

## Developing New Sets of Digital Skills In A Changing Online Environment

Ciochină Raluca Silvia<sup>1</sup> Cismaru Diana Maria<sup>2</sup> Lemnaru Mihaela<sup>3</sup>

<sup>1</sup> College of Communication and Public Relations, National University of Political Studies and Public Administration, raluca.ciochina@comunicare.ro, Orcid: 0000-0003-4056-8787

<sup>2</sup> College of Communication and Public Relations, National University of Political Studies and Public Administration, diana.cismaru@comunicare.ro,

<https://scholar.google.com/citations?user=-c13FUIAAAAJ&hl=en>

<sup>3</sup> College of Communication and Public Relations, National University of Political Studies and Public Administration, mihaela.lemnaru94@gmail.com

**Abstract:** Changing requirements of the job led public relations practitioners' capabilities and competences to develop consistently throughout the past decade. The aim of this research paper is to analyze the level of digital skills in public relations practitioners and to identify their opinions, attitudes and motivations related to the role of digital skills in their current workplace. This research specifically focuses on informational, hypermedia, socio-emotional, visual and social media skills. A quantitative study was conducted, and the questionnaire was applied. 75 public relations practitioners responded to the online survey in May 2018, most of them with a university degree in Public Relations. The communication professionals work in various types of organizations, such as PR and Marketing agencies, communication start-ups, NGOs, advertising agencies. The results show that over 40% of the communication professionals use content, storage and social media management tools to meet their objectives. In regards to digital skills levels, social-emotional skills have the highest values for the selected sample. The research results also show that communication practitioners are becoming more and more involved in digital marketing related activities, as their tasks also include transactional related objectives, not exclusively communication-based ones.

**Key Words:** digital skills, Public Relations, online.

### 1. INTRODUCTION

The subject of digital skills development is not new in the public relations domain in general and in the practice of online communication in specific. Considering the extensive changes and transformations in digital platforms and the increasing expectations of publics to consume information and content based on their interests and availability, public relations practitioners' capabilities and competences developed consistently.

Gardner's definition (1993, p. 15) of intelligence as "the ability to solve problems or fashion products that are of consequence in a particular cultural setting or a community" sets the criteria allowing the emergence of digital intelligence, a concept which was studied intensively in the past years, undertaking various forms, such as digital literacy, digital skills and competences and so on (Buckingham, 2003; Hargittai, 2008; Van Deursen, Helsper, & Eynon, 2014; Van Laar et al., 2017).

Digital skills have been a focus of research in the past years with studies showing relevant methodology as well as empirical results (Eshet-Alkalai, 2004; Ng, 2012; Van Deursen et al., 2016). Studies so far have shown how communication specialists are currently using digital competences

(Tench et al. 2013; Zerfass et al., 2017) and how they keep up with the latest changes, undertaking activities meant to maximize their efforts in developing and implementing an efficient online communication campaign.

In Romania, most digital communication roles imply a variety of skills, such as knowing how to develop and coordinate online campaigns, from content creation to website administration, search engine optimization understanding and social media community management. Considering the diversity of tasks and responsibilities communication practitioners undertake at their current workplace, it is important to analyze their levels of digital skills and identify the specific areas where they are facing challenges.

This research specifically focuses on identifying the levels of digital skills (informational, hypermedia, socio-emotional, visual and social media skills) of communication practitioners, and their opinions, attitudes and motivations related to the role of digital skills in their current workplace.

### 1.2. The Concept of Digital Intelligence and Digital Skills

By interacting with the new information and communication technologies, individuals develop

new forms of intelligence that help them achieve their objectives. In the current postmodern global culture, multiple intelligence theory gathered considerable popularity (Gardner, 1983, pp. 137-142) influencing pedagogical practices. In the current digital era, individuals recognize the existence of a new form of intelligence, the digital intelligence, and its implications, while setting effective strategies to adapt to this new intellectual style. Intelligence, as defined by Gardner (1993, p. 7) is “the ability to solve problems or fashion products that are valued in one or more cultural or community settings”. It is the ability of individuals to use knowledge in a personal way and to interact successfully with their environments. This definition of intelligence goes beyond the perspective that intelligence can only be measured based on the amount of knowledge, “combining cultural knowledge and ability to interact effectively with cultural or community settings” (Adams, 2004, p. 94).

Today, people use either computers or smartphones for their daily jobs, or for personal use, for information and entertainment, for connecting with people from different geographical areas, but with shared interests. This also contributed to the way people develop and form ideas regarding society, norms, culture, politics and other life domains.

Intellectual abilities are currently dependent on the ability to interact with digital technologies. According to researchers who studied digital skills (Buckingham, 2003; Hargittai, 2008) this concept means more than the ability to use software or digital devices, as it includes a variety of abilities, such as cognitive abilities, kinetic abilities, sociological and emotional that users need to own in order to effectively use digital tools. Digital literacy incorporates more than the technical ability, combining a set of abilities that are used in executing different tasks in digital environments, such as gaining knowledge while navigating the Internet, understanding user interfaces, being able to search data bases, creating and distributing online content, and communicating on online social networks (Hargittai, 2008; Jones-Kavalier & Flannigan, 2006).

In the digital era, digital literacy helps users intuitively perform complex digital tasks. Eshet-Alkalai (2004) developed a holistic conceptual model for digital literacy measurement, emphasizing that it incorporates most cognitive abilities users use while working with digital technologies. The framework of digital literacy developed by Eshet-Alkalai (2004) originally

included photo-visual digital skills (ability to understand instructions and messages that are presented in a visual form), reproduction digital skills (using digital reproduction to create new materials and new meanings and interpretations to previous digital content), branching digital skills or hypermedia skills (orientation skills, the ability to stay oriented while navigating through complex domains), socio-emotional skills (understanding the norms from hyperspace and applying this knowledge in all digital interactions), information skills (the ability to evaluate critically the quality and validity of information). This evaluative model was built based on the large volumes of empirical data of user behavior online. After following debates in the academic arena, a new skill was introduced to the model - real time thinking skills (Eshet, 2012), which refers to individuals’ “ability to process large volumes of stimuli at the same time, as in video games or in online teaching” (p. 267). This skills refer to users’ ability to control advanced digital tools, multimedia games and online classes which implies that they would need to process simultaneously large volumes of information at a very high speed.

*Photo-visual skills* helps users easily understand and intuitively read the instructions, content and messages that are presented graphically. When using website interfaces, for instance, public relations practitioners need to understand the design so they can easily develop experiences online and make other users navigate through the information and reach their PR objectives. *Reproduction skills*, on the other hand, offer users the opportunity to digitally innovate, by reproducing and editing existent texts, visual and audio content. With increasing open source digital technologies (Bruns, 2008), this poses ethical questions, as users tend to use content without indicating the original source. However, rethinking content, readapting it for new purposes and combining preexistent materials while curating content – these are really important abilities for public relations practitioners as they need to constantly rearrange information and recycle past content for various campaign channels and objectives.

Operating digital tools is also important for communication practitioners. Free multimedia environments, such as online software, data bases and social media offer users a high degree of freedom for navigating various knowledge domains, while, in the same time, challenge users into using nonlinear strategies and develop new skills without necessarily following a specific structure. In this sense, hypermedia skills, also known as branching

skills, help users navigate online, developing a sense of orientation when using various platforms, interfaces, and tools in order to meet their purposes. Communication practitioners are directly involved in editing content, backgrounds, photos, buttons and pop up banners when working online for their clients. New functionalities are meant to help users satisfy their online needs rapidly, while sound, animations, video and other interactive features contribute significantly to engage users to spend more time on the website.

Users also need informational skills in order to effectively solve online problems, especially considering the large volumes of information that are available digitally. Whereas content creators may lack authority and legitimacy to produce content, it is important to be able to analyze the sources of information and to evaluate them accordingly. In previous research, Van Deursen and Van Dijk (2014) conceptualized information skills as locating required information by choosing a website or search systems to seek information, defining search options or queries, selecting information on websites or search results and evaluating information sources. Information seeking, however, is a subjective process. For instance, Weiler (2005) emphasized that personal opinions, time limitations and difficulty in obtaining information can be more important than the accuracy of information for millennials. The easiness with which they accept information as being true or false is given by cognitive capacity, while the selection process is influenced by the individuals' previous attitudes and opinions, by what they accept as being true. Hargittai & Hinnant (2006) stressed the importance of social support in information seeking behaviors, specifically the tendency of individuals to seek for information in their social and cultural surroundings. Accessing networks for information seeking and retrieval has important implications for this process, especially considering social media proliferation and use for these purposes.

Following this stream of thoughts, strategic skills are described as using computer and network sources to achieve particular goals, being as one of the most advanced Internet skills (Van Deursen & Van Dijk, 2014). Critical and analytical approaches to using information and content online are essential when developing strategic skills. They involve developing an orientation toward a particular goal, which means being aware of emerging opportunities, then taking the correct action to reach this goal (for optimizing the change to reach the goal), and finally to make the right decision and gain the benefits that result from reaching the goal (Van Deursen & Van Dijk, 2014).

In this context, of online social interactions and collaboration, digital communication and knowledge exchange opened up new dimensions and learning opportunities, through online virtual communities, discussion groups, online social networks (Boyd, 2007, p. 212). Such challenges included not only the ability to share formal knowledge, but also to share the emotions digitally. In this sense, users need to own a relatively new digital skills, also known as socio-emotional skills, because they imply emotional and social aspects when engaging in digital environments. Amongst all the digital thinking skills described in this paper, socio-emotional skills are probably the newest and the most complex ones as they emerged only in the past decades, with the wide spread of social media. Eshet-Alkalai (2004) specifically refers to them as the skills that are needed to understand and strategically apply the rules of interaction in online media environments. Scollan and Gallagner (2016) wrote about the *emotional spaces* and how they are important for positioning oneself and making sense of rules and boundaries of digital realms. The authors stress that users "need to be mindful of unforeseen emotional space between these two worlds, which is a hybrid space where the digital and non-digital worlds collide" (p. 129). Individuals with good socio-emotional skill levels are willing to share information and knowledge with others, to evaluate data, they own abstract thinking skills, and are able to gain new skills and know how through virtual collaboration.

Users' ability to process information and make sense of large volumes of stimuli in the same time is called real time thinking skills. Modern digital working environments such as micro simulations, virtual games, social media, they are all affecting users with fast stimuli such as sounds, texts, images, and so on. So when users are engaged in these digital realms, they need to share their attention, reacting differently (Green & Bavelier, 2003), while executing tasks in the same time. Eshet-Alkalai (2009) conceptualizes this skills by introducing the following dimensions of real time thinking: simultaneous synchronization which refers to the ability to process real time stimuli in parallel (like listen to a story on a podcast and read a social media post), then high speed, which refers to maintaining a high level of performance and process high speed information in real time situations, attention management and multi-tasking which refers to being able to split attention and respond simultaneously to stimuli that appear on different areas on the screen, multiple perspectives (ability to shift perspectives, angles of view, degree of resolution as users work), real-time feedback

(which enables gradual improvement in performances online).

### 1.3. Roles and Digital skills in Public Relations

Communication and Public Relations practitioners are facing both opportunities and challenges in the context of new media. Tench et al. (2013) found that the basic skills of a communication specialist nowadays include: digital writing, analytical thinking/problem solving skill, software operating skills, legal know-how and social media skills. The latter need to be specifically improved. According to Digital PR Report in 2015, PR professionals are involved in content creation, offering SEO services, blogger outreach and engagement, online ads/PPC, and online reputation management. Moreover, communicators are also involved in web design as this the entire digital experience is considered to be part of PR's responsibility. In Spain, for instance, Dircom study (2018) showed that organizations are increasingly using big data and algorithms for communication (50%), making efforts to connect organizational and communication strategies (47%), and to develop and manage quality content for the organization's publics (40%). In 2017, the European Communication Monitor Study (Zerfass et al., 2017), one of the most important longitudinal empirical studies in the field, showed that there are current gaps between the perceived importance of digital media and the ways in which they are used by PR professionals, indicating that the levels have been stagnating. According to the study, visual communication is very important, with 94% of professionals considering this to be true, while 7 out of 10 organizations already changed their communication by introducing more visual elements. The most important visual elements for strategic communication are: online videos, infographics, instant photos, business graphics, signs and symbols (logos, pictograms), online animations, professional videos and photos. As far as the ability to actually produce this type of content is concerned, the levels are lower for online videos, infographics, logos, animations, or professional photos or videos. Unfortunately, even if these communication materials are considered important by management, there is barely enough competence within the organization to satisfy these communication needs. According to the study, however, Romania has the largest capacity to produce in-house business graphics and professional photos, as well as instant photos and infographics. On the other side, Romania professionals only implement standard design guides, and less process, technical infrastructure or

tools for measuring visual communication effectiveness. Also, the study shows that 40% of the companies face challenges in keeping up with digital media in general and social media in particular. Online social networks are specifically important for strategic communication, while website communication, email and online media relations also hold an important place.

Communication practitioners also face challenges as far as the spread of false information is concerned. Spreading fake news can cause damage to organizations and affect their reputation (Kim, Moraver & Dennis (2019). For instance, some websites are built to intentionally spread deceiving information related to public actors, with social media contributing to the rapid spread of information. Even though fake news websites are short-term (Allcott & Gentzkow, 2017), they can still damage the image of public actors or organizations. In this new context, public relations practitioners need to invest in their abilities, to develop integrated marketing and communication strategies, to monitor the online space, to implement advanced search optimization programs, to build and maintain relations with media and publics online, to manage virtual communities, to test and evaluate campaigns, to develop content strategies and to manage online crisis if they emerge.

The Internet is a global network of informational resources and a powerful instrument for collaboration and communication. This offers communication practitioners the undeniable opportunity to communicate freely for any purpose they want (Van der Merwe, Pitt, & Abratt, 2005). But for public relations practitioners to effectively communicate with their publics online, they need to be able to monitor the environment, to identify potential problems and to be able to respond accordingly. The digital era enhances all functions and PR roles that were previously present in traditional media, making them more transparent and prone to evaluation by publics. PR and communication practitioners are involved in developing campaigns suitable for their publics and the channels they choose for reaching specific communication objectives. Cismaru (2014) stresses that managing public interactions online is specifically important as it entails generating and maintaining a positive environment for the organization or the public actor. Messages need to be conceived in a consistent manner, taking into account all communication channels (including traditional ones). Being involved in the website development process, communication practitioners also manage the marketing transactional objectives,

thus undertaking this role as part of their responsibilities. On online social networks, on the other side, PR professionals are expected to generate trust, open up conversations and maintain relationships with current or potential clients through promotional and awareness messages (Berkley, 2007). So, in order to efficiently manage these channels, practitioners need to develop certain digital skills. For instance, for building and implementing content marketing strategies, PR practitioners need to have informational skills and hypermedia skills, as they need to use complex search tools and evaluate source credibility, while on social media, they need to focus on developing relevant content for their publics. Moreover, digital communication practitioners also need to know basic data analysis and interpretation techniques, so they can properly analyze and optimize Facebook, Google, Instagram or LinkedIn campaigns.

Considering the need to explore how digital communication practitioners integrated digital skills and roles with their current responsibilities, the research questions for this paper are:

1. What are the levels of digital skills in the case of digital communication practitioners?
2. What is the relationship between the specific digital skills and the job roles of communication practitioners?

## 2. MATERIAL AND METHODS

For the purposes of this research, a quantitative method was used. The research instrument was the online questionnaire. Considering that there is no prior research investigating the digital skills and roles of digital communication practitioners specifically, an exploratory research was needed, specifically to identify the parameters of digital skills and the extent to which they are developed in Romania.

Regarding the research instrument, Likert scale was used to measure the extent to which participants agree or disagree related to the affirmations, to measure the level of usage of specific digital tools and to self-evaluate their visual and skills and their Instagram campaign implementation skills. Instagram was selected as a social media platform because it is one of the most successful platforms for users aged between 18 and 25 years old (92% of Romanian Internet users use Instagram) (Manafu, 2019), and many brands are currently looking to build a relevant online presence on this social media platform.

The research lot included 74 practitioners from the Public Relations and communication domain, as well as from digital marketing. The invitations to fill in the online questionnaire were posted online, on social media communities with former students who graduated the Faculty of Communication and Public Relations, at the National University of Political Studies and Public Administration and who are currently working in PR and marketing. We considered that they would probably be more interested in developing the digital skills needed to fulfil their job responsibilities. Google Forms was used for collecting the data, and then the link was distributed on Facebook groups (for instance, on Master Social Media and online marketing 2016 Facebook group). The data was then analyzed through IBM SPSS Statistics software, version 20.

Most of the respondents (73%) graduated bachelor's degree, while 23% graduated master's degree. Related to gender, 57 of the respondents identify themselves as females, and 17 respondents as males. Most of the respondents work in private companies (n=30), PR and Marketing agencies (n=27), start-up businesses (n=7), freelancing (n=5), NGOs (n=4), and advertising agencies (n=1). As far as job titles are concerned, the participants undertake various titles and roles: Account Manager, Copywriter, Digital Marketing Specialist/Online Public Relations Specialist, Online Marketing Specialist, Performance Marketing Specialist, Media Relations Specialist, Social Media Coordinator, Community Manager. The diversity of job roles shows that this domain is specifically versatile, as communication practitioners are able to work for large companies, with big teams and with consistent budgets available for communication campaigns, but also within NGOs, where the focus is more related to fundraising.

## 3. RESULTS

As far as the time spent for digital activities is concerned, 42% of the respondents mentioned that they spend over 5 hours online, while 29% spend between 3 to 5 hours. All the respondents have a Facebook account and are involved in virtual communities. Considering that three quarters of the participants spend over 3 hours daily in the digital environment, this shows that most of the communication activities are held online and that practitioners need to be present in the online space. The main activities of digital communication practitioners are: copywriting (46 of the professionals spend their time writing posts for online social networks, articles and press releases), photo-video editing (32 practitioners develop

posters, graphic posts for social media, photos etc.), implementation of paid campaigns on Facebook and Instagram and project management (see Fig. 1). Building and editing Wordpress sites and affiliate marketing activities were selected by a small number of professionals.

Figure 1: Digital activities of communication practitioners

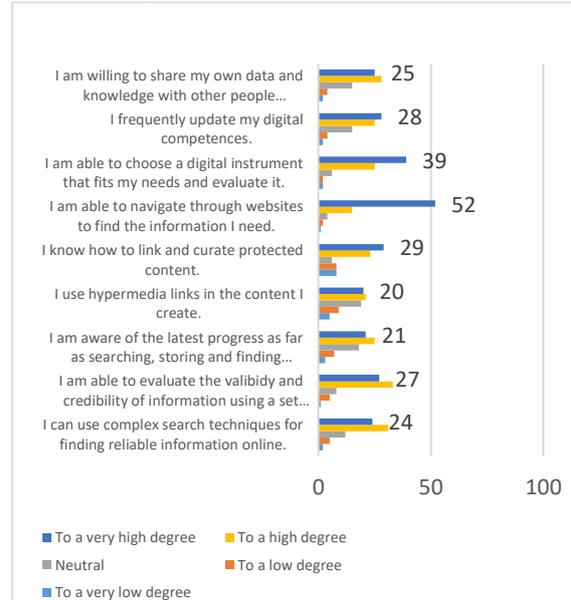


For effectively managing their online activities, communication professionals use various platforms and tools at work: online social networks analysis tools, content tools, task management/time management tools, automation tools, photo/video editing tools, data base/text storage tools. The purpose of this question was to identify to which extent communication specialists use these types of tools that were developed for better managing their efforts. In this sense, the most used platforms are Google Drive (44 practitioners use these tools to a high and very high degree), and data insight tools such as Facebook Insights and Google Analytics (46 practitioners use these tools to a high and very high degree).

Moving forward to the digital skills questions, participants were asked self-evaluation questions regarding their informational, hypermedia and socio-emotional skills. As far as information skills are concerned, most of the respondents (n=60) consider they have the ability to evaluate information validity and credibility to a very high degree. Socio-emotional skills are also high according to the practitioners' self-evaluation: more than 64 respondents have the ability to identify the right instrument for their needs and to evaluate its efficacy, and 53 of the respondents are willing to share their data and knowledge with other

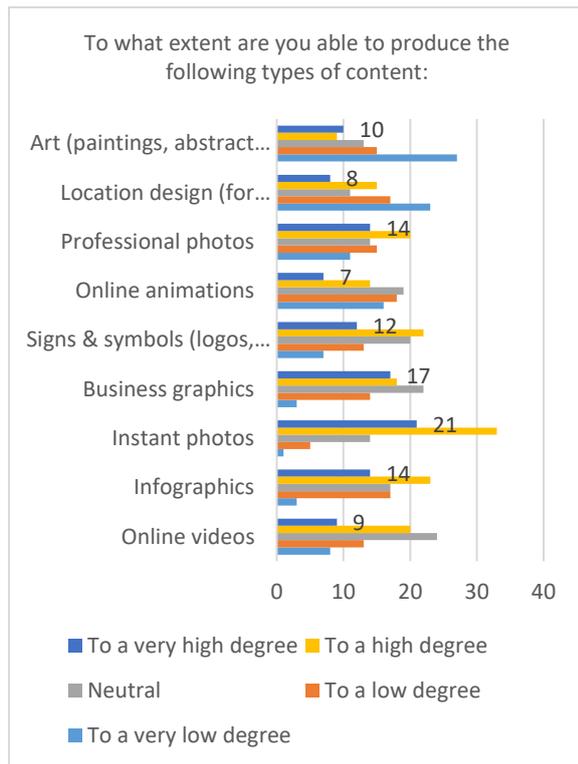
people through virtual communities (Table 1). Regarding hypermedia or branching skills, practitioners are mostly able to use links in the content they developed (n=41), link and reuse protected content (n=52), and navigate through websites to find the information they need (n=67).

Figure 2: Self-evaluation of digital skills (the extent to which communication practitioners agree with the following statements)



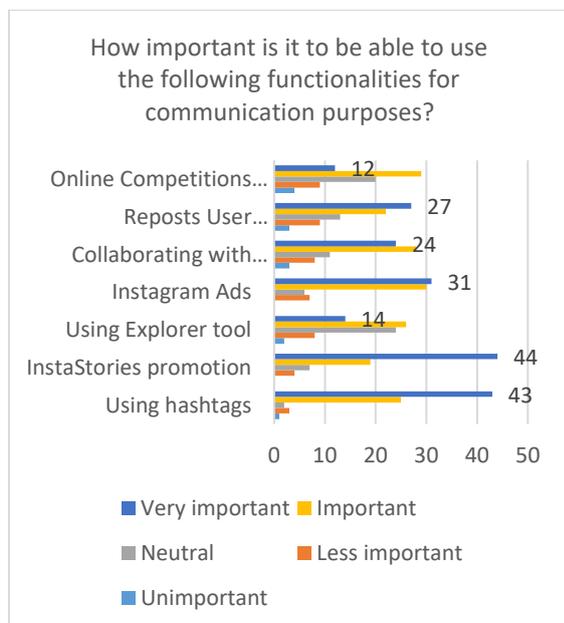
As far as photo-visuals skills are concerned, which refers to the ability to develop materials for communication purposes, 29 of the respondents self-evaluated their ability to create an online video as good and very good, while approximately the same amount are neutral (n=24). The highest degree of ability lies in creating infographics (n=57), instant photos (n=54), business graphics (n=35), creating signs and symbols such as logo development (n=34) (Figure 3).

Figure 3: Photo-visual digital skills self-evaluation



Communication professionals were also asked to evaluate whether they consider using Instagram important for online communication purposes. As seen in Figure 4, most of the respondents consider creating InstaStories and using hashtags as important and very important skills.

Figure 4: The ability to use Instagram functionalities



## DISCUSSION

Considering this is an exploratory research, there are important mentions that need to be emphasized. Most of the respondents of the study work in companies, suggesting they chose a relatively stable environment where they also have professional growth opportunities, such as trainings. Moreover, PR and Marketing teams within private companies are larger, job roles and responsibilities are clear, compare to small agencies where communication and PR specialists undertake roles that are not necessarily within their area of expertise. On the other hand, communication practitioners working in PR or advertising agencies have the opportunity to work in more informal environments where they can work for various, different clients and also learn more from their colleagues. This is why their skills need to develop faster so they can comply to the needs and expectations of their clients. This pressure can be a driver for continuous development. With most respondents spending over 5 hours performing digital activities at work, it can be suggested that undertaking various digital tasks, specifically research tasks and content creation tasks, could explain the amount of time invested in this sense. Amongst the main activities that communication practitioners undertake online are copywriting and photo/video editing. So creativity needs to be translated digitally as text, as well as visually. As far as content creation is concerned, PR practitioners need to personalize their posts according to the social platforms they use, according to content type, target public and client specifications. For instance, Instagram is a visually focused platform, with impactful images, whereas Facebook is an universal platform, which includes textual posts, and image and video sharing. Both skills (copywriting and photo editing) take time to be learnt and they also imply constant updating, as professionals need to understand and comply with current trends. The digital environment is continuously evolving, so social media norms and expectations also change. For instance, communication practitioners need to create the visual content for their social media posts and articles, as seen in the results. This digital skill implies additional preparation for professionals and also know how in using tools with templates (for example, Canva). However, only 37 respondents use these types of tools, while others are probably working with the graphic designer for creating the relevant visuals that are needed for their online communication objectives.

According to the results, Google Drive is the most used tool, which possibly means that the easiness

for sharing files and documents and real time synchronous editing are useful functionalities for busy communication practitioners. On the other hand, the study participants do not use special tools for creating content. This can suggest that language might be an issue in using these tools, as mostly have an English version, or that they use other tools or none at all when creating social media posts and specific articles.

Regarding informational, hypermedia and socio-emotional skills, the results show that socio-emotional skills and informational skills are the most developed. Public relations and communication practitioners have access to different study resources, to tools and tutorials explaining specific digital activities. So they have the opportunities to choose a digital tool that fits their needs. Efficacy can be related to the relevance of the tool for their own activity or the time they gain from using that specific instrument. It is important to evaluate the value these digital tools bring to online communication professionals and this should be investigated further in future studies.

As the digital environment constantly evolves, especially online platforms and tools, a large number of respondents confirmed that they update their digital abilities constantly. Communication and PR practitioners need to learn the latest changes fast and understand how online platforms are optimized for better performance. Also, most of the respondents are willing to share their own knowledge with other people, which helps them build and maintain their personal brand, but also support the development of the domain and the emergence of specialized professionals.

As expected, the skill with most above average answers was the hypermedia or branching skill. Navigating through the digital platforms in a nonlinear way in order to solve various problems is essential for communication practitioners who need to find solutions for unexpected problems which can arise from either online publics, digital platforms, publishers, influencers or organizations which may want to get involved in the online conversation.

On the other side, PR and communication practitioners also need to stand out with skills that make them valuable within their organization. This added value can mean being able to create photo or video content that is relevant for publics and respects social media policies also. Impactful visuals and videos bring valuable advantages and increase the quantitative indicators on social media. Communication specialists are specifically involved in creating content for various platforms and with

different online social networks functionalities, as seen in the results. They are able to present data and information visually, which is easier to consume and also to produce instant photos which captures experiences real time. This might seem a relatively easy task, but posting in real time on social media is important for organizations and publics looking for transparency and authenticity. PR and communication professionals have the role to communicate with online publics and inform them in a relevant and captivating manner.

The ability to use Instagram to promote a business and engage with virtual communities is also important considering the popularity of the platform especially amongst young audiences. Most respondents are able to use functionalities such as hashtags and InstaStories, but there is still the need to evaluate the quality of producing stories and the levels of engagement with Instagram fans. Qualitative research is needed for further exploration on how practitioners produce content and the criteria they use when they start creating it.

In conclusion, the roles and responsibilities of communication and PR practitioners are evolving and digital skills also need to be developed so they can keep up with the rapid evolution of the new information and communication technologies. Even though digital platforms and tools open up new opportunities and frontiers for users activating the communication domain, specifically in the digital environment, a systematic approach for learning is still needed, inclusive of the experiences and knowledge of the peers in the domain. Challenges will continue to emerge and tasks will diversify, so a rapid response to integrating new skills is needed.

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## REFERENCES

- Adams, N. B. (2004). Digital intelligence fostered by technology. *Journal of Technology Studies*, 30(2), 93-97.
- Allcott, H., & Gentzkow, M. (2017). Social media and fake news in the 2016 election. *Journal of Economic Perspectives*, 31(2), 211-36.

- Berkley, H. (2007). *Marketing in the New Media*. North Vancouver: International Self-Counsel Press Ltd.
- Bruns, A. (2008). *Blogs, Wikipedia, Second Life, and beyond: from production to produsage*. New York, New York: Peter Lang.
- Buckingham, D. (2003). Media education and the end of the critical consumer. *Harvard Educational Review*, 73(3), pp. 309-328.
- Cismaru, D.M. (2014). *Social media și managementul reputației*. București : Tritonic, 2012.
- Eshet, Y. (2012). Thinking in the digital era: A revised model for digital literacy. *Issues in informing science and information technology*, 9(2), 267-276.
- Eshet-Alkalai, Y. (2004). Digital literacy: A Conceptual framework for survival skills in the digital era. *Journal of Educational Multimedia and Hypermedia*, 13(1), 93-107.
- Eshet-Alkalai, Y. (2009). Real-time thinking in the digital era. In *Encyclopedia of Information Science and Technology*, Second Edition (pp. 3219-3223). IGI Global.
- Gardner, H. (1983). *Frames of mind: The theory of multiple intelligences*. New York: Basic Books.
- Gardner, H. (1993). *Multiple intelligences: The theory in practice*. New York: Basic Books.
- Green, C. S., & Bavelier, D. (2003). Action video game modifies visual selective attention. *Nature*, 423, pp. 534-536.
- Hargittai, E. (2008). Survey measures of web-oriented digital literacy. *Social Science Computer Review*, 23, pp. 371-379.
- Hargittai, E., & Hinnant, A. (2006). Toward a social framework for information seeking. In *New directions in human information behavior* (pp. 55-70). Springer, Dordrecht.
- Dircom (2018). *El estado de la comunicación en España 2018*. Madrid: Dircom. <https://envios.dircom.org/docs/ECE-2018.pdf>
- Jones-Kavalier, B. R., & Flannigan, S. L. (2006). Connecting the digital dots: Literacy of the 21st century. *Educause Quarterly*, 2, pp. 8-10.
- Kim, A., Moravec, P. L., & Dennis, A. R. (2019). Combating fake news on social media with source ratings: the effects of user and expert reputation ratings. *Journal of Management Information Systems*, 36(3), 931-968.
- Manafu, C. (2019). *Câți utilizatori are Instagram în România*, available at <https://www.manafu.ro/2019/08/cati-utilizatori-are-instagram-in-romania/>, accessed on August 5th 2020.
- Ng, W. (2012). Can we teach digital natives digital literacy? *Computers and Education*, 59(3), 1065-1078.
- PRCA (2015). *Digital Skills of the PR Industry*. Available at <https://www.prca.org.uk/insights/about-pr-industry/digital-skills-pr-industry>, accessed on August 3rd 2020.
- Scollan, A., & Gallagher, B. (2016). Personal and socio-emotional development and technology. *Young children in a digital age*, 113-133.
- Tench R., Zeffass A., Verhoeven P., Vercic D., Moreno A., & Okay A. (2013). *Competencies and Role Requirements of Communication Professionals In Europe*. Insights from quantitative and qualitative studies, ECOPSI Research Report disponibil la [www.ecopsi.co.uk](http://www.ecopsi.co.uk)
- Van der Merwe, R., Pitt, L. F. & Abratt, R. (2005). *Stakeholder Strength: PR Survival Strategies in the Internet Age*. *Public Relations Quarterly*, Spring 50(1), pp. 39-49.
- Van Deursen, A. J. A. M., Helsper, E. J., & Eynon, R. (2014). *Measuring digital skills. From digital skills to tangible outcomes*. Project Report. Recuperado de: [www.oii.ox.ac.uk/research/projects](http://www.oii.ox.ac.uk/research/projects).
- Van Laar, E., Van Deursen, A. J., Van Dijk, J. A., & De Haan, J. (2017). The relation between 21st-century skills and digital skills: A systematic literature review. *Computers in human behavior*, 72, 577-588.
- Van Deursen, A. J., & Van Dijk, J. A. (2014). *Digital skills: Unlocking the information society*. Springer.
- Van Deursen, A.J.A.M., Helsper, E.J., & Eynon, R. (2016). Development and validation of the internet skills scale (ISS). *Information Communication & Society*, 19(6), 804-823.
- Zeffass, A., Moreno, Á., Tench, R., Verčič, D., & Verhoeven, P. (2017). *European Communication Monitor 2017. How strategic communication deals with the challenges of visualisation, social bots and hypermodernity. Results of a survey in 50 Countries*.