

Communication skills in higher education vs the labor market: different perceptions and valuations

Inês Braga¹ [0000-0001-5278-9363], António Abreu² [0000-0001-5959-9188]

¹ISCAP, Instituto Politécnico do Porto, CITCEM. CEOS.PP, Portugal
inesbraga@iscap.ipp.pt

²ISCAP, Instituto Politécnico do Porto, CEOS.PP, Portugal
aabreu@iscap.ipp.pt

Abstract

Communication skills are considered increasingly important by higher education institutions, but also by employers as they influence better professional performance. The literature review recommends a necessary and desirable alignment of the communicational aspect of academic curricula with work needs, so that graduates have professional success. The objective of this research is to know how communicational skills are seen and valued in higher education, specifically in a Portuguese Polytechnic Accounting and Business School. For this purpose, undergraduate and Masters students who integrate courses or approaches related to communicational skills are surveyed. Coordinators of some of these courses (who are also professors) are consulted too. The methodology adopted is the case study and the data collection techniques are questionnaires applied to a sample of students and interviews carried out with the Coordinators of some of aforementioned courses. According to a self-assessment carried out by students, it was concluded that their average communication performance is very good, which is not in line with the literature review. As for the existence of training, within the scope of communication skills, course coordinators and most students consider that these should be taught in higher education. In the opinion of the course directors, there is an alignment between the skills taught in the courses and those that are required in the job market, an opinion that a not very expressive majority of students also share, although an overwhelming majority of students consider that this should be done. Course coordinators and students suggest motivating, practical and work-related pedagogical approaches for greater development of the skills in analysis.

Keywords: Higher Education, Labor market, Communication skills

1 Introduction

It is known that, currently, the communication skills of 21st century individuals tend to be considered increasingly important, not only by educational institutions but also by employers. These not only value the hard skills of employees but also the practical skills related to work tasks that workers must perform successfully and which include the ability to communicate effectively, which contributes to greater organizational success.

The research question is: How is academic training carried out for the development of communication skills in higher education, taking into account their professional application?

The general objective of this research is to know how communication skills are seen and valued in higher education. The specific objectives are: i) to know the level of development of communication skills of a sample of higher education students at ISCAP, through self-assessment ii) to know the perspective of students and course directors on the way they are taught, applied and valued communication skills.

The methodology used is the case study and, according to Yin [1], that allows researchers to have a holistic and in-depth approach to real-life events, including school performance, as well as the empirical study in question. In this situation, the research question includes a “how” about a contemporary set of events that the researcher wants to explore and know in order to answer the research question.

It's a study with a quantitative and qualitative approach that uses more than one data collection technique, such as a questionnaire applied to students and an interview applied to course directors.

The structure of the paper includes the introduction, literature review, focusing on communication skills - considered Information literacy skills and soft skills -, the need to align these skills with the job market and good pedagogical practices adopted in the higher education for the development of communication skills in students and future workers. It also includes the discussion in which the results of the case study involving undergraduate and Masters students from ISCAP are presented, as well as the content analysis of the interviews given to some course directors, the conclusions and bibliography.

2 Literature review

Communication skills are considered Information Literacy (IL) skills, along with many others, and are included in several international IL standards, some of which we will now highlight.

Thus, we begin by referring to a reference Standard for the development of skills by Higher Education students, published by ALA [2] and which in its point 6 defines that “the information literate student validates understanding and interpretation of the information through discourse with other individuals, subject-area experts, and/or practitioners”. With regard to the development of communication competence, it is defined as desirable that students achieve the following outcomes: a) participation in class and other discussions; b) participation in electronic communication forums and c) gathering expert opinion through various means such as interviews, email and listservs.

Also the “Australian and New Zealand Information Literacy Framework: principles, standards and practice” [3] characterize the information literate person as one that “communicates knowledge and new understandings effectively” and detail in four points what this individual should be able to do, at the communicational level, namely: i) selects a means of communication that best suits the communication objectives and the intended audience; ii) uses varied and appropriate information technology applications to produce the communicational acts; iii) integrates design and communication

principles suitable for the environment and iv) communicates clearly and in a style appropriate to the objectives of the intended audience.

The ISTE Standards, produced by the International Society for Technology in Education and which are important guidelines for educators to promote excellent teaching-learning and leadership, through innovative action, in the chapter dedicated to students, also include communication skills, under the title “Creative Communicator”. In the most updated version, the clarity, creativity and diversity of digital tools that students use to successfully achieve the objectives of the communication acts they produce are considered important: “Students communicate clearly and express themselves creatively for a variety of purposes using the platforms, tools, styles, formats and digital media appropriate to their goals.” [4].

Communication skills, due to their importance and transversality, are considered soft skills and have applicability in various spheres of life, of which we highlight the professional sphere. Based on skills widely used in all sectors of industry and jobs, the World Economic Forum defined which skills are relevant in the professional context, creating a table designated as core work-related skills and which includes 35 work-relevant skills and abilities. From this table, we highlight the oral expression, reading comprehension and written expression, all of them related to the communicational dimension and integrated in the group of basic skills. [5].

In a study on soft skills required in the Chinese labor market stand out those that are common to supply, on the part of educational institutions, and demand – on the part of the labor market. Among them are communication skills, along with problem solving, critical thinking, analytical thinking, leadership, and cooperation, one of the conclusions of the study being that there are advantages to incorporate them into the curricula of educational institutions, with a view to better prepare students to succeed in their future careers [6].

In an empirical investigation with Information Technologies students enrolled in an industry internship and their internship supervisors whose objective was to analyze the perception of both groups on hard and soft skills, the conclusion is that, within their group, teamwork and communication skills are considered very important by all respondents. Thus, in a ranking according to importance, the latter are in 2nd place, according to the perspective of the industry staff and in 3rd place, according to the students. Regarding the importance attributed to soft skills in general, there are no significant differences between the two groups of respondents, which are considered to be very important, while the same is not true for hard skills, perceived by students as very important, while industry consider them only important. It should be noted that the industry considers hard skills less important than soft skills, suggesting in the study an enrichment of these, on the part of educational institutions, as well as their integration into the curriculum [7].

A study identical to this one, entitled “Investigating the skill gap between graduating students and industry expectations”, involving managers or hiring personnel working in software companies in the United States and Europe, aimed to identify the areas in which graduating computer science and software engineering students have a harder time when they start their first jobs. This study identifies the weaknesses that they present in relation to the skills required by the labor market and that may prevent them from being hired. Among the results of interviews with industry staff, some technical

gaps stand out, as well as communication difficulties that recent graduates have in relation to co-workers and customers [8].

Now, this and the aforementioned investigation intend to alert to the need to establish an important bridge between the job market and the academy, contributing so that the needs of companies are mapped and reflected in university curricula, with a view to a better preparation of graduates and consequent success in their careers.

Given the perception that recent graduates find it difficult to secure a job due to their poor communication performance, there are specific courses that focus precisely on teaching technical communication, in a motivating way and close to the working reality in Technical and Vocational Education and Training – TVET, with programs designed based on the needs of the industry. In this sense, it is recommended that academics work collaboratively with specialists in the sector, in order to identify the needs and communication practices of the present, so that the training provided is adequate, current and useful, improving students' communication skills and their future employability [9].

In line with the advantage of the soft skills's integration required by the job market in higher education institutions, there is another study focused on the need to teach communication to Undergraduate Engineering Students, since these students generally underestimate it, although the job market values it. Insofar as the answers given by the educational institutions are not ideal, regarding the teaching methods and assessment of the aforementioned communication skills, the idea of an interesting course project with motivating and interactive strategies arises, integrating “live lectures, practical homework assignments, and other authentic activities like elevator pitching, participating in job interviews as well as workshops or presentations.” [10]. In this example, there is a scalable approach, by the teachers who carry out training for a large student population, verifying that, after training, the students' perception is different, as they consider that communication skills are important for engineers. It should also be noted that among the pedagogical strategies used, the authentic activities implemented in the course are valued by the students, even though these activities required more work on their part.

The adoption of motivating pedagogical strategies that are different from the usual is crucial for the acquisition of transferable skills and, although there are cases of their integration in the curriculum, they are not properly recognized by students. Now, we highlight an investigation carried out in two universities in which, in an appealing way, it is intended to draw their attention to the possibility of developing a set of the aforementioned skills. These are identified in badges that can be used in various subjects and in their materials, this experience being considered useful by more than half of the students and verifying the increase in the development of the competences in question, among which verbal and oral communication are counted. In addition to these advantages, the results of the study point to greater motivation and satisfaction, after completing the proposed tasks, as well as the recognition, by students, of skills that can be applied within the scope of their job applications [11].

Good pedagogical practices in the context of soft and transferable skills teaching-learning involve practical activities in which they can be applied, such as the organiza-

tion of an international conference by PhD engineering education students. In this activity, integrated in a compulsory course, skills related to writing, listening and communication, collaborative work, time management, leadership, entrepreneurship, negotiation and problem solving, among others, are mobilized [12].

In another study carried out in a university context with undergraduate students from different types of programs, which aims to analyze free time management and communication skills as predictors of motivation, it was concluded that motivation establishes a positive and significant relationship with communication skills and free time management and that, through a regression analysis, both skills allow predicting the degree of student motivation. This means that students who know how to manage their free time intelligently and who know how to communicate wisely will tend to be motivated to take on certain responsibilities and do so in a timely manner, while those who do not know how to manage their time or communicate with third parties properly, find no reason to motivate themselves [13]. Therefore, we conclude that a good communicational performance is crucial for academic motivation but also, transposing to another context, for the motivation and success of graduates when exercising their profession.

Following the new challenges that the recent pandemic situation has brought at various levels, it is also crucial to pay special attention to digital communication. Based on an investigation that proposes an effective communication model within a remote working situation and that makes recommendations to companies, we highlight some included in the Guidelines and recommendations for communication in online company meetings and technology-based communication: i) incentive to daily informal communication between employees; ii) holding regular meetings; iii) adequate structuring of meetings; iv) knowledge of e-mail rules (their structure, response times and recipients); v) beginning of the videoconference with an introduction by the meeting leader with identification of the participants and those absent from the meeting; vi) videoconferencing without side conversations; vii) asking meeting participants to mention any uncertainties [14].

3. Discussion

The research takes place at Instituto Superior de Contabilidade – ISCAP – (Porto Accounting and Business School of Polytechnic Institute of Porto) which includes 5114 students, 231 teachers and 58 staff members and has 8 undergraduate and 17 Master degrees. The case study integrates a sample of students of an undergraduate program in Business Communication (BC), and 3 Master Programs in Digital Communication Auditing (DCA), in Administration Auditing (AA) and Digital Marketing (DM). The criterion for choosing these 1st and 2nd cycle courses had to do with the fact that they provide training for the development of communication skills, which happens more explicitly in the first three courses that have some courses in the communication area in their curriculum, and implicitly in DM. An online questionnaire was applied to this sample and the total number of responses was 60.

This empirical study also includes interviews given to the Directors of BC, DCA and AA courses, since they are the courses who most visibly attribute importance to the area of Communication in the training of students.

The questionnaire contains two groups of questions, the Self-assessment of communication skills and Communication skills in the academic and professional context. The first group consists of 14 questions extracted from information literacy standards referred in the literature review and the second group has 13 questions. Respondents are asked to answer each question using a Likert scale, ranging from 1 to 5: (1) Strongly disagree; (2) Slightly agree; (3) Agree; (4) Mostly agree; (5) Completely agree.

Concerning Group I, sixty students provided answers to the 14 questions (Table 1).

Table 1- Self-assessment of communication skills

SELF-ASSESSMENT OF COMMUNICATION SKILLS	LIKERT SCALE					TOTAL
	5 N/ %	4 N/ %	3 N/ %	2 N/ %	1 N/ %	
1. I can interact, collaborate, and publish with colleagues, experts or others that use several Media for this purpose.	18/ 30%	20/ 33.3%	19/ 31.6%	3/ 5%	0/ 0%	60 99.8%
2. I can communicate information and ideas effectively to a variety of audiences, using a variety of media and formats.	13/ 21.6%	24/ 40%	16/ 26.6%	6/ 10%	1/ 1.6	60 99.8%
3. I choose a mean and format of communication appropriate to the objectives of the communication product, the communicational performance and the intended target audience.	16/ 26.6%	27/ 45%	13/ 21.6%	3/ 5%	1/ 1.6%	60 99.8%
4. I can use a variety of information technology applications to create a product or communication performance.	14/ 23.3%	24/ 40%	17/ 28.3%	4/ 6.6%	1/ 1.6%	60 99.8%
5. I am able to incorporate design and communication principles in the communication act.	11 18.3	18 30%	19 31.6%	11 18.3%	1 1.6%	60 99.8%
6. I can communicate clearly and in a style that fits the objectives of the target audience.	19/ 31.6%	20/ 33.3%	15/ 25%	6/ 10%	0/ 0%	60 99.9%
7. I can identify and apply common utilities (e.g., spell checker and thesaurus for word processing; formulas and graphics in spreadsheets; photos, movies, sound, and graphics in presentation tools) to improve communication with a specific audience.	21/ 35%	21/ 35%	15/ 25%	3/ 5%	0/ 0%	60 100%
8. I can validate the understanding and interpretation of information through a conversation with other individuals, experts in the subject area, and/or professionals.	14/ 23.3%	16/ 26.6%	27/ 45%	3/ 5%	0/ 0%	60 99.9%
9. I can participate orally in the classroom and in other discussions.	18/ 30%	17/ 28.3%	15/ 25%	9/ 15%	1/ 1.6%	60 99.9%
10. I can participate in electronic communication forums with the aim of encouraging a discussion on a topic (e.g. via email, bulletin boards, chat rooms).	12/ 20%	19/ 31.6%	21/ 35%	7/ 11.6%	1/ 1.6%	60 99.8%
11. I can gather expert opinions through various mechanisms (eg interviews, email, mailing lists).	9/ 15%	27/ 45%	18/ 30%	6/ 10%	0/ 0%	60 100%
12. I can communicate knowledge and new interpretations effectively.	15 25%	23 38.3%	17 28.3%	4 6.6%	1 1.6%	60 99.8%
13. I can communicate properly, in writing and orally, due to the training I had in higher education.	16 26.6%	22 36.6%	17 28.3%	4 6.6%	1 1.6%	60 99.7%
14. I can communicate better now than before the period of attending higher education.	22 36.6%	14 23.3%	18 30%	4 6.6%	2 3.3%	60 99.8%

For the most part, answers will be analysed in a clustered way, from the perspective of positive agreement, including the sum of the percentages of the three levels of the Likert scale used (3) Agree; (4) Strongly agree; (5) Completely agree and in the perspective of negative agreement, including the sum of the percentages of levels 1 and 2 of the scale, respectively (1) Strongly disagree; (2) Slightly agree.

The percentage of students who say they agree without restrictions ranges, in each question, between 80% and 95%, with an average of 90%. Students indicate a high degree of agreement in their self-assessment of their communication skills.

Thus, considering the sum of the percentages of the aforementioned three options of the scale (3, 4 and 5), the questions that obtained the highest percentage of agreement without restrictions - all with 95% - were questions 7, 1 and 8 (Table 2).

Table 2 - % of positive agreement per question (Group I)

		% of positive agreement							
		95%	93%	92%	90%	88%	87%	83%	80%
Questions	Q. 7		Q. 3	Q. 13	Q. 14	Q. 2	Q. 10	Q. 9	Q. 5
	Q. 1			Q. 12	Q. 6				
	Q. 8			Q. 4	Q. 11				

Question number 7 – “I can identify and apply common utilities (e.g., spell checker and thesaurus for word processing; formulas and graphics in spreadsheets; photos, movies, sound, and graphics in presentation tools) to improve communication with a specific audience”, stands out with the highest percentage of respondents choosing options (5) Completely agree and (4) Strongly agree, both with 35% (Figure 1).

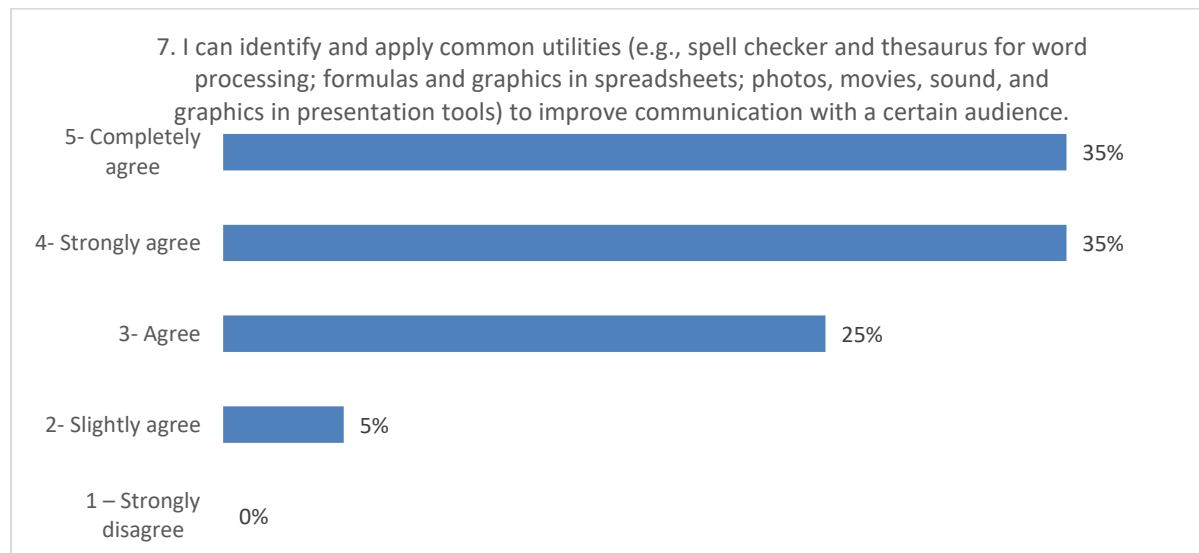


Figure 1- Question 7

Of the three, question 1 “I can interact, collaborate and publish with colleagues, experts or others that use several Media for this purpose” has the second highest percentage of answers in the two maximum agreement levels: 5- Completely agree - 30% and 4- Strongly agree - 33.3% (Figure 2).

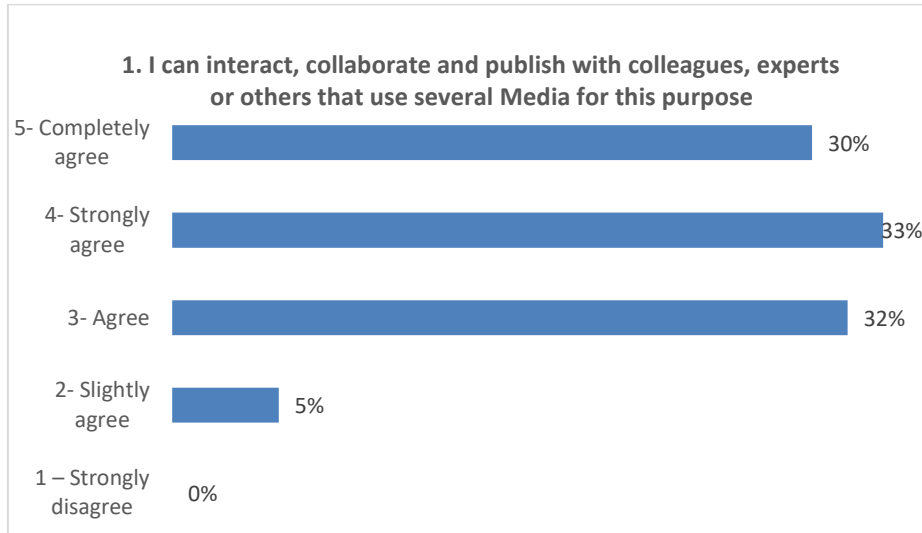


Figure 2- Question 1

Question 8 “I can validate the understanding and interpretation of information through a conversation with other individuals, experts in the subject area, and/or with professionals” stands out for having the best percentage of responses in option 3 – Agree (45 %), not only by comparison to the results of the three highest scoring questions but also within group I (Figure 3).

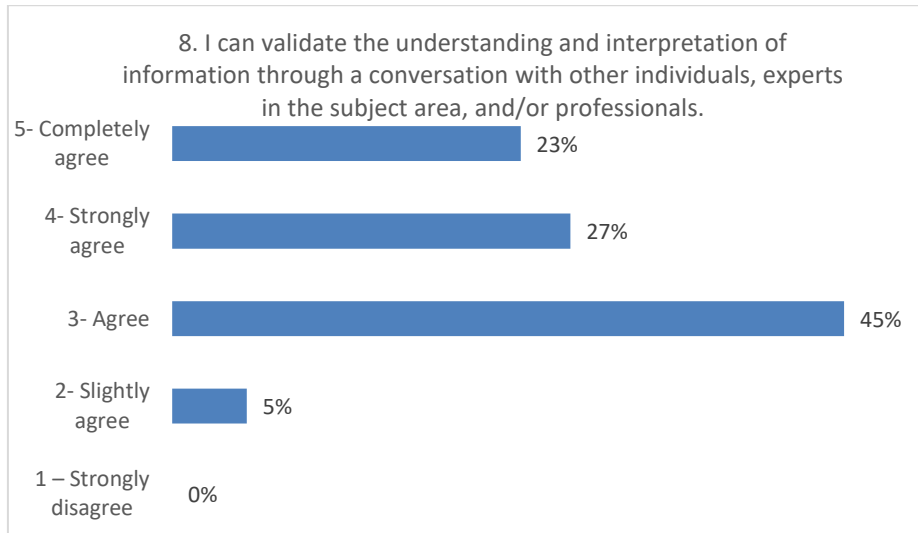


Figure 3- Question 8

Question 5 “I am be able to incorporate design and communication principles in the communication act” registered the lowest percentage of choices (80%) amongst those of positive agreement (Figure 4).

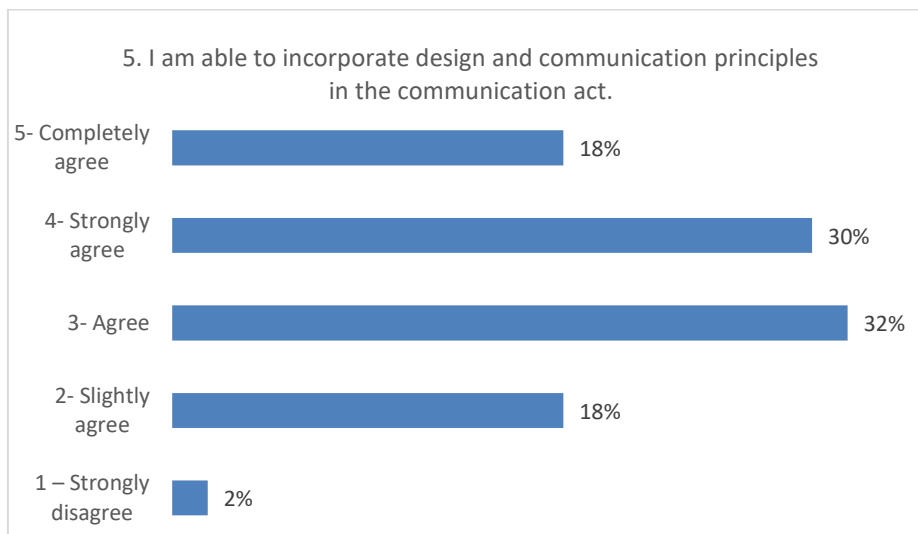


Figure 4- Question 5

Group II “Communication skills in the academic and professional context”, registered a lower response rate than Group I. The number of responses varies, ranging from 30 to 56 responses, out of a total of 60 respondents. Option (5) Completely agree has no registered responses.

As for Group I, responses will also be analysed from the perspective of positive agreement (the sum of the percentages of the three levels of the Likert scale 3, 4 and 5) and of negative agreement (the sum of the percentages of levels 1 and 2).

Regarding question 15 “Communication skills should not be lectured in higher education for students have learned them in high school”, there is a total of 87.8% of disagreement with the statement, of which 60.3% of respondents strongly disagree.

A small majority of students (53.6%) agrees that communication skills generally result from informal learning in higher education (question 16) and a slightly higher percentage (67.8%) think that communication skills, in general, are formally lectured in the context of higher education (question 17).

The majority of respondents (69.5%) agree that communication skills must be developed within the scope of specific courses (question 18) and a majority of 62.1% agree that communication skills must be assessed in the context of higher education (question 19).

When asked if they agree that communication skills are important for academic success, there is a positive agreement of 83.7% which includes 52.6% of respondents strongly agreeing with this idea (question 20).

Question 21 - Communication skills are important within the professional context - gathers a 100% total agreement by respondents, including 70% of students strongly agreeing with the statement. Question 22- Communication skills that must be developed in the context of higher education must be related to the professional context - gathers a positive agreement which is expressed by 97.3% of students (the sum of levels 3 and 4) and with a 60.5% for level 4.

Regarding communication skills, most respondents consider that higher education students attach importance to them. Thus, 57.7% do not agree with the statement in question 23 - Communication skills, in general, are not considered important by higher education students. Regarding question 24 - Communication skills, in general, are not considered important by higher education teachers - there was a total percentage of 67.1% of negative agreement. However, these results point to the fact that most students consider that their colleagues and teachers value communication skills.

Regarding the opinion of students on the teaching of communication skills, a majority of 73% believe that these, in general, are not taught in a motivating way (question 25), which should lead to a reassessment/redesign of future pedagogical strategies.

A majority of 72.2% of students agree that “The communication skills of higher education students, in general, are adequate for the professional context” (question 26), with 18.5% of the answers attributed to level 4 and 53.7% to level 3 of the Likert scale.

Although question 27 - Communication skills have a positive impact on professional success- is the one with the lowest number of responses (30 only) it has the third highest percentage of positive agreement, in a total of 96.6%, of which 70% correspond at level 4 of the scale. However, these results are consistent with question 21, in which all students consider that communication skills are important within the professional context.

We implemented a content analysis of the 23 answers to Question 28 – an open question on strategies for the development of communication skills to be adopted in higher education for contributing to increase the academic and professional success of students. Three categories of analysis were created: i) Teaching strategies under the

teacher's responsibility; ii) Seminars/workshops; and iii) Courses specialized in communication skills (Figure 7). Some answers mention more than one category, amounting to a total of 27 occurrences recorded, as shown in Table 3.

Table 3 - Analysis categories of open answers given by students

Analysis Categories	N
Teaching strategies under the teacher's responsibility	17
Seminars/workshops	6
Courses specialized in communication skills	4
Total	27

Most of the answers focus on teaching strategies of the teacher's responsibility, with an emphasis on the development of orality in the classroom context, with interactive approaches (and different from the traditional method), motivating and appealing to other skills such as teamwork or critical thinking. There is also a greater focus on teaching than on assessment, the use of pitches, improvisation exercises, debates, exchange of ideas, maintaining a pleasant and non-judgmental environment, introduction to academic discourse, with writing and presentation of brief research or reflections on relevant topics, on a recurring basis. One answer suggests group work and dynamic oral presentations to develop communication skills (verbal and non-verbal) to captivate the audience as well as other soft skills necessary for academic and professional success. The use of different educational platforms, and the coaching and assessment of the student are also mentioned.

Regarding the four references to the existence of curricular courses in communication skills, one of them mentions that they should exist in all courses, another mentions that they should be of introduction, especially at a technological level, while another suggests the inclusion of the theme of communication in the subject taught in different courses.

Of the six responses that suggest holding seminars/workshops, three of them still add that they should be held in greater numbers and one of them indicates that they should be in an online format.

Regarding the results of the interviews, they were subject to content analysis, through thematic synthesis, according to the questions.

In question 1 - "Should communication skills be taught in higher education or not because secondary school students have already learned them in this cycle of studies? Why?" all course directors agree that they should be taught in higher education. One of them (DCA) states that students do not bring these skills from secondary education and that the development of soft skills in higher education is necessary, while AA refers that they have to be developed at all levels of education, being something that does not end in any study cycle and that students are always being challenged to work, with no boundary between study cycles. The director of BC says that it is something that does not end in any study cycle, that these skills are learned, put into practice and that students have to improve them, and there must be a stimulus for that in higher education.

Asked if communication skills, in general, are taught in the context of higher education (question 2), all respondents think so. The director of DCA considers that they are not formally taught and although there are many courses that require work to be presented orally, there is a great focus on the final product and communication skills are rarely evaluated. The AD Director distinguishes courses that are specific to develop these skills from other courses and believes that, even so, communication skills should be developed transversally to all areas, given their importance. On the other hand, the director of BC believes that, in general, all courses stimulate these skills, but the demanding programs and large classes jeopardize the individual accompaniment of all students. In academic tasks where students have to express themselves, where they have to transmit information and show digital skills, they are working on this communicational area. She thinks the approach is informal because students can participate in all topics in class. On the other hand, there is a formal approach through the academic works that students have to carry out in order to be approved in the course.

Regarding the way in which these skills are taught, whether informally or formally (question 2.1) the DCA director mentions that competences are not formally taught, with the exception of the courses specifically directed to communication. It appears from the AA director's response that there are courses in which they are taught more formally than others, depending on the area. The director of BC refers to the informal aspect of teaching insofar as there is a general stimulus from teachers for students to collaborate, participate and express ideas and opinions, but also refers to formal learning through the work that students have to carry out for the courses approval.

Asked about whether communication skills should be developed within the scope of specific courses (question 3), all Coordinators say yes, in case the courses have affinities with the communicational area. The DCA director states that in these cases there should be specific courses for this purpose, with subsequent collaborative work with other subjects, in a transdisciplinary way. The BC director suggests that these skills should be worked on within the scope of certain courses related to communication.

All interviewees fully agree that communication skills should be assessed in the context of higher education (question 4). The DCA director thinks that is why there should be a course integrated into the course that addresses these issues so that they are taken seriously and believes that, when evaluating, there will be more responsibility on the part of the students about this skill. The AA director thinks that if there is the objective of developing communication skills in students, it makes sense to have an assessment component that allows to know if they have developed these skills. The BC director believes that her colleagues when students present a work, express their opinion or justify a position are also evaluating communication skills but considers that in courses that do not have communication as a core area, it may not be fair for students be harmed and evaluated negatively because of this aspect.

Both directors of the DCA Master's degree and of the the undergraduate degree in BC consider that the percentage of courses related to Communication is adequate in the course (question 5), and the first one mentions that there have been additionally workshops/seminars to complement missing aspects in the communication courses. The AA director mentions that there is only one option whose name is related to Communication

and although there are no courses in which the skills are formally taught, they are mobilized whenever students do academic work, present them, negotiate and lead groups.

Regarding the question of how communication skills are taught in the course (question 6), the DCA director mentions that there is an Organizational Communication course, where internal and external communication is addressed, with people from the communication area being invited to several organizations that share their experiences, using the methodology of case studies. The AA Director refers to an essentially practical approach, with an expository component, with very frequent adoption of group work, discussion, leadership, negotiation, decision-making, group/team management and conflicts, in short, using argument and counter-argument, realities that students will find in the professional world. In this case, all courses have work presentations during and at the end of the semester. The BC director says that there is a lot of concern with language, there are specific courses for written and oral expression. Thus, with many academic works related to companies, there is the necessary preparation for the importance of writing, an interaction with the digital area, developing a work very focused on various communication tools.

When asked if the communication skills to be obtained by the students of the course are related to the professional context (question 7), in the case of the Master in DCA it is mentioned that there is a very close relationship because the course specifically talks about communication within the scope of business. Thus, case studies of people in the communication area are invited to the classes to share their communication testimonies in different contexts, which is an asset for students who have these different approaches in the Organizational Communication and Digital Communication courses. In the view of the AA director, students, when they go to the job market, have to be able to express themselves, expose and defend the ideas they believe in, and she adds that if they practice this in a classroom context, they know how to do it in the work environment. As for the BC degree, it is mentioned that all the skills that have to do with knowing how to be and relate to others are also covered and that the course stands out for having a strong connection with the job market. There are visits and intervention by companies and students have to organize events, visits, invitations to speakers and companies, activities where transversal skills are mobilized.

All the course directors state that in the design of the course plan there was a previous work of aligning the communication skills to be developed in the academic context with the communication skills required in the job market (question 8) and emphasize the assessment and accreditation phase of the courses where this was taken into account. The DCA director refers to the World Economic Forum, which served as a reference because it contains the main soft skills, which include communication skills. The AA director mentions that the labor market was consulted through a Professional Association, with all entities/partners in the labor market having given their opinion about the course and its curricular subjects. The BC director mentions that in the last assessment of the course, there was a survey applied to companies and that many accept interns and former students who work in Communication companies, thus always making the bridge with them.

As for the average performance of students in terms of communication (question 9), in the Master's of DCA, communication skills are well developed throughout the

course. In the opinion of the director of the AA course, there is an evolution of the students in the presentations of their academic works, throughout the semester, with their average performance of 7 on a scale of 1 to 10. The director of the degree in BC says that students have a good average in the 3rd year, as they have already had many courses in the area of communication, in Portuguese, and that in the internship courses there are many compliments from the companies, mentioning that they express themselves well, have a careful language, in short, there are very good results.

Regarding the importance that students and professors of the course attribute to communication skills (question 10), in the DCA Master's Degree, its director mentions that as it is a digital communication course, there is a great focus on communication platforms and face-to-face communication and that students are very sensitive to that. According to the AA director, regarding the teachers, they all recognize the importance of communication because they all adopt group work, which means they recognize the importance of communication, as well as group discussion, negotiation and leadership. The director of BC says that students attach great importance to communication skills because in the presentations of academic work, they accept very well constructive comments. As for the teachers, he says that they are all very committed to adding value and she thinks that the students will assimilate the teachings given.

Question 11 is a request for a suggestion of strategies for the development of communication skills to be adopted in higher education and which can contribute to increasing the academic and professional success of students. Of the three contributions, it should be noted that one of them - that of the Director of the Master's in AA - aligns with two of the categories of analysis considered in the students' open responses, as it proposes the development of communication skills through a practical approach, either through courses, or through extracurricular activities, such as workshops. Another important suggestion given by the Director of the Master in DCA is that of collaborative, interdisciplinary work, with a view to creating a portfolio of student work, to be made available digitally to companies and enhancing internal and external communication. Another idea presented by the Director of the degree in BC would be to trigger the communication of students through a real case or problem presented by the companies and that the students would have to solve. She also presented the proposal for 3rd year students to interact more with 1st year students, with the transmission of their experiences and knowledge.

4. Conclusions

In conclusion, it should be noted that the perception that students have about their communicational performance is very good, since the average of positive agreement on various aspects of the communicational act is 90%. Next, we highlight the perceptions of the students and the three teachers/coordinators interviewed regarding some common questions they were asked.

It is worth noting that an expressive majority of students and teachers interviewed are of the opinion that communication skills should be taught in higher education.

A warning sign is that a considerable majority of students believe that these skills are not generally taught in a motivating way.

As for the possibility of the existence of specific courses for the development of communication skills, a majority of about 70% of students agree that this should occur, a result that is in line with the trend of responses from teachers who agree with this, but with some reservations, depending on the type of courses in which they were integrated.

Regarding the assessment of communication skills, a small majority of students agree with this situation while all directors unreservedly consider that it makes sense.

Regarding the students' perception of the importance that their colleagues attach to communication skills, a small majority consider that their importance is recognized and the teachers' perception is also generally in line with that of students. In the students' opinion, teachers also recognize the skills under analysis as important, in a reasonable percentage, results in agreement with the answers of most interviewed teachers.

From the perspective of the course directors, there is an alignment between the skills taught and those required by the professional context. Also, a large majority of students agree that the aforementioned skills to be developed in the academic context must be related to the professional context, while a much less expressive majority believe that they are adequate to the professional context.

It is interesting that communication skills are recognized as important in the professional context, by all the students who answered this question, while almost of them considers that communication skills have a positive impact on professional. However, it must be mentioned that in these two answers only half of the respondents answered, perhaps because they are not yet working and/or are unsure about the answer.

It is still worth noting that most of the strategies suggested by students to increase the development of communication skills have to do with motivating pedagogical strategies that promote active learning. The coordinators also advise practical approaches, which include collaborative and interdisciplinary academic work, as well as interaction with the labor market. Other strategies suggested by the students and also by some course coordinators are the holding of Seminars/workshops and specific and formal training on Communication, it should be noted that all these ideas are aligned with the literature review.

In conclusion, in this case study the results of the self-assessment of communication skills are very good, which contradicts the literature review that tends to report difficulties of higher education students and graduates regarding this issue. As a future work, it is suggested that the Research be replicated in courses that do not have to do with the area of Communication in order to carry out a comparative analysis.

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References

[1] Yin, R. K.: Estudo de caso: planejamento e métodos, 4ª ed. Artmed Editora, São Paulo (2005).

[2] ALA: Information Literacy Competency Standards for Higher Education. ALA, Chicago, Illinois (2000).

[3] BUNDY, A., ed.: Australian and New Zealand Information Literacy Framework: principles, standards and practice. Australian and New Zealand Institute for Information Literacy, Adelaide (2004).

[4] ISTE (International Society for Technology in Education): ISTE Standards. ISTE (2021).

[5] WEF (World Economic Forum): The Future of Jobs: Employment, Skills and Workforce Strategy for the Fourth Industrial Revolution. World Economic Forum (2016).

[6] Yan, Y., Kongjit, C.: An Exploratory Analysis of Required Soft Skills Towards Chinese Workplace Today. In 2020 Joint International Conference on Digital Arts, Media and Technology with ECTI Northern Section Conference on Electrical, Electronics, Computer and Telecommunications Engineering (2020).

[7] Patacsil, F. F., Tablatin, C. L. S.: Exploring the importance of soft and hard skills as perceived by IT internship students and industry: a gap analysis. *Journal of Technology and Science Education* 7(3), 347-368 (2017).

[8] Radermacher, A., Walia, G., Knudson, D.: Investigating the skill gap between graduating students and industry expectations. In ICSE Companion 2014: Companion Proceedings of the 36th International Conference on Software Engineering, pp. 291–300 (2014).

[9] Ramamurthy, R., DeWitt, D., Alias, N.: The need for technical communication pedagogical module for 21st century learning in tvet institutions: lecturers' typical instructional strategies. *Malaysian Online Journal of Educational Sciences* 9 (3), 37-46 (2021).

[10] Petrović, J., Pale, P.: Achieving Scalability and Interactivity in a Communication Skills Course for Undergraduate Engineering Students. *IEEE TRANSACTIONS ON EDUCATION* 64 (4), 413-422 (2021).

[11] Hill, M. A., Overton, T., Kitson, R.R. A., Thompson, C. D., Brookes, R.H., Coppo, P., Bayley, L.: 'They help us realise what we're actually gaining': The impact on undergraduates and teaching staff of displaying transferable skills badges. *Active Learning in Higher Education* 23 (1), 17–34 (2022).

[12] Camarinha-Matos, L.M., Goes, J., Gomes, L., Pereira, P.: Soft and Transferable Skills Acquisition through Organizing a Doctoral Conference, *Educ. Sci.*, 10 (9), 1-15 (2020).

[13] Demirdağ, S.: Communication Skills and Time Management as the Predictors of Student Motivation. *International Journal of Psychology and Educational Studies* 8 (1), 38-50 (2021).

[14] Cakula, S., Pratt, M.: Communication Technologies in a Remote Workplace. *Baltic J. Modern Computing* 9 (2), 210-219 (2021).