

# TESTING POLISH SECONDARY-SCHOOL STUDENTS' WRITTEN SOCIAL COMMUNICATION COMPETENCE BASED ON A TIMED COMPOSITION TASK

## KOMPETENCJE PISEMNEGO KOMUNIKOWANIA SPOŁECZNEGO UCZNIÓW NA PODSTAWIE BADAŃ

Krzysztof Gołata, PhD

Poznań University of Economics and Business, Department of Economic Publicity and Public Relations, Poland

krzysztof.golata@ue.poznan.pl ● ORCID 0000-0001-6468-8076

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### ABSTRACT

This study experimentally evaluated Polish school students' competence at written communication, understood as one of the forms of social communication. The task, performed online, was designed to see if the students were able to select the most important information from a given base text and to compose new texts on this basis to comply with three different length requirements, and how they behaved under the pressure of the time allocated to complete the sub-tasks. Results from an overall pool of 500 secondary school students from a diverse sample of schools (in the city of Poznań and the surrounding Wielkopolska province) that differed in terms of type and ranking suggest an overall poor competence at various composite skills involved in written social communication: information selection, summarization, logical structuring, and cohesive embellishment. Participants clearly exhibited various problems with concisely formulating thoughts, properly complying with instructions, etc. Composing a short, written message (based on a provided base text) and/or freely embellishing and reformulating information clearly caused them considerable difficulty. The article closes with some suggestions for how the methods used could potentially be improved in future studies of this type.

**Key words:** social communication, written communication, competence

## ABSTRAKT

Skuteczne komunikowanie jest warunkiem skutecznego porozumiewania się ludzi oraz instytucji. Komunikowanie jest atrybutem nie tylko sprawnego zarządzania ludźmi oraz organizacją, ale także wzajemnego zrozumienia się i porozumienia. Artykuł koncentruje się na jednym z narzędzi komunikowania społecznego, jakim jest komunikowanie pisemne. Zastosowanie tego narzędzia polegało na przygotowaniu przez uczniów szkół średnich w określonym czasie tekstu (informacji) o określonej objętości.

**Słowa kluczowe: komunikowanie społeczne, komunikowanie pisemne, kompetencje**

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## Introduction

Social communication is one of the most important competences, not only for individuals managing a team or an organization, but for every employee. Indeed, the ability to communicate effectively is one of the basic preconditions for the proper functioning of any community, organization or institution. As Goban-Klas (2009, p. 40) points out, the idea that the human individual, as a rational being, needs contacts with other people which "require, above all, the ability to express one's thoughts and to communicate them to others", goes all the way back to Aristotle.

Morozowski (2001) draws attention to the difficulties involved in defining "communication", arguing that they are twofold. Firstly, they are connected with determining which manifestations of human behavior and their effects constitute communication. Secondly, they involve the choice of

appropriate categories of description, which most accurately reflect the essence of communication. Wojcik (2013, p 77), in turn, notes that there are two extreme understandings of the term "communication" manifest in the literature: a very broad notion, "everything people do can be reduced to communication," and a very narrow one, whereby "only verbal communication is considered communication."

Goban-Klas (2003), reviewing how the concept of "mass communication" is understood in the literature, points out the occurrence of various forms of communication, including communication as transmission, as understanding, as interaction, as linking (community-forming), as interaction, as exchange, and as a component of social processes. From the standpoint of the problem to be addressed in this article, the first understanding of this concept is important — the notion of communication as the transmission of information. On the other hand, Filipiak (2003) points out that communication is a process: symbolic, social, continuously ongoing, it is a mutual relation, it takes place on a certain level (interpersonal, group, institutional, intercultural, mass communication), and finally it is a transactional process of negotiating meanings by the participants. The author ultimately concludes that one cannot stop communicating.

Dobek-Ostrowska (2004), in one of her many works focusing on political communication, surveys a number of different approaches to this concept that can be found in literature, including the behavioral, structural-functional, interactional and dialogical approaches. Michalczyk (2008), in turn, pays attention to the changes in communication that have arisen as a result of globalization. Based on an analysis of the existing literature, he reduces the reality of global communication to four research fields: international communication, developmental communication, intercultural communication, and transcultural communication. He concludes that in the literature on the relationship between communication and globalization, there are five characteristics of a global information society: global spirit, global regulation, divisive global communication, global governance, and global business. Clearly, the development of the Internet is reinforcing all types of global activities.

The issue of communication in the online world has received much attention in the contemporary literature. Of the many aspects of this issue

that can be considered; here it is worth referring to the article by Tadeusz Kowalski, poignantly entitled (in Polish): "Communication in the Internet era: back to the sources?" (Kowalski, 2017). He argues that the development of the Internet provides a basis for reflection about a "new — old" model of communication, with digital platforms altering the nature of contemporary communication between people. The Internet has been said to lead to the death of the printed word, while at the same time opening up great leeway for the written word. The Internet, therefore, is a return to writing, and it is probably in this context that Kowalski writes about a "new — old" model of communication.

Writing about one of the aspects of communication, namely communication within an organization, the public relations specialist Dariusz Tworzydło (2017) points out several main areas: communication on the vertical employee level, on the vertical managerial level, on the vertical dialogue-based level and on the conflict-based level. The effectiveness of internal communication, he argues, depends not only on whether there is dialogue or toxic conflict in communication, but also on whether all actors involved in the communication process understand it and are willing to take on the challenges involved.

When speaking of communication, we often consider mistakes that people make in this process, mistakes that are the source of social conflicts and then crises. In extreme cases, they lead to the collapse of a company or organization.

Communication is the basis of understanding of official instructions from managers to contractors and opinions of employees addressed to management bodies. Efficient use of diverse channels (tools) of social communication is one of the main sources of acceptance or rejection of decisions of state and local government bodies. Decision-makers often say: "It is not enough to be right, it is still necessary to convince others that one is right". Effective communication definitely facilitates gaining power within any institutional body, be it a student government, local housing estate council, municipal government, or national government. It is worth noting, however, that social communication cannot be analyzed solely in terms of "top-down" relationships. Rather, efficient communication is also determined by the effectiveness of the "bottom-up" relationship, in other words, the way on which information is articulated and channeled from

society (individuals or institutions) to the decision-making bodies of various levels. How information is formulated and conveyed will to a large extent determine how decision-makers react.

A number of aspects of communication have been highlighted by Denis McQuail (2010), who writes about the timing of communication and the duration of the process. Technology increases its speed and the possibility for repeated reproduction of information. McQuail also pays attention to the place where the communication process takes place. Location determines the context of the message; it not only connects communicating individuals but also reduces the distance between them. Two more aspects raised by McQuail are also worth noting, namely social reality and cultural diversity. The process of communication takes place not only in a specific time and place, but also in a material social reality that determines the behavior of senders and receivers of information. The process of sending and receiving information also determines the cultural differentiation observed among the transmitters and receivers of any message.

At present, in the realities of the early 21st century, individuals get "attacked" by thousands of pieces of information virtually every moment of our lives. The ability to absorb this information largely hinges upon the limits on the technical possibilities of transmission (e.g. the duration of a radio or television broadcast), counted in minutes and more often in seconds, or on the acceptable number of words or characters (for printed text). The Internet, largely free of such restrictions, also "condenses the volume of information", and the real barrier in this case is defined by the perceptions of users, in other words, how long we are willing to read a text or focus our attention on a transmitted image. A contemporary broadcaster, therefore, must first of all answer the question of how to capture and hold the recipient's interest in the transmitted information. We should remember that every sender of information selects the content of the message by assessing what — in his opinion — is important and should be relevant for the recipient (Jabłoński, 2016).

As for written communication, the literature contains numerous assertions concerning declining competence among society — in Polish, for instance, this has been lamented by Dukaj (2019), among others. Obviously, it is difficult to predict what the future of humanity will be like, although in a few years' time, people will very likely need competences very

different than the ones we know at present.<sup>1</sup> However, it does not seem that competence in written communication will soon disappear from the catalog of competences necessary for a human being to communicate with the surrounding world. Imagery and voice will not replace everything that is related to communication, although with certainty people will use the competence of written communication differently.

In light of the above context, we designed and implemented a research project to experimentally evaluate Polish school students' competence at written social communication. The task was designed to see if the students were able to select the most important information from a given base text, to compose new texts on this basis to comply with three different length requirements (shorter and longer), and how they behaved under the pressure of the time allocated to complete each sub-task.

## **Broader Research Project Framework**

The project that this study forms part of, carried out at the Poznań University of Economics,<sup>2</sup> consisted of two main parts. In the first, the task was to create a list of competencies needed in the "new economy"<sup>3</sup> and to prepare a research tool to measure students' competence in written social communication. It was assumed that every communication, regardless of whether it is transmitted in print (newspapers, magazines, the Internet), voice (radio) or through images (television, the Internet) must be prepared and drawn up in a written version. Therefore, the ability to use written language (Polish in our study, but also any other language) in accordance with its own rules and stylistic norms is of fundamental importance for conveying a correctly constructed message, and thus for the effective communication of individuals and institutions.

It is a truism that the new economy will require new competencies from employees, but it is hard not to agree with Lamri (2019) that the modern economy will generate a high demand for employees who have the capacity for analysis and interaction, broadly construed. Having competences that the author describes as "routine", rooted back in the 20th century, will soon be a serious barrier to functioning in the economy and society. We can say that social communication fits perfectly into the competences Lamri posits.

Osika (2018) also considers communicative competence, asking how it should be defined in the modern times. She notes that the American linguist Noam Chomsky was the first to address this issue back in the mid-1960s, and refers to the six "levels of social communication" posited by McQuail (2010): intrapersonal communication, interpersonal communication, intergroup communication, intergroup communication, institutional communication, mass communication,

The aim of the second part of the research project was to conduct applied research in selected secondary schools located in Poznań and the surrounding Wielkopolska province (general secondary schools, technical secondary schools and trade schools).

## Materials and methods

The portion of this research to be reported herein experimentally evaluated Polish school students' competence at written social communication.

### Sample selection

The study was conducted in 2021 among students at selected secondary schools in Poland's Wielkopolska province, which is centered around the city of Poznań. The schools were selected based on the annual ranking list of the monthly magazine *Perspektywy*.<sup>4</sup> All the secondary schools in the city and province receive scores and ranking orders within three different types: general-education secondary schools (*liceum*), technical secondary schools (*technikum*), and vocational schools (*zawodowa szkoła branżowa*). A sample of schools was selected to cover the full spectrum of teaching quality, including schools securing the best, good, average, poor and poorest ratings. A mixed method of non-random selection was used, allowing us to construct a sample that reflected the structure of schools in Wielkopolska and the diversity of quality of education.

The survey covered 26 secondary-school classes, including 8 classes of vocational schools, 9 classes of technical schools, and 9 classes of general

secondary schools. The localities in which the selected schools operated were divided into three groups: schools in the city of Poznań itself (5 units), schools in other cities and towns of the province (19 units), and rural areas (2 schools). In terms of the two characteristics simultaneously, the five schools in Poznań include 2 vocational schools, 1 general-education school, and 2 technical schools; of the 19 schools in other cities of the province, 5 units were vocational schools, 8 were general-education schools and 6 technical schools; and of the two rural schools, in turn, one was a vocational school and the other a technical school.

Fifty-five students participated in the study, out of the total of 663 students assigned to the selected classes. Thus, 76% of all students in the selected classes participated in the study, and the selection of classes translated into the structure of the student sample. The students in the sample were 63% female and 37% male. General-education secondary school (*liceum*) students made up the largest group of respondents (47 percent), with the group of technical school (*technikum*) students made up a further one-third of the surveyed population (33 percent), while one-fifth of the respondents were vocational school (*zawodowa szkoła branżowa*) students (21 percent). Nearly one-third of the surveyed population (3%) were students at schools in the city of Poznań, precisely twice as many (64%) were students at schools in other cities and towns in Wielkopolska, while 4% of respondents attended rural schools.

## Experiment

The students in this sample were tested for a number of competences. The task dealing with written social communication, to be reported herein, was presented to participants as the fifth in a series.<sup>5</sup> Testing was performed online, through an online testing platform.

The students' task was to compose a short written text addressed mainly to their future peers, i.e. to future secondary-school students potentially attending their school. This identification of a specific addressee was an important piece of information which defined the scope of knowledge and skills of the people who would eventually be the recipients of the content of the message. The students were informed that the texts they composed by



them were not meant to be a classic advertisement of a secondary school, but an informational text, to aid late elementary school pupils in search of a secondary school at which to continue their education. The prepared texts, therefore, were meant to include a limited number of expressions, such as: "great school", "terrific curriculum", "excellent teachers", "great atmosphere" or "caring and understanding educators". However, note that these phrases are closer to the language of marketing or public relations, or even the language of propaganda, which Edward Bernays wrote about as early as in the 1920s (Bernays 1928). Such a message has little in common with an informational text.

Each student was given a base text approximately 2,500 characters long. Before starting the task, they were asked to read this text carefully. The students realized that the text is not arranged according to the classical rules of information construction. The author of such a text should always start with the information most important for the recipient, and then move on to less important information; however, the content of the base text was chaotically organized, in a number of places inconsistent with the rules of style of the Polish language, and it also contained certain typos. Students were not warned about this fact in advance. This was done deliberately, partially in order to partially make the task more difficult, but above all, it was to make it possible to check to what extent the respondents employed a "copy-paste" approach (the student had access to the base text throughout the task).

Therefore, two issues were the subject of evaluation in this task: the time of task completion and the quality of the prepared output text, i.e. whether the volume of the text was consistent with the given limits and whether it contained the information most relevant for the recipient. The task was divided into three parts.

**Part I** — On the basis of the base text read, each student had to prepare an original short text with a strictly specified length limit of 280 characters (i.e. the maximum volume of information transmitted via Twitter, for instance<sup>6</sup>). In this part, they had to sharply abbreviating the material by focusing on just two or three most important pieces of information.

**Part II** — In this part, a longer text was to be prepared, the volume of which should be 1,500 characters. In practice this meant shortening the material while preserving its most important points.

**Part III** — In this part, there was no limit set for the volume of text, which was implicitly more than 1,500 characters. The students' task was to expand the text by adding any available sources of information (e.g. the Internet), as well as their own knowledge. In this part, they could also add their own opinions. Of course, students' own opinions were not meant to dominate the text, but rather to supplement it.

The first evaluation criterion was the time taken to complete the work. For each task, three time intervals were distinguished. For the first: up to 15 min., 15–20 min. and more than 20 min. For the second: up to 20 min., 20–30 min. and over 30 min. And for the third: up to 30 min., 30–45 min. and over 45 min.

The second criterion of evaluation was the quality of the prepared text, i.e. the amount of information contained in it. It was assumed that on the first task the text should contain three most important pieces of information, and on the second task, five pieces of information. On the third task, students should not only use the information contained in the text given to them, but also demonstrate their own knowledge and draw upon online resources. In this part, students were meant to be creative in both selecting information and tapping into different sources of information.

Each student was allowed to perform the entire task for a maximum of 3 h. Once this time expired, the software automatically shut off the student's access. Students were given information about the time to complete the task. Each student was meant to begin the task by reading the attached text, and so each of them can be considered to have been based on the very same "input material".

The base text contained the following five pieces of information deemed by the researchers to be most important from the point of view of the imagined recipient (reader):

- all students of our secondary school pass the secondary-school leaving exam (*matura*) each year;
- each year 95% of our school graduates secure admission to their chosen university;
- our secondary school cooperates with all the universities in the city of Poznan;
- our school offers the opportunity to learn Chinese;

- the ranking of secondary schools published by *Perspektywy* magazine is the most prestigious such ranking in Poland and therefore its results should be an important, but not the only source of information when choosing one's further educational path.

## Results

The task analyzed in this article, which was presented to participants as the fifth in a series of tasks,<sup>7</sup> consisted of three parts. Each was successfully completed by a different number of participants — note that not everyone who started each part necessarily completed it. Part I was started by 486 participants,<sup>8</sup> 105 of whom stopped before finishing the task or exceeded the time limit for its completion. Part II was begun by 455 people, with 82 students interrupting it or exceeding the time limit. Part III was started by 448 students, with 67 of them failing to complete it or exceeding the time limit. Restated another way, Part I was completed by 378 respondents, which means that more than 21% of those who started did not complete it. Part II was completed by 373 students, and so 18% of those who started did not complete it. Part III was completed by 382 respondents, meaning that 15% did not complete the task. Notably, the overall number of respondents who started to complete each part of the task can be seen to be decreasing, although the number of students who became discouraged and stopped following the instruction or exceeded the time limit is also decreasing. Part III, which was the most difficult (composing the longest text, while also drawing upon additional information), was completed by relatively the largest group of students.

The question arises as to why such a significant group of students (ranging from 15% to over 21%) started each part of the task, but did not finish or did not complete that part in time. It can be assumed these students found the task too difficult. From the comments that some of the respondents provided after the study, it appeared that quite a few students found the task to be time-consuming or boring — the full task was indeed time-consuming, which may have discouraged students from completing it in its entirety and may go some way to explaining the relatively high dropout rates. Of course, this may be only part of the answer to the

question about the reasons for this, given that less than 15 percent of the respondents shared their opinion in an anonymous survey after participating in the study.

Another issue concerns the distribution of time that respondents spent on the task. In all three sub-tasks, three different time intervals were set for the purposes of analysis, as shown in Table 1 below.

**Table 1. Time intervals for completion of individual tasks**

Sub-task	I bracket	II bracket	III bracket
Part I	up to 15 min.	15–20 min.	over 20 min.
Part II	up to 20 min.	20–30 min.	over 30 min.
Part III	up to 30 min.	30–45 min	over 45 min.

How long did it take the students to complete each part of the task? Detailed data are presented in Table 2. The vast majority of students performing each part fell below the first time threshold. In the case of Part I, the lowest bracket accounted for more than 60 percent of the respondents. For Part II, more than 70 percent of those who completed the task fell within the first bracket, while for Part III the percentage was the highest, at almost 90 percent of all those who completed the task.

**Table 2. Number of students falling into each time bracket**

Number of participants completing sub-task	I bracket	II bracket	III bracket
Part I — 378 participants	238–62.9%	37–9.8%	103–27.3%
Part II — 373 participants	276–74.0%	40–10.7%	57–15.3%
Part III — 382 participants	336–87.9%	24–6.3%	22–5.8%

It is worth noting the very short time (less than one minute) that a significant group of respondents required to complete each sub-task. The software used to analyze the responses not only allowed us to add up the number of people in each time slot, but also provided precise information about how long it took individual students to complete the sub-tasks. Part I turned out to be completed within one minute by almost 27% of all respondents, and Part II by more than 31%. Moreover, a significant group

of students (almost 19%) took just one minute to write the longest text (more than 1,500 characters) — a task that is impossible to properly complete in such a short time. Composing what is often considered a "single page of standardized text" (1800 characters) will certainly take more than one minute for any writer. Moreover, on this sub-task, students were meant to seek out additional information that would enrich the base text. This requires time and is not doable in under one minute.

Further analysis of the results obtained from the survey revealed that the performance of the task went so allegedly "smoothly" because:

- a. students composed texts shorter than the intended limits;
- b. students' texts were very often not related to the topic;
- c. students copied parts of the base text and pasted them into their own texts;
- d. some of them may have known the content of the task beforehand (having found out about it from their colleagues who had already solved the task), preparing the answer beforehand and pasting it into the form.

This is illustrated in the following table (Table 3).

**Table 3. Number of texts vs. time threshold I**

Sub-task	I time bracket	Total number of participants in time bracket	Number of participants taking less than 1 min	%
Part I	under 15 min.	238	64	26.9
Part II	under 20 min.	276	87	31.5
Part III	under 30 min.	336	96	28.6

Consideration was given only to those composed texts that satisfied the length requirement (280 characters for the first part, less than 1500 characters for the second, with no precisely defined length for the third — i.e. more than 1500 characters). Assuming that a lack of experience in preparing texts of a strictly specified size might have made it difficult for the students, we adopted certain tolerance limits for acceptable text length. Texts between 260 and 300 characters long were considered to be on target

in the first part, and those between 1400 and 1600 characters in the second. In the third sub-task, only texts above 1500 characters were assessed. The details are given in Table 4.

**Table 4. Number of texts vs character limit**

Sub-task	Total number of participants completing sub-task	Complied with limit	limit exceeded / not complied with	No text*
Part I	486	168	191	127
Part II	455	156	202	97
Part III	448	201	118**	129

\*"no text" means an "empty sheet" or the text written was not consistent with the task.

\*\*the case of Part III, non-compliant texts were below the limit, i.e. less than 1,500 characters.

It is worth noting the relatively small number of respondents who performed Part I in accordance with the assumptions. Only less than 35% of the respondents wrote a text within the specified length range. On the other hand, of the composed texts that failed to comply with the length limit, there were significantly more that exceeded the upper limit of 300 characters (over 90 percent) than works below the lower limit of 260 characters (under 10 percent). This indicates that the students exercised little control over the volume of the text they were composing, even though they had the possibility to do so. They had problems with concisely formulating thoughts. Composing a short written message (based on a provided base text) also caused them considerable difficulty. There could be many reasons for this phenomenon, although in the age of SMS culture, it seems odd. Moreover, the 280-character limit was selected in reference to the length of text that may be posted via Twitter.<sup>9</sup>

A significant proportion of the participants, on each of the three sub-tasks, failed to produce a text. This type of result accounted for between 21 percent and 29 percent of all participants for a given sub-task. Most did not provide any reason for the lack of text. It does not seem that the real reason was that the time allotted for the task was too short. Indeed, confirmation that time was not the reason for failing to produce a text as instructed on the sub-task is provided by some of the respondents' feedback

entries: "I don't feel like doing it", "I have no idea what the task is about", "I have no knowledge about it", "I don't want to", "I don't have time", "I don't feel like doing it" or "I have better things to do" and "that's not what I was supposed to do" (the phrase is repeated for 2–3 pages). Of course, the authors of the study should consider why some students were unable to understand the instructions, but such individuals were very few.

Certain other, more "elaborate" explanations for the lack of text were also given, e.g.: "I think people are more likely to read summaries of the text rather than expanded content" or "the text is so expanded that more is not necessary". Some respondents, instead of composing their own text, instead pasted in texts on various sundry topics: "about Poles who cannot appreciate their freedom and independence" or more practically, "rules of conduct during a job interview" (a text of more than 31,000 characters, i.e. almost 20 pages of standard typescript), or even "the adventures of Pinocchio", instructions for setting up a Facebook account, the preparations of the Polish national football team for the Euro 2020 competition, or successive victories by the Polish tennis star Iga Świątek. Several people evaluated the material provided or wrote descriptions of its content. Others, in turn, instead of writing about their school, entered texts about how good a university the Poznań University of Economics is (probably influenced by the affiliation of the authors of the study). A few people pasted in indecipherable letters — several hundred characters in total. There were also collections of original thoughts, such as "For the sake of mental health and stability of our students, we have withdrawn the German language classes from our school because our research has shown that after and during the German lessons, students have higher than normal stress levels, which negatively affects their performance at school. We have replaced the hours that students would normally spend learning this vile language with self-care hours, when students can go to eat, sleep, or otherwise take care of themselves." There were other sorts of declarations as well: "The school should also be supportive and not restrict students' freedom". All of these responses were placed into the so-called "no text" category.

The vast majority of students who prepared the information in Part III in compliance with the length requirement (more than 1,500 characters) started their work by simply copying the beginning of the base text

provided to them, running approx. 600 characters. The "copy-paste" method was also applied by many respondents to the end of the text, which is identical to the end of the baseline version, also running approx. 600 characters. In this group, there were more than two hundred works (201) in which some version of the "copy-paste" principle was applied, accounting for more than 44% of all texts.

It is also worth noting that only 25% of the composed texts prepared in accordance with the set limit were more than 3,000 characters long, and only four authors prepared a message of more than 4,000 characters. Recall that students were given a base text of about 2,500 characters in length.

## **Discussion and conclusions**

The objective of this study was to test secondary school students' competence in written social communication. The task was designed to see if the students were able to select the most important information from the received text and how they behaved under the pressure of the time limit allocated to complete each sub-task.

The results obtained by the students show that the task proved unfeasible or difficult for a significant group of respondents. Preparing a text of a certain volume, within a certain set time-frame, was quite problematic for students. It is noteworthy that a significant percentage of students became discouraged while working on the sub-tasks: although they began the individual sub-tasks, they gave up before completing it or exceeded the time limit.

A significant barrier to completing the various parts of the task proved to be the issue of text length. Most of the respondents proved themselves to be unable to prepare a text according to a set length. The students failed to successfully exert control over the number of written characters (although they had such a possibility). It should be assumed that in this case the prevailing belief was that there are actually no special restrictions on the volume of text on the Internet ("the Internet can accommodate everything"). Such an approach is not conducive to the composition of



concrete statements (texts), emphasizing the information most important for the recipient. In this way, the participants demonstrated little skill at selecting information, which in these modern times of "information overload" seems exceptionally important.

Unfortunately, it was not possible to avoid the widespread application of the "copy-paste" principle, as was particularly evident in Part III. As a result, we received compositions that were faithful copies of (parts of) the original text. Students pasted particular fragments without much reflection or even without reading the whole material; moreover, not all the pasted fragments formed a logical whole. When analyzing this issue, we should consider whether there might be some other more effective way to combine technology (the use of a computer) with the actual testing of competences (in young people, but not only). Reverting back to pen-and-paper is unlikely to yield a satisfactory method, while requiring texts to be composed in the presence of a teacher would not guarantee reliable completion of the task, either.

A significant group of our participants took just seconds to compose their responses. It is, of course, impossible to write a text of more than one standard typewritten page in 15–30 seconds — or indeed to compose any meaningful text at all. In some cases, it is apparent that students applied the classic "copy-paste" method, sometimes extensively so. There is also reason to believe that some students may have known about the content of the task beforehand (e.g. having learned from classmates what the instructions were), prepared their actual response, and then simply "pasted" it into the worksheet.

More broadly, students were in general not always able to distinguish between an informative text (as they were meant to compose), an advertising text (i.e. "how great my school is") or even a propaganda text. Needless to say, the over-abundance of adjectives in the resulting compositions made them difficult to read.

Often the task, intended to be worked on individually, was nevertheless performed "in teams", as is evidenced by the similar time of starting and finishing the task, or the same volume of text. There were cases when students from the very same school submitted the very same compositions at the very same time.

However, despite these various complications and limitations discovered in connection with the format of the testing protocols adopted in this study, the participants — secondary-school students at a variety of schools in and around the city of Poznań — clearly exhibited various problems with concisely formulating thoughts, properly complying with instructions, etc. Composing a short, written message (based on a provided base text) and/or freely embellishing and reformulating information provided to them clearly caused them considerable difficulty.

And yet, there is no doubt that the kind of written competences the present study intended to test — information selection, summarization, logical structuring and embellishment — are crucial for social communication in general. Such skills are crucial today, and can only be expected to be more crucial in the future: what is the Internet, after all, if not a verifier of the skillful use of language — any language. As such, the type of research pursued herein can and should be continued, adapting the research tools used to the level of students' knowledge, their inclination for further education and its results. Future studies of this sort may also, for example, pertain to the use of the Internet in improving communicative competence.

## Endnotes

<sup>1</sup> For instance, here we might point out the ongoing debate in the public forum about numerous professions that will exist several decades from now, but about which we are not yet familiar with today. Such new professions will certainly require new competencies.

<sup>2</sup> The text of this article is based on the results of a study carried out under the framework of the project "Economics in the face of the new economy: Regional Initiative of Excellence", funded by the Polish Ministry of Science and Higher Education (competition Regional Initiative of Excellence; contract number: 004/RID/2018/19). The project includes a separate task "New Generation in the New Economy", implemented in 2019–2022 by staff members of the Poznań University of Economics. Each member of the seven-person research team (S. Białowas, K. Gołata, G. Krzyminiewska, I. Olejnik, O. Shelest-Szumilas, A. Waligóra, and H. Zboroń) dealt with one of the competencies (research tool) in: 1. mathematical literacy (analytical competence); 2. ethical and civic competence; 3. communication; 4. creativity; 5. teamwork; 6. self-organization of work; 7. digital content creation and ability to search for information using IT; 8. learning new issues.

<https://ue.poznan.pl/pl/badania-naukowe-uep,c458/ekonomia-w-obliczu-nowej-gospodarki,c12736/>

<sup>3</sup> The term "new economy" is often used interchangeably in literature and journalism with terms such as: "digital economy", "knowledge economy", "information economy", "e-economy", or "Internet economy" or "economy 4.0". The limited framework of this article does not allow for a detailed analysis of these terms.

<sup>4</sup> In 2021, Perspektywy published the twenty-third edition of this ranking. [https://perspektywy.pl/portal/index.php?option=com\\_content&view=article&id=5489:ranking-najlepszych-liceow-i-technikow-2021&catid=24&Itemid=119](https://perspektywy.pl/portal/index.php?option=com_content&view=article&id=5489:ranking-najlepszych-liceow-i-technikow-2021&catid=24&Itemid=119)  
The criteria for the **2021 Ranking of General-Education Secondary Schools** ("Ranking Liceów") were as

follows: results from secondary-school leaving exams (*matura*) on compulsory subjects (30%) and optional subjects (45%), as well as success at Olympiad competitions (25%). Once again, achievements in international Olympiads are included in this category. The criteria for the **2021 Ranking of Technical Secondary Schools** ("*Ranking Techników*"): the school's success at Olympiad competitions (20%), the results of secondary-school leaving exams (*matura*) on compulsory subjects (20%) and optional subjects (30%), and the results of vocational exams (30%). In 2021 provincial rankings (separate for general-education and technical secondary schools) were also prepared, which are extracts from the main national rankings. All rankings, covering a total of more than 1,500 of the best general-education schools and technical schools in Poland. The results of the ranking were published on the educational portals [www.licea.perspektywy.pl](http://www.licea.perspektywy.pl), [www.technika.perspektywy.pl](http://www.technika.perspektywy.pl).

<sup>5</sup> within the framework of the broader research project noted in footnote 1 above.

<sup>6</sup> After the survey was completed, it was reported to us that the Twitter platform is no longer a common communication tool for Polish secondary school students. However, this information needs to be verified.

<sup>7</sup> within the framework of the broader research project noted in footnote 1 above.

<sup>8</sup> This is less than the total survey sample of over 500 people, as only those respondents who opened the task reported in this article (which was the fifth task in a series) were included in the analysis.

<sup>9</sup> As noted above, perhaps secondary-school students are no longer familiar with this tool.

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**Krzysztof Gołata, PhD, Poznań University of Economics and Business, Poland** — economist, doctor of political sciences. Lecturer in the Department of Economic Publicity and Public Relations at the Poznań University of Economics and Business. For many years an economic journalist. Co-founder and for many years head of the economic department of "Wprost" weekly, editor-in-chief of "Businessman Magazine" (the first Polish economic monthly, editor-in-chief of TV Biznes (the first business channel in Poland). Author of several hundred press articles, TV and radio programmes. Currently, he conducts lectures, exercises and seminars for students in economic journalism, relations of companies and institutions with the media and building the image and reputation of entrepreneurs, companies and institutions. Author and co-author of several dozen scientific articles and popular science books.