

The Role of Social Networks in the Development of Skills of Professional Communication: An Empirical Study

Rimma Ivanova, Linguistics University Nizhny Novgorod, Russia*

Natalya Gaifullina, Yelabuga institute of Kazan Federal University, Russia

Nidal Al Said, Ajman University, UAE

ABSTRACT

The purpose of the present study was to investigate the role of social networks in the formation of professional communication skills. With this aim in view, a number of training approaches initially used in class were adapted to the online format and re-oriented towards developing professional communication skills using social networks. The specially-created training course focused on developing professional communication skills included the following tasks: come up with a meme on a given topic, invent a short story, create antinomies, make up compliments, create an online event on social network, and count how many people from the group are interested in it. The task fulfillment was proved to facilitate professional communication skills among students, which testifies to their validity and effectiveness. Consequently, they can be suggested for inclusion in educational institutions' academic programs to raise their students' communicative competence.

KEYWORDS

Communication, Education, Professional Communication, Skills, Social Networks

INTRODUCTION

As a virtual communication space, social networks are becoming increasingly important for professional communication these days (Malvini Redden & Way, 2019). The possibility of instant distribution of advertising, conducting negotiations, organizing online events, as well as the availability of various forums and blogs contribute to the fact that a variety of professional activities take place in social networks (Flanagin, 2017; Slone & Gaffney, 2016) (Figure 1). Professional communication on social networking websites has begun to develop particularly intensively in connection with the COVID-19 outbreak. The introduced quarantine restrictions forced not only educational but also service and other sectors of the economy to switch to a predominantly remote working format (Franz et al., 2020). Therefore, as of the present day, professional communication remains an essential component of any activity. The development of corresponding skills in this field is among the central aspects able to ensure the success of work (Müller et al., 2020). Even though social networks are

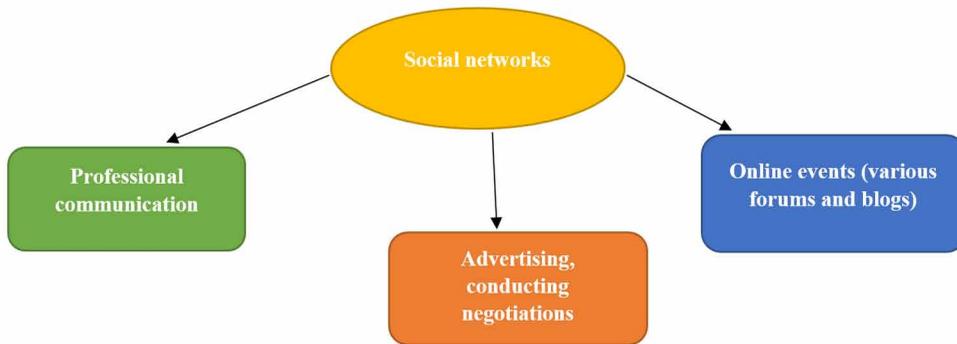
DOI: 10.4018/IJWLTT.299860

*Corresponding Author

This article published as an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0/>) which permits unrestricted use, distribution, and production in any medium, provided the author of the original work and original publication source are properly credited.

widely regarded as an area of professional communication skills' application and, at the same time, as a means of their development, this research area is still insufficiently studied, which determines the relevance of the present research.

Figure 1. The purpose of social networks using



The aim of this paper is to study the role of social networks in the development of professional communication skills.

Research objectives are as follows:

- Analyze recent papers on the role of social networks in the development of professional communication skills;
- Conduct an empirical study of professional communication skills;
- Develop a practical course aimed at improving professional communication skills by means of social networks and assess its effectiveness.

Literature Review

Professional communication via social networking websites is predominantly focused on implementing effective public engagement strategies and managing branding and reputation (Bossio et al., 2020; Malvini Redden & Way, 2019). The development of organizational use of social networks for external and internal communicative purposes is largely reliant on the expertise of social network managers, inter alia, on their communication skills (Bossio et al., 2020). To date, despite the general popularity of social networks, the attitude towards them remains ambiguous both in society and in scientific circles. A number of publications (Arogyaswamy, 2020) emphasize that virtual technologies contribute to changes in the way we think and our sense of self. There are growing concerns about the potential threats to social and political stability due to the dysfunctional effects of technological innovation. In particular, they refer to replacing human labor and decision-making in a number of industries with robots, full access of search engines to the interests of people and their monitoring by search engines monetized through advertising, the influence of online stores on the choice of purchases, and many more. As for the social networks themselves, by connecting people with each other, they possess maximum information about each participant of the communication process, which can be later used against users' well-being, individual freedoms and rights, societal cohesion, harmony, employment, and trust in democracy as a whole. Since this problem is of ethical nature, it

should be resolved with reference to each country's specific social values and political preferences by establishing ethical standards and creating a culture of morality. In an ideal scenario, these specific principles should become a determining factor in the future development of technologies (Arogyaswamy, 2020). Considering a person not as a means or a tool to achieve the desired results but as an end in itself, ethics requires fair treatment of everyone using common impartial standards, as well as ensuring careful protection of each person's dignity and freedom of choice based on such universal values as honesty, compassion, not harming others, maximizing good, and minimizing harm (Arogyaswamy, 2020). As such, computer technology allows instant access to information and entertainment. Social networks, in turn, are able not only to connect individuals but also to be united with like-minded people, thereby expanding the possibilities and increasing professional communication efficiency. Despite the obvious benefits we gain from social networking, there is also a risk of numerous negative consequences. These include privacy violations, reduced real-life interaction with family and friends, and almost full transfer of communication activity to the online space. One of the top places in this list is rightfully assigned to the problem of digital addiction, which causes dramatic changes in the mental condition of a person, in some cases requiring even specialized treatment (Arogyaswamy, 2020). Nevertheless, being general-purpose technologies, information and communication technologies (ICT) are now embedded in almost every product or service. Facilitated by industrial communication on social networks, they are used as a platform for the development or advancement of other technologies and as a tool for increasing the efficiency of manufacturing and service enterprises (Arogyaswamy, 2020).

Social networks are widely regarded as a universal information environment, which determines their apparent benefit in terms of professional communication (Capriotti et al., 2021). However, in this day and age, there is a tendency to use limited vocabulary and volume of textual information for social networking, which is regarded as a transformation of mental habits and cognitive processes of internet users (Dhar et al., 2021). Immediate perception of information from social networks weakens our capacity to read deeper, turning us into simple information decoders (Matthes et al., 2020). Meanwhile, learning and reading practices are crucial in forming neural circuitry in the brain and controlling such cognitive functions as memory and the interpretation of visual and auditory stimuli. Variations in the style and way of information perception and transmission contribute to changing neural connections and the brain's adaptation to digital technologies (Lacka et al., 2021). As a system for the automated collection, transmission, and management of data, the internet becomes a space for professional communication while controlling the process of finding and using information. The web turns information into one of industrial goods, on which the productivity of thinking depends. The critical problem of the internet is represented by the quality of information and the loss of cultural authority and aesthetic standards (Agar, 2018). The anonymity of publications removes responsibility for their reliability and quality. However, its abolition may not guarantee that standards will be raised. In any case, the internet continues to be a useful information and communication tool for the future. The search for specialized data that once required many days in libraries can now be done in several minutes by using the computer. Precisely this fact determines the advantages of online communication (Afrouz & Crisp, 2021).

According to marketing research, the most active social network users are adolescents and young people aged 16 to 24 (Sherman et al., 2016). The dialectic of online communication is that, on the one hand, it reduces loneliness, and on the other, its excessive use negatively affects self-esteem and life satisfaction, leading to anxiety, depression, and suicidal behavior (Martinez, 2018). Communication on social networks can replace the negative feeling of isolation and contribute to the reduction of drug and alcohol use, road traffic accidents, and deviant behavior in adolescents. Though, excessive immersion in virtual reality may also harm mental health (Sherman et al., 2016). Positive emotions resulting from constant dopamine stimulation by online communication discourage critical thinking, raise curiosity and addiction, and make us unable to disregard incoming texts and emails (Glatter, 2018). The increasing role of advanced technologies in communication is actually alienating people

from each other, causing effects comparable to those diagnosed with substance abuse (Glatter, 2018). Addiction to the technology underlying social networks can adversely affect nurturing and developing new social connections. Loneliness is believed to arise from the absence of body language and other social signals normally associated with face-to-face communication that cannot be interpreted when people use texting as a form of interaction (Glatter, 2018). At the same time, never-ceasing online activity and semi-tasking do not allow users of social networks to physically or mentally relax. The desire of the technology industry to increase corporate profits may lead to the emergence of digital addiction associated with our biological responses to incoming danger biological responses to signals from gadgets. Thus, it is necessary to control the process of online communication by disabling push notifications and responding to texts and emails only at certain times of the day (Glatter, 2018).

Today, social networks are often referred to as a tool for expanding access to higher education. Their rational use is deemed conducive to the formation of professional skills and academic performance improvement (Mishra, 2020). Social networks analysis is a promising method for investigating the relationships in computer-aided cooperative learning, in which students interact to achieve a common learning goal utilizing computers and laptops (Müller et al., 2020). The inclusion of social, emotional, and intercultural competences in academic contexts is supported by many international organizations, such as the European Union and the United Nations Organization, which justifies the importance of the simultaneous assessment of these three competences (Carr, 2008). Online communication for educational purposes increasingly uses mobile instant messaging (MIM) as it provides a wide range of technological, pedagogical, and social affordances (Tang & Hew, 2017). Its technological capabilities and advantages are associated with convenient timing, minimal costs and multi-modality. Pedagogical opportunities presented by MIM include journaling, dialogic, transmissive, constructionist with peer feedback, helpline, and assessment. The effect of MIM on improving student cognitive performance can be described as cautiously optimistic when used to supplement course content in dialogic activities, thereby facilitating the development of social presence (Tang & Hew, 2017).

Interactive communication technologies make a positive contribution to the unification of mass and interpersonal communication, having significant potential and eliminating the traditional distinction between these communication types (Walther & Valkenburg, 2017). Merging mass and interpersonal communication occurs as a result of the integration of a set of internet-based tools into the communicative repertoire, including that of professional communication. This makes it promising to study new methods and areas of social influence on the web (Walther and Valkenburg, 2017). The capacity of social networks for users to generate, comment, and send content to others creates significant opportunities for their active use in the professional sphere as one of the forms of mass interpersonal communication (Neubaum & Krämer, 2017). One of the aspects of professional communication in social networks is related to job advertisements published in the programs and materials of conferences on technical and professional communication (Dayley, 2020).

The use of social networks for professional communication is proved to promote student engagement and favorably affect their academic performance (Kunka, 2020). The use of Twitter, for instance, is confirmed to increase students' commitment to education and, as a result, improve their learning outcomes through interaction with peers, instructors, and the specially developed course content (Kunka, 2020). The introduction of social networks into the educational process has become particularly relevant after the global transition to e-learning because of the pandemic-related quarantine restrictions (Kunka, 2020). Among the positive aspects of using Twitter to develop professional communication skills, researchers outline increased student involvement in the educational process; elimination of psychological barriers; more active performance of students; overcoming student feelings of isolation due to a lack of communication closeness and immediacy; provision of another communication channel and space to share assignments; provision of a medium where students actively engage with others, with the course content, and with instructors (Kunka, 2020).

The development of professional communication skills, first of all, intimates the development of language competence (Handford et al., 2019). Social networks make it possible to expand the experience of using the language to all spheres of social life and work, creating new conditions for the implementation of language practices and new ways of understanding the language. Not less important is that social networking allows the creation of communication situations in which users can increase language awareness and better control, organize, and evaluate verbal behavior. However, this issue remains insufficiently disclosed in the scientific literature, which determines the necessity to continue the investigation of the considered matter in the context of professional and social activities.

As the practice shows, modern students tend to highlight the need for various academic programs teaching professional communication (Dayley, 2020). Effective communication is recognized as essential for all professional activity types, remaining a top-priority requirement in some areas. A good example is represented by health care. It is not infrequent that medical assistance may presuppose communication with patients suffering from communication problems caused by neuropsychiatric diseases, for example (Franz et al., 2020). In such situations, the success of interaction can be achieved through cross-professional team organization and the use of various means of communication improvement (including the capabilities of social networks). They can help in overcoming communication barriers and encourage achieving better efficiency and quality of cooperation in rehabilitation. Professional communication skills are also crucial for scientific publications since academic papers should adequately fulfill their communicative potential (Smith et al., 2016). Determination of parameters defining professional written and verbal communication in the industry, professional engineering organizations, and other areas also presupposes the formation of appropriate communication skills (Kaushal & Talwar, 2021; Sulcas & English, 2010).

The development of professional communication skills using social networks should be aimed at teaching students to create a professional online presence (Slone & Gaffney, 2016). A critical point in this process is related to training faculty (Bay, 2017). Educator training approaches should include immersion in experimental learning situations and innovative use of social networks and modern educational technologies. As a rule, technical and professional communication programs rely on contingent faculty to achieve their curricular mission (Meloncon, 2017). On the flip side, contingent faculty often lack professional development opportunities in the face-to-face mode, and therefore it can be provided online (Bay, 2017). The use of social networks in teaching technical and professional communications forms the basis of recommendations for educators' online preparation (Vie, 2017). In this aspect, the study identifying the relationship between attitudes to online communication and relational closeness and showing its predictive value is especially interesting (Bernhold & Rice, 2020). It indicates that a positive attitude towards e-learning also implies the same view on social networking and online self-disclosure. The frequency of online and offline communication is often associated with the communication goal type and relationship culture. Offline and online communication, in turn, is declared to be in a direct relationship with relational closeness, which is moderated by in-group identity. At the same time, it should be noted that the relationship-oriented communication strategies (frames) (Wu & Choy, 2018) used in crisis communication are represented as a predictor of the valence of online public opinion and cause no direct influence on online public opinions expressed by social network users (Gonzales & Baca, 2017).

The analysis of research shows that it is worth paying attention to the role of social networks in the formation and development of effective communication skills, in particular the possibility of using basic communication techniques in communication not only through social networks but also in live communication.

MATERIALS AND METHODS

The examination process involved a total of 348 students, for whom professional communication skills are the leading competence. Of them, 127 individuals were studying *English language and literature* at Linguistics University Nizhny Novgorod (the Russian Federation), and 221 majored

in teacher education at Yelabuga Institute of Kazan Federal University (the Russian Federation). Within the framework of the present study, communicative competence is referred to as a system of requirements related to the communication process (the ability to show an individual approach to the interlocutor, knowledge of oratorical techniques and how and when to use utterances appropriately, etc.). The scientific community distinguishes between formalized and non-formalized communicative competences. Hence, the formalized communicative competence is described as a set of strict communication rules, which is a part of corporate culture, whereas non-formalized communicative competence is based on the cultural characteristics of a particular social group of people. In general, it can be inferred that a person's communicative competence depends on the situation and social group in which it is manifested. Professional communication skills imply a high communicative competence of a person in his/her professional field. This competence presupposes the ability to negotiate with partners and clients effectively and includes the following components: possession of professional vocabulary, good speaking skills (speech clarity, correctness), good writing skills, compliance with the rules of communication etiquette, mastery of communication strategies and tactics, knowledge of personality traits and typical problems of interlocutors, ability to analyze nonverbal communication signals, ability to prevent conflicts, assertiveness (confidence), empathy, possession of active listening skills, possession of public speaking skills, possession of acting skills, ability to organize and conduct negotiations and business meetings, and ability to be imbued with the interests of another person. It should be noted that when using social networks, such skills as active listening, speaking, and acting are important only when conducting webinars, online negotiations, and conferences, whereas the mastery of writing and attention to the partner's (client's) messages come to the fore. Hence, one must be able to express thoughts in a laconic and clear form and simultaneously provoke interest and form a positive impression.

Research Design entailed the investigation to be carried out in several stages. The first stage implied determining the relevance of the research topic, defining the research object, subject, goals, objectives, and conducting an analytical review of scientific literature on the topic. At the second stage, valid methods for conducting an empirical study were determined, and an experimental group was formed by means of the randomization method. The period covered by the present research (March-June 2020) stemmed from the introduced quarantine measures and the subsequent transition of all students to the e-learning format.

An empirical study performed at the beginning of the examination made it possible to assess the formation of professional communication skills among respondents and create a training course that would facilitate their development through social networks. The following re-examination of respondents' communication skills in June 2020 confirmed the effectiveness of the course developed and helped determine the role of social networks in improving professional communication skills. The research process made use of the most commonly used psychodiagnostic tests in Russia translated into English. Statistical processing of the results obtained was carried out by utilizing an online calculator. The results obtained enabled formulating relevant conclusions and practical recommendations for the future.

To determine the level of the respondents' communicative competence before and after the online training, the following tests were used (AZPS, 2021):

- Communicative skills test (developed by L. Michelson, translated and adapted by Y. Z. Gilbukh) – aimed at determining the level of communicative competence and quality of basic communicative skills formation;
- Empathy test – aimed at investigating the ability to put oneself in another person's place and the ability for a voluntary emotional response to other people's experiences. Empathy is believed to promote balance in interpersonal relationships since it means accepting the feelings that someone else is experiencing as if they were our own. Highly developed empathy is a key success factor

in training and education, as well as in activities requiring being involved in the world of a communication partner;

- Test on the quality of relationships with an interlocutor;
- Test “Are you a pleasant conversationalist?”.

Apart from this, the following strategies and techniques were used to develop an online training course focused on the enhancement of skills necessary for professional communication:

- Come up with a meme on a given topic, post it on Facebook and (or) Instagram, determine whose meme got the most likes and which meme was shared by a larger number of respondents;
- Come up with a story and describe it briefly (up to 5 sentences); the rest of the group must determine whether it is true or false;
- Come up with the largest number of antinomies possible;
- Come up with as many compliments for each of the group members as you can;
- Create an online event on Facebook and count how many people from the group are interested in it.

A meme is a peculiar and somehow aggressive unit of cultural information, depersonalized in relation to its source and actively spread in society. Memes tend to run into our brains, thereby changing perception, affecting the emotional state, and causing a desire to share this meme with other people to convey them the same emotions (AZPS, 2021). Antinomies are two statements that are both true and false (the brightest example is the classical antinomy of Kant: “the world is finite – the world is infinite”). Inventing antinomies develops such fundamental aspects of professional communication as logical thinking, literacy, and the ability to press the case (AZPS, 2021).

Statistical Processing. The responses received from the respondents were processed using Statistica, Microsoft Excel, on the basis of which charts were formed with indicators separately for each question for all respondents.

Research Limitations laid in the fact that most communication training sessions were based on the use of visual and auditory analyzers and were supposed to be used during face-to-face communication in an online mode only. The search for similar training courses that would be suitable for online teaching professional communication skills got nowhere. In this regard, the study authors have modified and adapted some of the existing training methods to be applied in teaching professional communication through Facebook and Instagram.

Ethical Issues of this study were connected with the disclosure of some personal information of respondents, for which their consent was obtained. The achieved research results were evaluated without taking into account age and gender differences.

RESULTS

The examination of communicative competence levels using Michelson’s methodology suggests determining the predominant way of communication in the proposed situations (dependent, competent, or aggressive) and outlining the formed communication skills. To make adequate conclusions, this examination was conducted twice – before and after the online training course (Table 1). While before the online training, poor abilities to respond to fair criticism, accept attention and refuse requests were noted with a predominance of dependent and aggressive forms of behavior, the post-training testing revealed predominantly competent behavior and the ability to respond to suggested communication situations as sufficiently well developed.

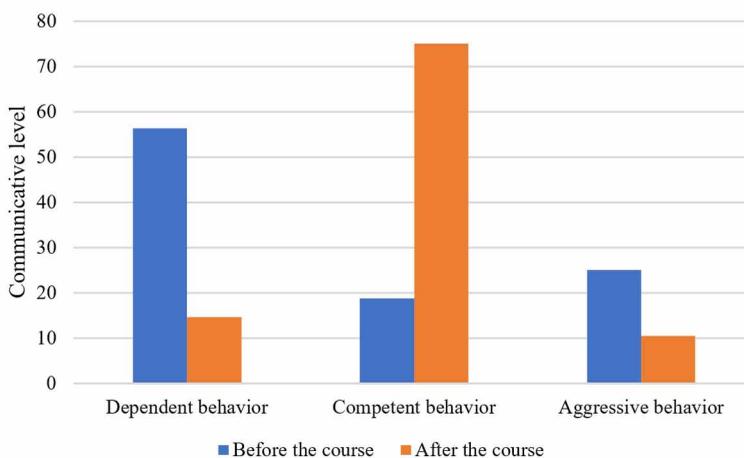
As can be seen from the table, the most significant communication problems in the study group arose due to the inability to respond with a refusal to a request and react to a provocative behavior. Failure to respond to someone’s requests does not necessarily mean a failure to provide help and support. First of all, this refers to counteracting psychological manipulations. In the meantime, the developed course intended both to teach how to say “no” to unreasonable requests and how to provide

empathy and support to those deserving it. That is, the training contributed to the formation of more constructive communication models in an online format.

Table 1. Communicative competence test results: pre- and post-training data

No	Ability blocks	Before the course		After the course		Student's t-test value	p
		Absolute number	%	Absolute number	%		
1	Ability to pay and accept attention (compliments)	159	45.7	254	72.9	192.33	<0.05
2	Ability to respond to fair criticism	130	37.4	212	60.9	166.17	<0.05
3	Ability to respond to unfair criticism	102	29.3	225	64.6	249.61	<0.05
4	Ability to respond to offensive, provocative behavior	51	14.6	203	58.3	309.01	<0.05
5	Ability to address someone with a request	72	20.7	246	70.7	353.55	<0.05
6	Ability to refuse someone else's request	23	6.6	268	77.0	497.80	<0.05
7	Ability to provide empathy and support	139	39.9	306	87.9	339.41	<0.05
8	Ability to accept empathy and support	110	31.6	261	75.0	306.88	<0.05
9	Ability to make contact with another person	177	50.8	319	91.7	289.21	<0.05
10	Ability to respond to an attempt to contact you	153	43.9	297	85.3	292.74	<0.05
Total		348	100	348	100		

Figure 2. Dynamics of respondents' communicative behaviour



The dynamics of the respondents' communicative behavior before and after the training is shown in detail in Figure 2.

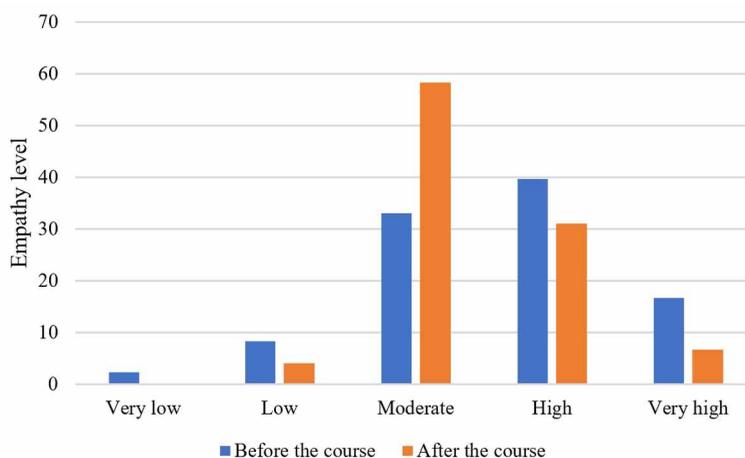
The initial tendency to dependent and aggressive behavior in the communication process draws particular attention. Such a state of affairs may be caused by pressing conditions of self-isolation and lack of face-to-face contact, which intensified non-constructive virtual communication among students during the quarantine. The developed training course promoted a considerable decrease in non-constructive communicative behavior manifestations in favor of competent communication.

The positive shifts were also noted for respondents' empathy levels. Relevant data on the results of this testing are presented in Table 2 and Figure 3.

Table 2. Empathy test results: pre- and post-training data

No	Empathy level	Before the course		After the course		Student's t-test value	p
		Absolute number	%	Absolute number	%		
1	Very low (†11 points)	8	2.3	-	-	16.26	<0.05
2	Low (12-36 points)	29	8.3	14	4.0	30.41	<0.05
3	Moderate (37-62 points)	115	33.0	203	58.3	178.90	<0.05
4	High (63-81 points)	138	39.7	108	31.0	61.52	<0.05
5	Very high (82-90 points)	8	16.7	23	6.7	70.71	<0.05
Total		348	100	348	100		

Figure 3. Dynamics of respondents' empathy



The developed online-based course on improving professional communication skills appeared to have a normalizing effect on respondents' empathy levels – it rose low and reduced too high manifestations of sensitivity to the experiences of other people. As a personality trait, the empathic ability itself is a positive quality; however, either callousness and egocentrism or excessive sensitivity

represent barriers to constructive and fruitful professional communication. Therefore, the possibility of normalizing empathy designates the validity of online learning from the perspective of professional communication skills formation and increasing communicative competence of the individual.

The dynamics of indicators describing the quality of professional communication before and after the online training course was assessed using the test on the quality of relationships with an interlocutor (Table 3).

Table 3. Online course's influence on the relationships with an interlocutor

No	Indicator	Level	Before the course		After the course		Student's t-test value	p
			Absolute number	%	Absolute number	%		
1	Mutual support	Low	226	64.9	112	32.2	231.52	<0.05
		Moderate	122	32.1	236	67.8	252.44	<0.05
2	Harmony of communication	Low	232	66.7	38	10.9	394.57	<0.05
		Moderate	116	33.3	310	89.1	394.57	<0.05
3	Conflict resolution	Low	237	68.1	54	15.5	371.94	<0.05
		Moderate	111	31.9	294	84.5	371.94	<0.05
Total			348	100	348	100		

As indicated by the data above, most respondents lacked mutual support, communication harmony, and conflict resolution skills before the experiment began. Nevertheless, the course taken encouraged more active and effective cooperation as well as made respondents more attentive to the conversation partner and less prone to conflict.

In addition to the methodologies mentioned above, respondents were also offered to pass a quick test that would assist in self-assessment of their communicative behavior. Its results are presented in Table 4. Interestingly, almost 20% of individuals surveyed noted significant communication difficulties, whereas almost a half indicated their low sociability. The proposed preparation course showed its notable beneficial effect on general respondents' ability to communicate and keep the ongoing discussion on, which is fundamentally important from the perspective of research participants' future occupation. In such a manner, the study findings clearly indicate the effectiveness of using social networks to develop professional communication skills.

Table 4. Communicative competence self-assessment results

No	Points	Before the course		After the course		Student's t-test value	p
		Absolute number	%	Absolute number	%		
1	1-3	67	19.2	15	4.3	105.36	<0.05
2	4-9	189	54.3	82	22.6	224.15	<0.05
3	9-11	92	26.5	278	79.9	377.60	<0.05
Total		348	100	348	100		

DISCUSSION

The conducted study is worth attention from the scientific community since communicative competence, traditionally understood as a direct interpersonal communication skill, was formed and assessed virtually. The development of digital technologies has radically changed the very paradigm of professional communication when the interlocutor's assessment as a business partner is performed only in the online mode, or, colloquially speaking, "blindly." Even with video contact available, the interaction parameters differ significantly from those during real-life communication. The monitor screen cannot convey all the nuances of facial expressions, intonation, and gestures. Furthermore, most often, online communication takes place in a written form, and, unlike traditional business interaction, information on social networks is presented in an extremely laconic, telegraphic style. These short messages must not only be filled with maximum content but also be composed in such a way to cause interest from potential clients and business partners. The ability to communicate via social networks is becoming an image-building factor that often determines future career success. In other words, when it comes to the formation of professional communication skills by means of social networks, the advantage of such training is connected precisely with the opportunity to practice critical business communication skills in an online mode, which cannot be done on traditional in-class lessons. If the world starts to use new means of communication, then the training format must be consistent with these means, and the methods used must correspond to the skills being formed. For this particular reason, the present study consolidated several most suitable training methods and not only adapted them for the online format but also directed the learning process towards developing professional communication competence by virtue of social networks. The proposed approach is in line with the recommendations for online professional communication training (Bay, 2017; Vie, 2017), claiming that such preparation should be focused on communication in the workplace and ensure full immersion in learning situations. The developed training course was based on this very idea. The most significant achievements of the experiment carried out are effective intragroup communication and excellent group cohesion (Bernhold & Rice, 2020; Wu & Choy, 2018), even though such outcomes are believed difficult to achieve online. Taking into account the arguments that the flow of information from social networks weakens the ability for thoughtful reading (Berkani et al., 2021) and considering the importance of written communication skills for professional interaction (Bossio et al., 2020), the conducted experiment tried to form skills in presenting and perceiving information necessary for communication on social networks, as well as in critically evaluating what one has read. Many researchers of today are especially concerned by the transformative influence social networking causes on users' cognitive abilities and the resulting online addiction and reduced ethical barriers (Agar, 2018; Carr, 2008; Smith et al., 2016). These concerns were not unrewarded within the present work as, apart from developing professional communication skills, the set of tasks proposed was also aimed at promoting critical thinking, empathy, communication harmonization, and mutual support. Analysis of testing outcomes obtained before and after the online training course made it possible to objectively attest the validity and effectiveness of the proposed methodology of developing professional communication skills.

In sum, the conducted experiment was focused on the formation of communicative competence by dint of professional communication in social networks. The results of communication skills analysis performed before and after completing the specialized online training course showed its high effectiveness. Despite the critical role of professional communication skills for individuals majoring in management and teacher education, initially, students enrolled did not possess these skills at a sufficient level since the experience of professional communication via social networks was far from the primary concern of their preparation before the pandemics. These skills' development became crucial only after the educational process switched fully to the online format. The positive results of using social networks to form professional communication skills among university students allow judging the proposed training methods as relevant and effective. Therefore, they can be recommended for inclusion in educational institutions' academic programs to improve communicative competence.

CONCLUSION

The study showed initially insufficient communicative competence of students trained in the field of management and teacher education. It was manifested in the failure to respond to criticism, provocations, and requests adequately; the choice of a dependent or aggressive style of behavior in online interpersonal communication; excessive sensitivity or on the contrary, emotional callousness; and poor sociability. The elaborated online course oriented towards developing professional communication skills facilitated a notable decrease in the number of non-constructive communicative behavior manifestations in favor of competent communication. Apart from this, the course was noted to have a normalizing effect on respondents' empathy levels as it enhanced low and reduced too high manifestations of sensitivity to other people's experiences. Hence, the ability to sympathize and support others increased from 39.9% to 87.9%, and the moderate level of empathy initially observed in only 33.0% of cases at the end of the experiment was inherent to already 58.3% of all the persons involved. This fact confirms the usefulness and applicability of e-learning-based courses when forming skills necessary for virtual professional communication and improving general communicative competence of a person. A similar increase in cases of possessing moderate abilities to provide mutual support (from 32.1% to 67.8%), harmony of communication (from 33.3% to 89.1%), and non-conflict interaction (from 31.9% to 84.5%) suggest that the proposed web-based course contributes to finding ways to mutual understanding, encourages the attentiveness to the interlocutor, promotes less conflict-prone communication model, and advances respondents' sociability. Given all the arguments above, the conclusion can be drawn about the usefulness of social networks in developing skills necessary for virtual professional communication. This provides evidence that the proposed training methodology is effective and can be used by educational establishments to improve the communicative competence of their students. Prospects for further research are the possibility of using the developed methodology and the results obtained in studying the capabilities of various social networks in the development of communication skills not only in education but also in other areas of life. In addition, the obtained data can be used to assess the capabilities of different types of social networks in improving the level of communicative competencies of different professions.

FUNDING AGENCY

Open Access Funding for this article has been covered by the authors of this manuscript.

ACKNOWLEDGMENT

Natalya Gaifullina has been supported by the Kazan Federal University Strategic Academic Leadership Program.

REFERENCES

- Afrouz, R., & Crisp, B. R. (2021). Online education in social work, effectiveness, benefits, and challenges: A scoping review. *Australian Social Work, 74*(1), 55–67. doi:10.1080/0312407X.2020.1808030
- Agar, N. (2018). *How to be Human in the digital economy*. The MIT Press.
- Arogyaswamy, B. (2020). Big tech and societal sustainability: An ethical framework. *AI & Society, 35*(4), 829–840. doi:10.1007/s00146-020-00956-6 PMID:32218647
- AZPS. (2021). *Psychology: Tests*. <https://azps.ru/>
- Bay, J. (2017). Training technical and professional communication educators for online internship courses. *Technical Communication Quarterly, 26*(3), 329–343. doi:10.1080/10572252.2017.1339526
- Berkani, L., Belkacem, S., Ouafi, M., & Guessoum, A. (2021). Recommendation of users in social networks: A semantic and social based classification approach. *Expert Systems: International Journal of Knowledge Engineering and Neural Networks, 38*(2), e12634. doi:10.1111/exsy.12634
- Bernhold, Q. S., & Rice, R. (2020). Toward an integrated model of online communication attitudes, communication frequency, and relational closeness. *Communication Studies, 71*(1), 1–21. doi:10.1080/10510974.2019.1683594
- Bossio, D., McCosker, A., Milne, E., Golding, D., & Albarrán-Torres, C. (2020). Social media managers as intermediaries: Negotiating the personal and professional in organisational communication. *Communication Research and Practice, 6*(2), 95–110. doi:10.1080/22041451.2019.1648028
- Capriotti, P., Zeler, I., & Camilleri, M. A. (2021). Corporate communication through social networks: The identification of the key dimensions for dialogic communication. In M. A. Camilleri (Ed.), *Strategic Corporate Communication in the Digital Age* (pp. 33–51). Emerald Publishing Limited. doi:10.1108/978-1-80071-264-520211003
- Carr, N. (2008). Is Google making us stupid? *Yearbook of the National Society for the Study of Education, 107*(2), 89–94. doi:10.1111/j.1744-7984.2008.00172.x
- Dayley, C. (2020). Student perceptions of diversity in technical and professional communication academic programs. *Technical Communication Quarterly, 29*(1), 49–69. doi:10.1080/10572252.2019.1635210
- Dhar, S., Bose, I., & Khan, M. N. (2021). Digital social networking: Risks and benefits. In *Research Anthology on Strategies for Using Social Media as a Service and Tool in Business* (pp. 828–849). IGI Global. doi:10.4018/978-1-7998-9020-1.ch042
- Flanagin, A. J. (2017). Online social influence and the convergence of mass and interpersonal communication. *Human Communication Research, 43*(4), 450–463. doi:10.1111/hcre.12116
- Franz, S., Muser, J., Thielhorn, U., Wallesch, C. W., & Behrens, J. (2020). Inter-professional communication and interaction in the neurological rehabilitation team: A literature review. *Disability and Rehabilitation, 42*(11), 1607–1615. doi:10.1080/09638288.2018.1528634 PMID:30457016
- Glatter, R. (2018). Digital Addiction: A Recipe For Isolation, Depression And Anxiety. *Forbes*. <https://www.forbes.com/sites/robertglatter/2018/04/13/digital-addiction-a-recipe-for-isolation-depression-and-anxiety/?sh=785b77825f6b>
- Gonzales, L., & Baca, I. (2017). Developing culturally and linguistically diverse online technical communication programs: Emerging frameworks at University of Texas at El Paso. *Technical Communication Quarterly, 26*(3), 273–286. doi:10.1080/10572252.2017.1339488
- Handford, M., Garrett, P., & Cots, J. M. (2019). Introduction to language awareness in professional communication contexts. *Language Awareness, 28*(3), 163–165. doi:10.1080/09658416.2019.1654647
- Kaushal, U., & Talwar, T. (2021). (in press). Exploring the communication skills of Indian engineering undergraduates: A partial ethnographic study. *Higher Education Skills and Work-Based Learning*. Advance online publication. doi:10.1108/HESWBL-09-2020-0217
- Kunka, B. A. (2020). Twitter in higher education: Increasing student engagement. *Educational Media International, 57*(4), 316–331. doi:10.1080/09523987.2020.1848508

- Lacka, E., Wong, T., & Haddoud, M. (2021). Can digital technologies improve students' efficiency? Exploring the role of Virtual Learning Environment and Social Media use in Higher Education. *Computers & Education*, 163, 104099. doi:10.1016/j.compedu.2020.104099
- Malvini Redden, S., & Way, A. K. (2019). How social media discourses organize communication online: A multi-level discursive analysis of tensions and contradictions in teens' online experiences. *Communication Quarterly*, 67(5), 477–505. doi:10.1080/01463373.2019.1668440
- Martinez, G. L. V. (2018). *Status of Mind: Social media and young people's mental health*. ISSUP. <https://www.issup.net/knowledge-share/publications/2018-05/statusofmind-social-media-and-young-peoples-mental-health-and>
- Matthes, J., Karsay, K., Schmuck, D., & Stevic, A. (2020). “Too much to handle”: Impact of mobile social networking sites on information overload, depressive symptoms, and well-being. *Computers in Human Behavior*, 105, 106217. doi:10.1016/j.chb.2019.106217
- Meloncon, L. (2017). Contingent faculty, online writing instruction, and professional development in technical and professional communication. *Technical Communication Quarterly*, 26(3), 256–272. doi:10.1080/10572252.2017.1339489
- Mishra, S. (2020). Social networks, social capital, social support and academic success in higher education: A systematic review with a special focus on ‘underrepresented’ students. *Educational Research Review*, 29, 100307. doi:10.1016/j.edurev.2019.100307
- Müller, F., Denk, A., Lubaway, E., Sälzer, C., Kozina, A., Perše, T. V., Rasmusson, M., Jugović, I., Nielsen, B. L., Rozman, M., Ojsteršek, A., & Jurko, S. (2020). Assessing social, emotional, and intercultural competences of students and school staff: A systematic literature review. *Educational Research Review*, 29, 100304. doi:10.1016/j.edurev.2019.100304
- Neubaum, G., & Krämer, N. C. (2017). Opinion climates in social media: Blending mass and interpersonal communication. *Human Communication Research*, 43(4), 464–476. doi:10.1111/hcre.12118
- Sherman, L. E., Payton, A. A., Hernandez, L. M., Greenfield, P. M., & Dapretto, M. (2016). The power of the “like” in adolescence. *Psychological Science*, 27(7), 1027–1035. doi:10.1177/0956797616645673 PMID:27247125
- Slone, A. R., & Gaffney, A. L. (2016). Assessing students' use of LinkedIn in a business and professional communication course. *Communication Teacher*, 30(4), 206–214. doi:10.1080/17404622.2016.1219043
- Smith, J., Mackiewicz, J., Hanson, D., Fanning, S. N., & Doan, S. (2016). The communicative work of biology-journal captions: Lessons for technical and professional communication. *Technical Communication Quarterly*, 25(4), 260–277. doi:10.1080/10572252.2016.1222453
- Sulcas, G., & English, J. (2010). A case for focus on professional communication skills at senior undergraduate level in Engineering and the Built Environment. *Southern African Linguistics and Applied Language Studies*, 28(3), 219–226. doi:10.2989/16073614.2010.545024
- Tang, Y., & Hew, K. F. (2017). Is mobile instant messaging (MIM) useful in education? Examining its technological, pedagogical, and social affordances. *Educational Research Review*, 21, 85–104. doi:10.1016/j.edurev.2017.05.001
- Vie, S. (2017). Training online technical communication educators to teach with social media: Best practices and professional recommendations. *Technical Communication Quarterly*, 26(3), 344–359. doi:10.1080/10572252.2017.1339487
- Walther, J. B., & Valkenburg, P. M. (2017). Merging mass and interpersonal communication via interactive communication technology: A symposium. *Human Communication Research*, 43(4), 415–423. doi:10.1111/hcre.12120
- Wu, F., & Choy, C. H. Y. (2018). Frames and framing effects in Chinese online and offline crisis communication: The case study of a celebrity scandal. *Chinese Journal of Communication*, 11(3), 324–343. doi:10.1080/17544750.2018.1473265

Rimma Ivanova is a PhD, Associate Professor of the Institute of Distance Learning, Linguistics University Nizhny Novgorod, Russian Federation. Research interests: social networks, communication skills, professional skills, education technologies, and communicative competence.

Natalya Gaifullina is a Senior Teacher of the Yelabuga Institute, Kazan Federal University, Russian Federation. Research interests: social networks, communication skills, professional skills, education technologies, and communicative competence.

Nidal Al Said is a PhD, Assistant Professor of the College of Mass Communication, Ajman University, United Arab Emirates. Research interests: Social Networks, Communication Skills, Professional Skills, Information Technology and Information Engineering.