expectable. Also, a comparison between the 5 courses shows, that the characteristics of the participants strongly vary. For example, the participants of the course on tablets, smartphones and computers had an average age of 60.7 years – as this course specifically addressed seniors. Low proportions of people with a disability were e.g. reached in the courses on Sexual Education (35%) and “Job and Apartment Search online” (36.8%).



**Fig. 1.** Distribution of participants (own illustration). N = 338, missing values = 4

The young age of the participants may also explain why – despite the aim of the event to reach “onliners” and “offliners” – the prevalence of internet use was relatively high among them: The results showed that 97.6% of them already used the internet before and only 8 participants (2.4%) stated that they had never used the internet so far – while the share of offliners within the German population lies at 19% [13]. 68% of the surveyed people use the internet several times a day (see Fig. 2).

In addition to the frequency of internet use, the spread of various digital devices also reflects a clear trend. Among the participants, the smartphone is a permanent fixture at 87.9% and is – like on federal level with 70% [13] – the most common terminal. The percentage also has risen by over 10% compared to the participants of the “GOW” 2017 [29]. The mobile devices laptop (55.9%) and tablet (49.4%) followed up, while only 41.7% of the participants used a classical computer. Like on federal level, where also only 47% use such a device [13], the use of digital media seems to be increasingly tied to its independence of time and place. Additionally, users are also more and more using more than one device – in Germany, in average than two terminals per person [13]. Considering the high frequencies of the single devices, this

obviously also applies to the sample. Regarding the reasons for using the internet, for most of the participants (73.1%), communications seems to be an important motivation just like the use of digital media for entertainment purposes (72.8%). The connected motivation “playing online games” applies to just 41.4% of the participants, but the proportion has almost doubled since 2015, when 26.6% of the course participants indicated the use of online games. In addition to the Internet applications already listed, searching for information online is another key aspect of using the internet. 79.3% use the internet to access important information. Based on the described internet use purposes, the participants have not only assigned themselves to one category. This is perfectly legitimate and serves to give a comprehensive picture of the range of activities they carry out via the internet. Many students have indicated three (36.7%) or even four ways of using the Internet (25.1%). Taking into account the information provided, it can be emphasized that Internet usage behavior has not changed significantly compared to the collected data of the previous years. Nevertheless, it can be seen that the digital devices, which were frequently used before, have continued to gain in importance.

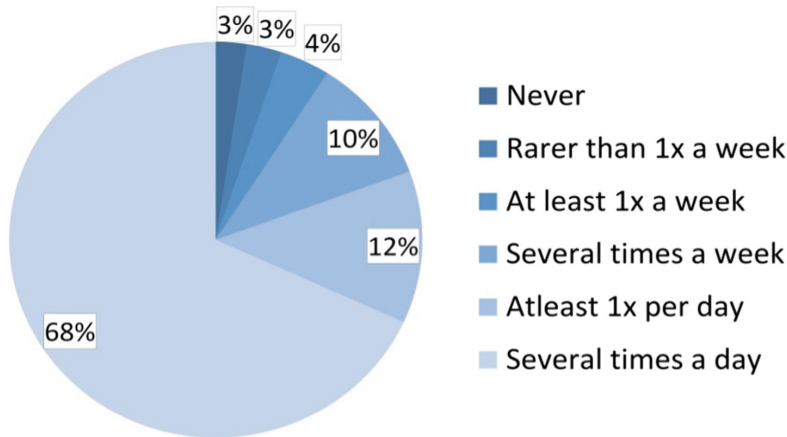


Fig. 2. Frequency of internet usage per week (own illustration). N = 338, missing values = 8

## 4 Evaluation Results

Within the following chapters, the evaluated data from the questionnaire and the conducted interviews will be assigned to the three research questions and an evaluation of the “Get Online Week” will be carried out on this basis.

### 4.1 Sustainability and Increase of Competences

An important part of the questionnaire dealt with the increase of digital competences for the participants through the contents of the different courses. Herewith the research question “How can digital competences be improved sustainably by participating in a course during the ‘Get Online Week’?” will be subsequently answered within the next



paragraph. Four different statements were part of the questionnaire before and after the course and their answers were analyzed depending on their change. The statements were “I know how to use a mobile terminal”, “I am able to search information on the web”, “I know how to upload and share content on social media” and “I trust myself with assessing if the information I find on the web are reliable and correct”. We speak of an increase in competences if the average of the answers to all four of these statements is positive. For 46.2% of the participants it can be said that the reported level of competences have increased after participating in the course (see Table 1). For 33.1% of the participants no change was registered and for 20.7% a lower level of competences was detected. That can be explained by the fact that the participants might have changed their view on their own competences during the course by finding out that they know less than they thought before, so their self-assessment decreased after the course compared to the one at the beginning of the course. People with disabilities seem to have a bigger profit concerning the improvement of their competences. 58.8% of the participants with a disability stated a higher level of competences than they did before. Regarding age, the most positive result can be found in the category of people older than 64 years, where for 85.0% an increase of the perceived competences were captured, followed by people aged 55 to 64 years with 70.0%. This corresponds with the high increase of competences among the predominantly senior participants of the course “Lead-in to the media use of tablets, smartphones and computers” (63-. A high increase of competences could also be detected at the course “What does my child do on the internet? The digital world easily explained.” with a rate of 56.1%. After the course, it was additionally asked, if the participants feel like their amount of knowledge is higher after the course – 38.9% and 30.1% rather agreed to this statement, while only around 9% fully or rather disagreed. Again, the courses on child digital media use and digital devices were rated particularly successful in this regard (with 52.6% and 49.1% fully agreeing).

**Table 1.** Change in competences divided in categories of age (own table).

Age	Increase	Neutral	Loss	Total
Under 16	44.0% (51)	29.3% (34)	26.7% (31)	38.8% (116)
16 to 24	40.0% (34)	40.0% (34)	20.0% (17)	28.4% (85)
25 to 54	37.9% (22)	44.8% (26)	17.2% (10)	19.4% (58)
55 to 64	70.0% (14)	20.0% (4)	10.0% (2)	6.7% (20)
Over 64	85.0% (17)	5.0% (1)	10.0% (2)	6.7% (20)
Total	46.2% (138)	33.1% (99)	20.7% (62)	100.0% (299)

Regarding the sustainability of the courses, a high interest to follow up with the covered content after course is crucial, as the courses are designed to be only an incentive for further activities. 80.7% of the participants feel motivated to follow up the covered contents. 63.5% stated additionally that the course was a suggestion to think about and discuss the topic critically afterwards. Female participants feel a little more motivated (85.5%) compared to male participants (75.2%). A similar result can be found in the second statement. 70.1% of the female participants and 55.7% of the male

participants feel compelled to think about the topic critically afterwards. Also, older people agreed surprisingly strong to these standings to these statements.

The high increase of the participants' competences as well as their interest in the contents could be validated by the interviewed experts, from whom most stated that the courses encouraged the participants to deal with the course topics, either in group discussions or on their own. The experts think that making the access to different digital topics possible for the participants can contribute to their digital inclusion. The processed topics of the course "Job and Apartment Search online" tempted the participants to do some research on the internet by themselves, like one expert stated: "It was searched for jobs and possibilities for an internship. They did that without any guidance and dealt with it on their own without asking me before."<sup>1</sup> The cooperating institutions speak of an increase in competences as a noticeable effect of the courses and some want to continue the course in their institution. For example "the cybermobbing-course [...] became part of the German-lessons [...]" in one of the schools and the course about sexual education offered the teachers further inspiration for the instructional design of their biology lessons. By that we can identify a good base for a sustainable uptake of the courses and their content.

## 4.2 Satisfaction of Participants and Cooperating Institutions

Within the following section, the results of both the questionnaires and expert interviews on the topic of satisfaction of the participants and institutions are discussed. Herewith the research question "How can the satisfaction of all participants and institutions be achieved?" will be subsequently answered within the next paragraph. First, the satisfaction of the institutions will be evaluated on the basis of the expert interviews. The contact day, which took place in December 2017, was rated as good and informative by all experts both on the organizational as well as the executional level. The content and the structure of the "GOW" had become clear only through the contact day: "[...] we were informed very comprehensively. Especially the presentation of the course offers by the course instructors was helpful" one expert reported. Some interviewees even stated that they would not have booked any of the courses without the contact day. Insofar, the contact day can be described as an indispensable component to attract participating institutions for the courses. The interviews also indicate that almost all institutions selected the courses according to their clientele. For example, the participating schools did not conduct the course concerning the topic of how to use a smartphone, but rather courses that already require an understanding of media literacy. It also shows, that digital competences already occur in elementary schools. Especially students "[...] are all trained online, that means [...] [they are] represented on Facebook, on Instagram [...]". In addition, all partner organizations were especially interested in the clarification of the opportunities and dangers that the internet, but also mobile devices imply.

The courses were perceived as well and professionally designed by the interviewees. Especially the practical oriented building blocks were highly valued. One

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<sup>1</sup> The interviews were conducted in German. For this publication, required quotation were translated into English.

institution e.g. positively mentioned the opportunity to try out things, as the participants “simply could continue using the electronic devices on their own”. Another positive aspect was the presentation of various websites and additional materials. The contents of the handouts e.g. were highly valued as well as the possibility to use these materials in the future to further deal with the course contents. That the courses lasted mainly about two hours, was also perceived as beneficial, mainly because the concentration of the participants was not strained. Despite that, the instructors often described a “lack of time” as their main struggle, which led to cuts in the content, although none of the participants and experts seemed to be affected. In terms of content, all of the courses were perceived positively by the interviewed experts of the participating institutions. In addition to the successful course concepts, the content was seen as detailed and appealing. In some courses however, the imparting of information did not always proceed smoothly: In one course, the high diversity and abundance of information, which could have been supplemented by active methods, was criticized. And in yet another course, most participants were able to grasp the overall context, but “the smaller details were not always understood”. Some institutions also mentioned, that handouts should have been distributed at an earlier stage and criticized the required media literacy. This however could, as stated by interviewers, be based on the respective claim or special need of the participants - which suggests, that – despite a convincing course concept – a special adjustment to the specific needs of the clients is crucial. To detect these needs, target groups have to be pre-examined carefully, for example through an internship.

The instructors were – beneath the (positively mentioned) intensive preparation of the course, a “reasonable group size” and a “great interest in the topic” – one of the most frequently mentioned aspects of the courses. Especially, the possibility of (spontaneous) exchange within a group setting was mentioned favorably. In addition, the personality and warmth of all instructors, who contributed to a pleasant course climate and partly also to the concentration and motivation of the participants, were valued. Expertise, theoretical competence as well as the imparting of theoretical knowledge of the instructors were rated as adequate and extensive and it was emphasized that answers to (current) questions were always given immediately. Most interviewees stated, that the instructors had “pleasure in communicating the content” and “thanks to the good preparation” “flexible, individual and spontaneous work within the courses” could easily be implemented. An example for this could also be found at the penal institution, where the instructors used their professionalism and flexibility to work through the prevailing internet-free space, which was especially appreciated.

More than half of the interviewees stated, that they had already participated in the “GOW” one or more times, thus it had become an integral part of their annual planning. The annually participating institutions thus form an important cornerstone when it comes to acquiring participants for the “GOW”. All eleven interviewed cooperation partners stated that they would like to attend the “GOW” again next year. The conduction of the courses by young students provided a good source of inspiration for all employees and supervisors within the participating institutions for their own offers and teaching designs. However, the course content would be decisive for some cooperation partners to select a course and annually participate within the “GOW”. Of eleven interviewees, five gave an overall positive feedback. Commitment devotion as well as the personal and professional

competences of the course instructors were highly. Furthermore, it was appreciated, that the courses were carried out at the participating institutions. While comparing the interviews with the course reflections, which were written down by the instructors themselves to express their personal feeling on the successful execution of the “GOW”, it can be said that both success and criticisms were often perceived by both sides. From this it can be concluded that the course ideas, the associated concepts and implementation contributed to the highest satisfaction of all participating institutions, the participants as well as instructors and thus to a successful “GOW”.

Within the questionnaire, the participants were asked to evaluate themselves with the aid of an evaluation tool called “target”. The collected data can be used to evaluate both the content and design of the courses as well as the impact of the course instructors. The “target” was embedded within the questionnaire and all participants were given eight different statements which they could rate on a 5-level scale from “I disagree” to “I agree”. Following, the collected data from the questionnaire, which was completed by 338 participants, will be presented to evaluate the satisfaction of the participants.

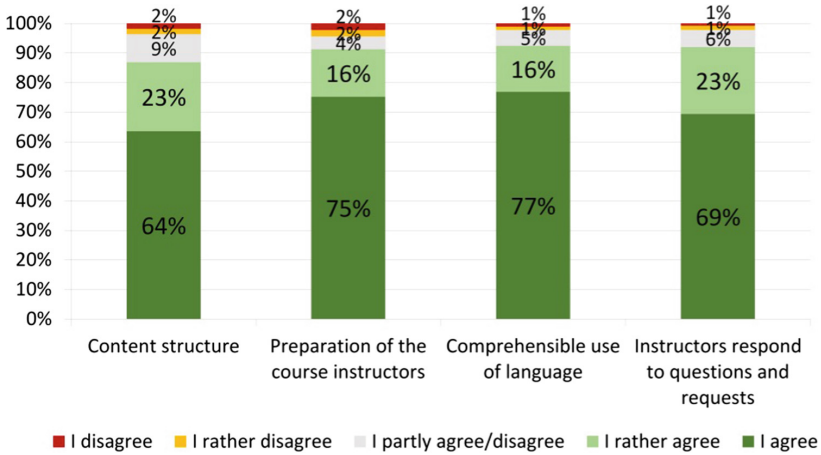


Fig. 3. Target evaluation method part 1 (own illustration). N = 274

All eight items received predominantly positive ratings (see Figs. 3 and 4). This applies especially to the assessment of lingual comprehensibility of the instructors (76.8% fully approval), the preparation of the courses (75.2%) as well as the instructors responds to questions and requests (69.3%). Also, the content structure was well received (63.5% fully approval). The amount of full disapproval was accordingly low with rates ranging from 0.7 to 2.2%.

The participants were the least satisfied with the personal relevance of the course contents, so that merely 49.8% fully agreed with them. While still a large majority fully or partly agreed with the statement (76%) and nearly all respondents (95%) assumed at least a neutral position, a more detailed analysis shows, that the disapproval rates were in some courses particularly high, e.g. in the course “Sexual Education with help of Digital Media” with 10.3% of the participants fully disagreeing and 2.6% rather

disagreeing. When stated that the course was designed in an interesting way and that the content was comprehensively communicated, 56.9% and 63.4% of the participants fully agreed. The last statement focused on whether the practical examples helped to better understand the course content. Most of the participants (57.5%) fully agreed, while merely 0.7% disagreed.

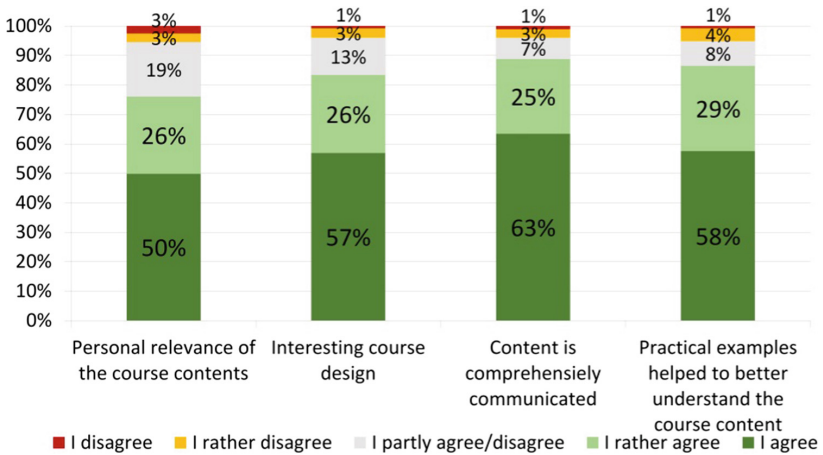


Fig. 4. Target evaluation method part 2 (own illustration).

In addition to the “target” method, the participants were asked to give a statement on what they liked the most and what they liked the least about the individual courses they attended. The participants mainly noted the practical aspects of the courses as positive, for example, the topics of tablet and mobile phone use as well as games and videos. Furthermore, the detailed information transfer as well as the intensive response to questions and requests from the instructors were rated positively by the participants. Lastly, education about different topics such as social media and sexual education was named positively. Within the negative aspects, the participants mainly noted that all of the courses seemed short on time and that they would appreciate a follow-up course to intensify the course contents. The majority of the participants had nothing to complain about and stated that they are all in all satisfied. A few have noted critically that it was too long, as they already knew a lot and that they did not like the research on the computer.

All in all, most of the participants were satisfied and therefore the conduction of the “GOW” can be rated as highly successful.

## 5 Conclusion

Within this chapter, the decisive results that have contributed to answering the research questions are compiled.

The first research question deals with the interest of the participants to integrate the treated topics into their everyday life. According to the project group, the decisive factor for the further use of the course contents was both the critical analysis of the course participants with the topics dealt with and their motivation to continue to deal with them. The extent to which the courses were able to call for continuous integration of the course content into everyday life could be determined as a quantitative methodological instrument, especially through the second part of the questionnaire. This proves that 64% of all respondents stated that the course stimulates a critical examination of the treated one. In addition, more than a third of the participants stated that they were motivated to deal with the course content themselves.

On the basis of these results, it can be stated that the courses had an effect not only within the course implementation, but also beyond. The reason for this is the interest and motivation of the course participants to continue to deal with the course contents, so that they could also continue to be relevant in everyday life.

Regardless of the fact that the interest of the participants also extends beyond the course, the question arises in the course of how it can be possible to sustainably increase media competence by participating in "GOW". Answers to this question were provided above all by the questionnaire as a quantitative method instrument. This proves that almost half of the participants gained competence. At the same time, however, more than 20% of those surveyed rated their media competence after the courses lower than they did before the courses, while the remaining participants perceived their media competence as unchanged. Which factors are responsible for the "loss of competence" cannot be fully clarified. However, it is possible that the awareness of the participants was trained to the effect that they have experienced that their media competence has not been developed to the extent that they initially assumed. According to this it can be assumed that the course participants had already assessed their knowledge and competences disproportionately high before the course was held, but noticed during the course that this assessment did not correspond to reality. Nevertheless, the increase in competence achieved is a benefit for all parties involved. As proven by the qualitative method instrument, the increase in competence mentioned above lies in the creation of points of contact and a professional course design.

The third research question dealt with the satisfaction of all persons and institutions involved in "GOW". Both qualitative and quantitative methods showed that the vast majority were extremely satisfied with the process. Thus 80% gave a positive rating. The satisfaction of the cooperation partners is reflected in the fact that all of the respondents would participate again and materials were also exchanged. The decisive factor for the 80% satisfaction of the respondents and participating institutions seemed to be the contact day in December 2017. A positive aspect is that it is possible to get an overview of the campaign and current course topics. In addition, it is also possible to get a first impression of the course leaders. One of our cooperation partners was so convinced of the contact day that he told us that without it he would not have taken part in the "GOW". The flexibility and willingness of the course leaders to compromise with target groups, as well as the main topics and premises, had also contributed to the satisfaction of the participants. All this attracted the positive attention of the cooperation partners. In order to keep the campaign and the courses and their content up to date, an analysis of the digitization trend at both international and national level is

required prior to the course conceptualization. This makes it easy to adapt the course topics to the current situation of the company.

Compared to the 2017 project group, the project group has therefore focused primarily on serving online users. This corresponds to the progressive digitization trend. Thus 87% of Germans are online [13]. With regard to course design, “[...] easy handling combined with target-group-specific topics and applications from everyday life can increase the attractiveness of the Internet as a medium for the majority of offliners” [13].

## 6 Recommendation

Within this last section, various recommendations based on the experience gathered during the “GOW”, which contribute to the successful implementation of such an intervention, will be presented. The respective recommendations are subdivided into the phases of the preparation, implementation and evaluation.

### 6.1 Preparation

At the beginning, it is essential to choose which topic content should be discussed fundamentally within the courses or webinars. In order to select the topics, it is useful to examine the current societal situation with regard to the digital transformation as well as the current topics and interests of the participating institutions and organizations and to define the main topics based on the findings. Currently, a topic like e.g. cybersecurity is more important as the basic use of media, which becomes increasingly outdated due to the progressive development towards a digital society. Furthermore, it should be discussed which topics are of interest to the participants and which topics have already been discussed in the various institutions in order to avoid repetition. To ensure a successful completion, the key topics also have to be adjusted to the knowledge and interests of the instructors. Key topics have to be determined previously by an intensive examination of the course contents. If the topics are to be adapted to the interests of the students and the wishes and expectations of the institutions, a previous internship is necessary. Thus, on site the participants can be acquainted and an overview of the available rooms and resources can be made. Afterwards it can be decided, whether the course can be performed at the facility or if it may need to be moved to an alternative location. An internship has also the advantage of adapting the course content to the different target groups and their strengths and weaknesses. Thus, the problem to overwhelm the participants with the course content, the problem that the topic content is of no relevance to the participants and that the duration of the attention span does not correspond with the time structure can be solved. This leads to a successful intervention and therefore to an overall satisfaction of all participants, as everyone gets the chance to fully participate and increase their competences. Another important step during the preparation is to acquire cooperation partners for your own course concept as well as institutions in which the courses can be held. The project group has therefore decided to invite different institutions and organizations within the region to a so-called contact day. During an afternoon, the individual course contents were presented and the visitors had the opportunity to talk with the instructors about the

contents and to exchange their own wishes and expectations. Based on the experiences of this year it can be said, that it makes sense to design such a day to attract a large number of cooperation partners and thus to acquire a heterogeneous group of participants. It was proved as helpful to hand out flyers with the most important information about the individual courses, which the institution could further use to acquire participants.

## 6.2 Implementation

Once the cooperation partners and the topic content of the course have been determined, the course concept can be developed and thus the course content be finalized. It is easier to work with a homogeneous audience within the course. This ensures that all participants can follow the course content equally. Still, most of the groups are very heterogeneous and a one hundred percent adjustment to the respective target group cannot succeed. Therefore, when creating the concept, it is essential to keep in mind to focus on a rough framework rather than a detailed plan. This allows both alternative processes during implementation and a high degree of flexibility which leads to being able to respond to all eventualities. All arrangements made between the course instructors and all participating institutions during the course design should be recorded and communicated both verbally and in writing. In order to achieve a successful implementation, it is necessary to constantly exchange information in order to meet the expectations of all those involved. Based on the gathered experience, it can be said that an optimal group size consists of ten participants. However, the size of the group should always be adapted to the individual needs of the participants as well as to the context of the institution – in a school an entire class can attend the course, but within a penal institution it was only possible to work with a group of six participants, based on their current situation. Nevertheless, the size of the group should always be such that individual questions can be addressed in order to give the participants the chance to extend their competencies. It has been found that this can best be achieved if the courses are run by two course instructors. Thus, the instructors can support each other and give individual attention to the participants during the practical exercises and answer questions which may arise. Within this year's "GOW", a time frame of 90–120 min was chosen, which proved to be sufficient for a short intervention. However, depending on the course content it may be advisable to extend or shorten the course duration to the individual resources of the participants so that all relevant information can be conveyed. If during the execution, it should prove that it is not possible to provide all relevant information within the set time frame, the content of the course should be shortened. An extension of the course to convey all information should be avoided in order not to strain the attention of the participants. Hereby, the importance to be able to act spontaneously and the planning of the course with a rough framework becomes clearer. Therefore, a variety of different methods should be used, both on a practical and an informational level. Conducting the courses can cost the instructors a lot of energy. Therefore, care should be taken not to perform too many course interventions in one day. The project group has determined that a maximum of three courses a day is possible – summing up to six hours of intervention. To lighten the course a bit and consolidate the course content, a variety of different practice exercises should be



implemented. In this way, all participants have the opportunity to implement the course contents correctly and to examine whether they still have questions or require more intensive help. If it is planned to reach disabled people with the courses, the courses should be created as barrier-free as possible and address many senses. At the end of the course – or at the beginning- different visual aids and handouts can be given to the participants, which provide them the opportunity to engage with the content beyond the courses respectively to access all information gathered during the course when questions or problems arise afterwards. Furthermore, various teaching materials or topic-specific additions can be forwarded to the institutions, so that the course contents can be further discussed. This contributes above all to the sustainability of the short interventions.

### **6.3 Evaluation**

In the context of the evaluation of the individual course concepts, it has been found useful to link qualitative and quantitative surveys. Thus, a wide range of information can be obtained, which promote the subsequent evaluation and further development of the concepts and the course contents. Furthermore, the project group decided to use the same questionnaire to evaluate all courses. To gain more specific insights, e.g. regarding course content and gain in competences, it could be beneficial to develop individual course questionnaires in future inquiries. Retrospectively, however, it turned out that it would have been better to adapt the questionnaire to the individual courses in a specific and individual way. Within the qualitative survey it was decided to conduct a guideline interview with representatives of the participating institutions. The aim was to be able to make statements on the sustainability of the course content based on the assessment of the educational staff and their observations. The project group decided against an observation while conducting the courses, as in this way the facilitators could better focus on the participants and would have been overwhelmed with simultaneously observing and documenting the specific situations. As mentioned earlier, the survey has identified three different objectives. On the one hand the goal was to examine the extent to which the competencies of the participants were increased and on the other hand to examine how high the achieved sustainability of the course interventions could be assessed. Another goal was to evaluate the satisfaction of all the participants. The questionnaire as a quantitative survey method has proven to be effective for the collection of sociodemographic data as well as to give an overview of the participants' heterogeneity and media usage behavior. In addition, the questionnaire provided information on competence acquisition and participant satisfaction. The interview was used to review the sustainability and to query the satisfaction of the participating institutions. Furthermore, while conducting the interview the possibility arose to specifically evaluate the different courses and course concepts which weren't possible with solely the questionnaire. Herewith it can also be seen that the two survey methods complement each other well. In addition, it can be said, that it has proved to be most effective to use different measurement times. The project group decided to run the questionnaire directly during the "GOW" at the beginning and end of the course. Thus, it was possible to avoid the problem that some institutions and participants opted not to participate in the questionnaire or that the time of the survey was too long ago and the participants were unable to answer the questions. The guided interview was deliberately carried out a few weeks after the "GOW" to examine

the sustainability. The representatives of the institutions were asked, for example, to what extent the participants dealt with the topics beyond the courses content. In conclusion it can be stated that in order to achieve an even greater success in organizing an event like the “GOW”, in future there should be a closer exchange between the instructors and the participating institutions as well as a better reconciliation of the course contents and the specific needs of the participants. Alternatively, the courses could also be planned in such a way that they address only one specific target group and thus be able to respond even more explicitly to their need. This would be particularly advantageous and interesting for institutions for mentally ill people.

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