



# Digital language and communication training for EU scientists

KA220-HED - Cooperation partnerships in higher education

Project number 2022-1-ES01-KA220-HED-000086749

### A report on digital science communication practices within European Higher Education: identifying practices, attitudes and training needs.

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### Introduction

Science communication has evolved rapidly in recent years. Researchers continue to publish research articles and communicate their results to their peers in their global scientific discourse community via conference presentations. However, traditional genres are evolving and digital genres have emerged such as video abstracts, graphical abstracts, blogs, academic social networks and research-sharing platforms requiring multimodal skills and effective communication strategies. There is now a rich literature on these developments and on specific genres. For example, Luzon & Perez-Llantada (2019) have discussed the increasing diversification of genres, Belcher (2023) has focused on their communicative purpose and the implications for genre theory and pedagogy. Rowley-Jolivet and Carter Thomas (2023) have also looked at how dissemination of research on the digital medium poses challenges for genre theory, for example, in relation to audience and identity. Recent studies have investigated the linguistic and multimodal features of specific genres, for example video methods articles (Hafner, 2018) and tweets (Luzon, 2023, Tardy 2023) *inter alia*.

In addition, researchers are also increasingly encouraged to share their science with the wider public as the democratisation of science becomes a key societal priority. A previous quantitative study by the *Campus Iberus* consortium and its international partners examined the attitudes of researchers to various genres and the choices they make when communicating their findings (Perez-Llantada et al (2022), Birch-Becaas et al (2023)). Such knowledge can contribute to a better understanding of the training needs of our Masters and PhD students as well as more experienced researchers.

The aim of the <u>DILAN</u> Erasmus+ project (Digital language and communication training for EU scientists) is to develop digital resources to better enable scientists to communicate their research not only to their peers but also to multidisciplinary and wider, non-specialist audiences on digital media.

During the first year of the project, we carried out a study to obtain qualitative data on researchers' communication practices across four countries: France, Norway, Romania,

Spain<sup>1</sup>. Interviews and focus groups were conducted to obtain qualitative data on the scientists' digital science communication practices and their uptake of and attitudes towards these new affordances. The aims were three-fold:

- to identify training needs to inform the design of an online training course to go some way to helping both STEMM and non-STEMM scientists to better communicate their science to their peers and to society
- to create video testimonials of female STEMM scientists discussing their communication practices
- and to provide a report on current practice, attitudes and needs.

In this report, we highlight communication practices across different academic contexts. The aim is to provide a snapshot of what the researchers actually do when sharing their research results with their peers and also wider lay audiences and to share these good practices. We will also investigate the barriers encountered in the process of sharing research results and in the uptake of digital genres and make recommendations for enhancing researchers' ability to communicate with diversified audiences.

#### **Population sample**

The interviewees (N = 60) were academics working in a wide variety of fields, such as engineering (chemical and civil engineering), biology, medical sciences, mathematics and physics, public health (the full list of academic disciplines is given in Figure 1). The most represented fields were computer science, physics and public health. The participants were 58% female, 42% male, and no other genders were reported. The majority (63%) were senior researchers. These participants were active researchers who publish on a regular basis and are involved in disseminating their research findings to their peers, being at the same time aware of the importance of communicating research to a wider general public. Approximately 10 % of our participant cohort were more junior researchers and 25% were PhD candidates. This gave us an overview of different researchers, from different fields and at different points in their careers.

<sup>&</sup>lt;sup>1</sup> The <u>DILAN</u> project partners are Campus Iberus, Spain, University of Clermont Auvergne, France, University of Bordeaux, France, OsloMet, Norway, Academia de Studii Economice din Bucuresti, Romania, Universitatea Ovidius, Romania din Constanta, Romania, Fundacion Ibercivis, Spain, Kampal Data Solutions, Spain.



Figure 1 Participant research fields

The interviewed participants were representative of an international body of academics, and were not necessarily from the local region where we interviewed them. They did nevertheless all speak the local national language of the universities where they were employed.

The first languages spoken by our participant cohort were as shown in Figure 2. A first language was asked for in the interview, but the reader must bear in mind that a first language can be one or many first languages for bilingual and multilingual speakers. Details of the other languages used by our participants for research, and outreach for example, will be addressed in the Language Use section.



Figure 2 Participants' first languages

### 1. Communicating research findings to peers.

For all of the interviewees, research dissemination within the scientific community is achieved through the publication of scientific articles in peer-reviewed journals, and presentations or posters delivered at conferences, symposia and workshops. For early career researchers or PhD students, participation in conferences and posters are an important way to build up a network within the scientific community and gain visibility.

#### 1.1. The research article

Overall, in this sample population, research articles are still perceived as the basis of the researcher's work and the most important form of communicating research results to peers. The publication of peer-reviewed research articles in high impact factor journals is seen as fundamental in a researcher's activity as it confers credibility to results and visibility within the research community.

"Research articles are still perceived as the foundation of the researcher's work as publishing confers credibility" (Clermont, France)<sup>2</sup>.

"In general, research articles were considered to be the most important for disseminating research results" (Bucharest, Romania).

"All our participants favoured and privileged the traditional means of research communication, such as the research article and, depending on the discipline, the conference paper" (OslotMet, Norway).

"The main duty as a researcher is to publish as many articles as possible and to the highest standard they can achieve" (Ovidius, Romania).

Peer reviewed research is thus associated with academic credibility as well as with promotion opportunities in local and national contexts.

"There is a pressure to publish as reflected in institutional and national assessment and promotion policies" (Campus Iberus, Spain).

 $<sup>^{2}</sup>$  The citations provided are taken from the reports of the six DILAN Higher Education institutions, which each gave an overview of the results of the 10 interviewees in their local area.

This is supported by the literature as Hyland (2015) has described academic publication as an enormous industry which dominates the professional lives of academics worldwide resulting in knowledge construction, assessment of academics and funding, a "master narrative" which remains pre-eminent. West *et al* (2020) also claim that "peer review rightly remains the fundamental tenet" but at the same time they encourage new forms of promoting, disseminating and accessing work. They point to the vast volume of medical research which is published and presented but the small proportion which is disseminated, claiming that it is the researcher's role to facilitate access and implementation of research findings.

There is, in our study, a general preference for the so-called "traditional" means of science dissemination in high impact factor journals (indexed for example in, *Thompson Reuters/Web of Science and ESCI (Emerging Sources Citation Index))* as well as Open Access articles in other international databases. The researchers emphasised the importance of making publications accessible. This may also be encouraged by the institution although a researcher commented that *"journal prestige may take precedence over Open Access (Ovidius, Romania)"*. To sum up, as a Romanian researcher commented

"Traditional research dissemination is what is expected by the university but dissemination to wider audiences may be becoming more important" (Ovidius, Romania).

#### 1.2. Research-sharing platforms and academic social media

The researchers also emphasised the importance of making their publications accessible on research-sharing platforms such as *ResearchGate*, which was used by 85 % of the participants and *Google Scholar* (65%). Research articles are also shared more widely with peers through institutional repositories, websites (68%), and open archives whose use is encouraged by the institution. Academic or professional social media (such as *LinkedIn*, used by 20%) are also used to share the publications more widely. Researchers are therefore using new platforms and modes of access to disseminate their work, get feedback and promote research as discussed by Hyland (2015).

#### 1.3. Digital genres

Digital genres can be used to promote research work and increase accessibility and also to follow research activity and impact. Hyland (2015) gives the examples of graphical abstracts where a concise visual summary helps readers identify the relevance of the study and its takehome message and blogs which may showcase the impact of a study and lead to more views and downloads. It has also been shown that information which is represented graphically is more easily understood and is more memorable than text (West *et al* 2020). Such elements are more likely to be shared on social media and lead to more downloads (West et al 2020). In our study, infographics were the most frequently used digital genre (see Figure 3). This is most likely because the researchers are more familiar with this visual genre and it is close to the poster format. Graphical abstracts, video abstracts, podcasts and videocasts were also used but some interviewees felt that such forms of communication were too time-consuming or explained that they were not at ease with video-editing for example. Graphical abstracts and video abstracts were also perceived to be more appropriate for certain research fields than others and were only used if they were a requirement of the journal. As seen above, there is a preference for traditional dissemination and a lack of necessity for becoming familiar with such genres. Furthermore, in most contexts, the researchers were not aware of an institutional policy which encourages this form of communication.

"The use of digital science communication within the general group is quite rudimentary and typically haphazard" (OlsoMet).

As of yet, there is no coherent or consistent strategy or agenda for digital communication of science (OlsoMet).



Figure 3 Digital genres used by the participants for research purposes

At the same time, some researchers expressed an interest in being trained to use these tools, for example at OsloMet, Norway. Certain genres were cited as a means of reaching policymakers who may not have time to read original research articles. Many fields are multidisciplinary and researchers acknowledged that they communicate not only to other specialists in their field but also to colleagues from other disciplines. Digital genres can therefore by a way to adapt their message for this wider audience. However, others felt it was not their job as researchers to produce such genres. In some institutions, researchers may have technical support but many would have to produce them themselves.

### 2. Outreach

All researchers stressed the importance of outreach. By outreach, we understand communication about scientific work outside of academia to the public, through means of communication which the general public has access to. Even if the researchers were not actively involved, they were generally seeking to develop their communication skills or improve their outreach strategies.

#### 2.1. Social media<sup>3</sup>

<sup>&</sup>lt;sup>3</sup> DILAN does not wish to promote or advocate for any particular social media tool that the participants of this study mention. We use the names of social media tools that were cited to us by our participants to assess their uses, rather than make any judgement about the quality of these tools.

The use of social media by academics is a recognised tool for disseminating research output to colleagues and also for outreach purposes, lessening the distinction between researcher and lay public (Hyland 2015). By social media here we refer to platforms which include a degree of interaction with other users, for example, those which include 'comments' or 'like' options (*X*, *Instagram*, *Linkedin*, *TikTok*). These interactive 'social' media, can be differentiated from other types of academic social media such as *ResearchGate*, *Google Scholar* or *ORCID* which act as depositories and have been mentioned above.

With regard to communicating research findings on social media networks, 35% of the interviewees used X (formerly known as Twitter), 28% used Facebook, 7% used Instagram, and 3% used TikTok (see Figure 4). DILAN is aware that social media use varies according to trends which can evolve very quickly, making one type of social media redundant, to be suddenly replaced by another in its place. Research has also shown that social media usage also depends on age. Different social media platforms appear to appeal to different age groups. Fennell and Miller (2019) found that students and younger alumni prefer Instagram and Twitter, whereas older students and alumni prefer Facebook.



Figure 4 social media used by the participants (shown in percentages)

Professional accounts on social media are sometimes set up to disseminate project results. In general, junior researchers seemed to be more active on social media platforms than more senior researchers.

#### 2.2. Research as a social mission

For some researchers, for example those working in the field of public health, research is seen as "a social mission" which can be used to influence policy and practice (Bordeaux, France). Many researchers interviewed felt that their work should help society and one went as far to say that

> "Social responsibility comes first despite the pressure to publish" (Campus Iberus, Spain).

Dissemination gives scientists the opportunity to tell citizens about their research:

"To bring science closer to society and to acculturate citizenship" (Campus Iberus, Spain).

When working on specific projects there may be a team devoted to dissemination and demonstrating the societal impact of the research for example through the development of tools/apps which can be used by the lay public. A Romanian researcher emphasized

"The need for society to understand why research is important, why it is publicly funded and the impact it has on people's lives (Bucharest, Romania).

University funding also leads to the desire to *"give something back"* (Bordeaux, France) and to contribute to the democratization of science and the development of scientific literacy.

#### 2.3. Media for communicating with the general public

Researchers cited various media that they used to communicate with the general public such as interviews with the local written press (30%), local radio (22%) or TV (15%), podcasts (13%) and articles in online outreach journals such as *The Conversation*. In some cases, their institution may encourage these forms of communication for example via writing workshops in order to adapt to this audience (Bordeaux, France). However, participation in podcasts or written press articles is often in response to invitations and not on the researcher's initiative. Participation in such media is also perceived to be discipline-dependent for example, media enquiries included subjects such as Covid-19 vaccination (Bordeaux, France), explaining unusual meteorological events (Clermont, France).

#### 2.4. Other forms of outreach

All researchers stressed the importance of outreach and 62% reported practising outreach themselves. Even if they were not actively involved, they were generally seeking to develop their communication skills or improve their outreach strategies. In addition to media interviews, certain researchers were involved with other activities to take their research out into the community and reach a wider audience.

#### "Dissemination to non-specialist and multidisciplinary audiences was seen as useful by the researchers" (Bucharest, Romania).

Certain institutions highlight the need to create a dialogue between science and society especially on environmental and social challenges through missions such as

"Science with and for Society" (Bordeaux, France).

There are also scientific culture units "whose aim is to give visibility to the research carried out in the institution" (Campus Iberus, Spain).

Links can be created with outside structures such as scientific culture centres. In these contexts, researchers can participate in workshops, public talks and events such as science festivals or "The night of Science" (Bordeaux, France), "researcher's night", "pint of science", "day of the dark matter" and hands-on activities (Campus Iberus, Spain).

This may be a way to avoid misinterpretation of scientific facts and promote citizens' scientific literacy. For example, one researcher cites collaborating with an artist to stage a performance on time to help people understand human and geological timescales (Clermont, France) and emphasizes that research should not be "the privilege of an elite". She emphasizes *"the role of researchers in sustaining public curiosity"* and believes that *"outreach is crucial due to science's everyday relevance" (Clermont, France)*. However, once again, involvement in this type of activity was seen to be dependent on the relevance of the research field and topic to the general public. For instance, experts in volcanology are more in demand than mathematicians whose research communication requires a certain level of scientific knowledge to be accessible to non-specialists.

"Maths is more difficult to disseminate" (Campus Iberus, Spain) "Chemical engineering is not of interest to the general public" (Bucharest, Romania)

Communicating research to the general public was therefore not always embedded in the researchers' everyday practices and there may be a gap between the recognition of the importance of outreach and certain constraints and attitudes which may impact actual involvement such as the disciplinary differences mentioned above and the importance attached to peer-to-peer communication.

#### 2.5. Participatory studies

The general public may also be involved in studies through Citizen Science initiatives. Twenty percent of our participants reported being actively engaged in Citizen Science initiatives, describing them as follows:

"Citizen science projects in schools where young people are encouraged to experiment and collect data" (Bucharest, Romania).

"Co-creation and design of questionnaires and apps with patients in public health, for example an app for students on how to access mental health facilities" (Bordeaux, France).

#### 2.6. Outreach to schools and students

Researchers also believe that it is important for young people to have a scientific culture and especially, to encourage young women to be more actively involved in science by participating in outreach initiatives in schools.

"Projects and links with local education authorities and also projects on gender equality in scientific and academic policies" (Bordeaux, France).

"Teacher-training sessions to provide educators with tools to teach complex concepts at secondary level" (Clermont, France). "A series of educational videos on quantum theory for school pupils" (OsloMet, Norway).

Lectures to students are also cited as a form of science communication.

"Within the institutions it is important for students to develop dissemination skills and for them to be aware of the importance of science for society (Campus Iberus, Spain). "Creating scientific videos on youtube for students in the field, to show volcanic "landscapes for example". (Clermont, France)

### 3. Language Use

Across all the contexts, English is used for international networking and collaboration and for publishing research in international journals. It is accepted that English is the default language because all the significant journals in the fields are in English. Most of the interviewees were proficient English-language users. They were at ease with using English for research and publication purposes and mostly had positive attitudes towards the use of English for publishing. They were confident and competent English-language users and some had a multilingual profile.

#### 3.1. Publications

All of the researchers interviewed saw English as "a taken-for-granted reality", "a shared lingua franca that facilitates scientific knowledge exchange and collaboration worldwide" (Campus Iberus, Spain). This is confirmed in the literature as surveys have shown that despite the dominance of English and the perception that it may advantage native-speaker authors, researchers feel that a common language is necessary (Hyland (2015)).

In our sample, the researchers tended to write directly in English and then some may have their work proof-read by a native-speaker colleague in their lab. Some (30%) use automatic translation tools and translation agencies (12%). Many researchers felt that it is *"easier"* to write in English as the language is more *"concise"*. They also recognized the need to have a common language or *"lingua franca"*. The majority felt comfortable and *"at ease"* writing in English.

*"More effective in English, nuances may be lost when translating" (Ovidius, Romania).* However, some did feel that language could be a barrier and that, at times, it is difficult to be precise in English.

#### 3.2. Day to day activities

Over half of the researchers (57%) reported using English on a daily basis in their labs as there are many international students and colleagues who may not speak the local language (see Figure 5). In some contexts, a mix of English and the local language are used, switching depending on who is in the lab (Clermont, France) or "Romglish" (Ovidius, Romania).



Figure 5 Using English for research (shown in percentages)

The researchers were, in general, happy to have the opportunity to speak English regularly and opportunities for spoken practice were seen to be important. The local language is used to communicate with colleagues locally and nationally and English is used for international communication. Indeed 87% reported using English for discussing their research with their peers.

#### 3.3. Wider audiences and outreach

The choice of language for communicating science always depends on who the target audience is for example:

"English if one targets an international audience, and Spanish if the target audience is a local audience". (Campus Iberus, Spain)

All the researchers used the local language for outreach which was relevant to their local context (although 12% of the participants also used English for outreach). For example, a

participant from Oslo reported being interviewed for a podcast, and said he did that in Norwegian because the audience was local.

The local language tended to be used to communicate with multidisciplinary audiences, the general public and for outreach in schools.



Figure 6 Languages used for outreach in the Institution's local area (shown in percentages). France and Romania having two representative institutions in the DILAN consortium means that their higher figures corresponded to the amount of L1 speaking participants from the French and Romanian universities.

# 4. Training

As a result of these findings, we asked participants about their training needs.

#### 4.1. Peer-to-peer communication

As mentioned above, the researchers interviewed were mostly confident and competent in English and were used to publishing in English although they said that training for this could always be beneficial (Ovidius, Romania) and that there is always room for improvement (Bucharest, Romania). The PhD students were, in general, interested in all forms of training.

#### 4.2. Adapting to a wider audience

All the interviewees reported that it is more difficult to adapt to a wider audience and that they would need training in communication skills. The most cited need (85%) was training on

how to adapt their message to a wider audience using new digital forms with a focus on adapting the message, and the way they disseminate research results to a broader audience. They argued that while it is easier for them to communicate on certain aspects from a scientific point of view, it is more difficult to simplify such aspects and explain them in lay terms. Thus, they felt that training to communicate their research findings to a wider public would be useful.

"Adapting to wider audience" (Ovidius, Romania).

"Writing for wider audiences and plain language use" (Campus Iberus, Spain).

"Being able to synthesise key information in short texts, for example for social media" (Campus Iberus, Spain).

"Challenge of conveying complex topics to different audiences and the importance of adjusting explanations to diverse groups" (Clermont, France).

"Effective communication on LinkedIn". (Clermont, France)

"Adapting results for companies, business. Diversifying communication – non-specialist and multidisciplinary audiences" (Bucharest, Romania).

Some researchers (47%) also cited an interest in training in English communication skills "argumentation skills", "persuasive strategies" (Campus Iberus, Spain), "communication with the press" (Clermont, France) and "communicating in an attractive way" (Ovidius, Romania).

#### 4.3. New tools and media

There was some (45%) interest in learning about tools and resources for composing digital genres such as video, audio, graphic design, blogs, infographics, especially from junior researchers. Others did cite a lack of time which prevents them from investigating and using such tools or they believed that this is the role of support staff. Some felt that they could ask for help within the institution or learn by themselves. The interviewees also cited the need to be trained in the effective use of social media (Instagram, TikTok), making concise posts to increase their visibility and promote their research.



Figure 7 Participant training needs (shown in percentages)

#### 4.4. Training Format

Many (61.6%) had a preference for an asynchronous, online format, working autonomously on self-paced modules as they are busy, but maintaining the motivation of coming together for group sessions and meeting colleagues from other disciplines. Others (48.3%) still thought synchronous group training could be beneficial to exchange with colleagues and discuss common concerns. All the participants expressed a general interest in the DILAN training initiative.



Figure 8 Preferred training formats for future training (shown in percentages)

### 5. Barriers

As we have seen above, the researchers cited many practices and activities that they take part in. However, they also gave reasons for not getting involved in certain activities or using certain forms of communication which we will detail below. The interviewees cited certain barriers to using newer digital forms or to practising outreach on a wider scale. This section will outline the different professional aspects which impact on researcher outreach practices.

#### 5.1. Time-constraints

Many researchers cited a lack of time<sup>4</sup> for becoming familiar with and using certain digital genres (video abstracts, graphical abstracts, blogs, podcasts, videocasts) with a preference for more traditional research dissemination.

All the participants showed sensitivity towards activities involving science dissemination but they all agreed that these activities take time and there was little incentive to do them. Many researchers reported a lack of time for not getting involved in outreach and/or not using other media.

#### 5.2. Priorities

The scholars in the Spanish context, for example, use newer digital forms for communicating research results, but such use is very limited compared to the time and effort they spend in writing papers for high impact factor journals. The main reason is the pressure to publish in English medium journals. Publishing gives them recognition and international visibility and, above all, as they stress, it enables recognition and academic promotion. This may explain why, in the interviews, research articles and abstracts were perceived as the most important types of genre texts.

<sup>&</sup>lt;sup>4</sup> 84 mentions of 'time' in the combined interview reports.

#### 5.3. Junior v senior researchers

Senior researchers tended to prefer traditional dissemination methods. However, digital communication appears to be more frequently used by junior researchers who were active on at least one social media platform. These junior researchers were quite familiar with digital tools and felt they would be able to produce media they were unfamiliar with by reaching out to colleagues or by looking up how to use them themselves.

#### 5.4. Research field

Some disciplines were perceived as being more relevant to the general public and therefore as we have seen above, the research topic may hinder or boost outreach participation.

#### 5.5. Influence of academic institutions

The individual interviewees did not tend to clearly know what the institutional priorities were regarding ways of disseminating science online using digital forms. They all mentioned the use of institutional web pages, Open Access and research-sharing platforms, but many (62 %) were generally not aware of how their institution positioned itself on the uses of these tools. Very few (22%) noted that there are services that support scholars when they need to create new digital output such as podcasts, or videos to disseminate their research findings to audiences beyond the expert scientific community. In general, the participants believed that their universities expected their scholars to publish and that current research assessment policies only value high stakes publications.

Interestingly, PhD students seemed to be more familiar with policy and the training possibilities offered through institutional communication. This may be due to the fact that doctoral students may have to do a minimum amount of training hours in some institutions.

### Recommendations

The aim of this report was to describe and give examples of current practice in research communication across a sample of researchers from different European contexts. We have described how researchers share their research with their peers but also to wider, lay audiences. Our study has revealed the importance of "traditional" forms of communication such as the research article and peer-reviewed publications for credibility and to meet institutional requirements. The need to then make this research accessible to all through Open Access, repositories, websites and social media for example, was also emphasised and was often encouraged by the institutions. To further encourage the uptake of digital genres, it would seem that more recognition for these activities is needed together with a greater awareness of institutional policy and technical support available. Researchers tend to give priority to peer-reviewed publications as this is principally what they are evaluated on by their institution. To invest more time in developing the transversal skills of intercultural and international communication and their presence on various media, researchers need incentive. By promoting their publications and the impact of their research findings through genres such as impact statements, lay summaries or video abstracts, researchers can reach colleagues from other disciplines, policy-makers and the general public.

All the researchers perceived outreach as being important even if they were not directly involved in these activities and there was an awareness of the need to promote scientific literacy and engage citizens in science by facilitating access to accurate scientific information and giving greater visibility to research findings. Many researchers wanted to share their research with the general public and to demonstrate the societal impact of research through the media and various activities such as workshops and events both on and off campus and in schools but such activities may be valued to differing degrees in institutions. There is therefore a conflict between researchers' beliefs in science as a social mission and how they can include such a mission into an already heavy workload. Once again involvement in outreach activities may need to be made more attractive in terms of promotion opportunities. Beyond the recognition from their institutions, we would like to suggest that through a better knowledge of digital genres, academics may achieve new, unexpected gains and recognition from further afield.

In the current climate of public scepticism and mistrust, researchers seem keen to participate in the democratisation of science and the development of citizens' scientific literacy as shown by the examples of outreach activities highlighted in section 2 and the involvement of the general public in research through participatory studies (section 2.5). There were also examples of outreach activities in schools to encourage young women in science. Involvement in these activities may lead to an interest in training which would enable the researchers to recontextualise their research for diversified audiences and take on the role of "science mediators" or the desire to actively involve the general public through data collection in Citizen Science projects, for example.

The training need most frequently cited by the researchers was how to adapt their message to a wider audience. We suggest that this could be done, for example, by learning how to use new digital forms of communication and becoming more familiar with the communication and affordances of different social media platforms, for example. Training courses could integrate writing skills with multimodal composing skills and the effective use of digital resources. Researchers could be trained to recontextualise their research in formats better suited to a multidisciplinary audience and the layperson. Materials could focus on communicative purpose, awareness of the audience and effective strategies, for example transposing an abstract into a plain language summary, synthesising the impact of research on social media posts, and promoting research on blogs (see Perez-Llantada, 2024).

Curating a strong online presence is crucial in today's world across all fields and industries. However, it must be recognised that academics may not, as of yet, have been sufficiently trained in how to excel in the field of digital communication. We thus advocate a pedagogical approach where both early-career and established researchers are encouraged to notice features which are common across genres but also the evolutions taking place in digital genres and Open Science<sup>5</sup>. The interest shown by the participants in all forms of training, English for publication and also the creation of digital genres could be formalised through DILAN's training offer to empower researchers, PhD and graduate students for their professional life.

<sup>&</sup>lt;sup>5</sup> Digital Genres and Open Science practices of researchers are discussed in the <u>GENCI</u> project, for example, and could be used as a guide to understanding how other researchers transmit and disseminate science openly on the Internet.

**Project partners** 





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This work is part of the Erasmus+ project Digital Language and Communication Training for EU scientists DILAN, co-funded by the European Commission. Views and opinions expressed are however those of the researchers on the DILAN team and do not necessarily reflect those of the European Union.