

Oral skills and anxiety: training and efficacy in undergraduate students

Competencia oral y ansiedad: entrenamiento y eficacia en estudiantes universitarios

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RESUMEN

Introducción. La importancia de las competencias comunicativas y el manejo de la expresión oral en la formación Universitaria viene recogida en distintos planes de estudios y asignaturas dentro del Espacio Europeo de Educación Superior. Estas competencias son prioritarias para el desarrollo profesional en distintos campos e implican el aprendizaje de una serie de habilidades que van desde el manejo de vocabulario adecuado, la organización del discurso y de la información, hasta la regulación de la ansiedad que suele provocar el hecho de hablar en público. Los objetivos del presente estudio son; 1 favorecer el aprendizaje de competencias orales y disminuir la ansiedad a hablar en público en estudiantes universitarios; 2. comprobar y comparar los efectos de las estrategias educativas y psicoeducativas aplicadas. **Metodología:** para ello se aplicó un experimento (pre-post) en el que se implementaron tres estrategias diferentes en una muestra de 51 participantes divididos en tres grupos, (grupo de intervención mediante taller; grupo de intervención mediante debate; grupo control). **Resultados:** se observan resultados positivos y eficaces en la mejora de competencias orales y confianza para hablar en público, así como una reducción de la ansiedad tras las distintas intervenciones. **Discusión:** estos hallazgos son relevantes para su implementación en programas específicos de mejora de las competencias comunicativas en el alumnado. **Conclusiones:** las intervenciones educativas y psicoeducativas mejoran la competencia oral y la ansiedad, siendo la aplicación de un taller de comunicación más efectiva que otras estrategias, consiguiendo generar un clima de participación activa en el aula.

PALABRAS CLAVE: competencias orales; ansiedad; estrategias educativas; estrategias psicoeducativas; comunicación educativa; estrategias de intervención; universitarios.

ABSTRACT

Introduction. The relevance of communicative competences and the management of oral expression in university education is reflected in different curricula and subjects within the European Higher Education Area (EHEA). These skills are a priority for professional development in different fields and involve the learning of a series of skills ranging from the management of appropriate vocabulary, the organization of speech and information, to the regulation of the anxiety that is usually caused by public speaking. The objectives of the present study are: 1. to promote the learning of oral skills and to reduce public speaking anxiety in university students; 2. to test and compare the effects of the educational and psychoeducational strategies applied. **Methodology:** For this purpose, an experiment (pre-post) was applied in which three different strategies were implemented in a sample of 51 participants divided into three groups (workshop intervention group; discussion intervention group; control group). **Results:** Positive and effective results were observed in the improvement of oral skills and confidence in public speaking, as well as a reduction of anxiety after the different interventions. **Discussion:** these findings are relevant for their implementation in specific programs to improve communication skills in students. **Conclusions:** educational and psychoeducational interventions improve oral competence and anxiety, and the application of a communication workshop is more effective than other strategies, generating a climate of active participation in the classroom.

KEYWORDS: Oral skills; anxiety; educational strategies; psychoeducational strategies; educative communication; intervention strategies; undergraduates.

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Translation by **Paula González** (Universidad Católica Andrés Bello, Venezuela)

1. Introduction

Currently, the important value of communication skills in university education within the European Higher Education Area is recognized (Barrio del Campo & Barrio-Fernández, 2018; Rodríguez, 2007; Ruiz-Muñoz, 2012). However, historically the oral expression of university students has received less attention in the classroom than the written expression. This means that the (oral) communication skills of each student have been developed naturally without explicit or direct training, so not all of them reach an optimal level of competence (Ruiz-Muñoz, 2012). The possible lack of these skills harms learning and expression in academic or even professional contexts (exams, oppositions, discussion groups, meetings, teamwork, etc.). Studies such as those of Ander-Egg (2006) affirm that the ability to speak in public is a combination of innate and learned components, so if we ignore this last part, not all students reach a sufficiently adaptive level of this competence. According to the European Commission (2006, p. L 394/14), oral competence is defined as the ability to "express and interpret concepts, thoughts, facts, and opinions orally and in writing... and to interact linguistically adequately and creatively in all possible contexts.

For this reason, in the current study plans included in the different university careers and the teaching guides of the subjects that compose them, more and more importance is attributed to communication-related skills. This makes special sense, taking into account that they are basic skills for good professional development in the different fields in which students will foreseeably be immersed. These communication skills are related to a transversal learning process, which implies the correct use of language and vocabulary, its adaptation to different contexts (specialized or non-specialized public), organization of content and information to be transmitted, correct intonation and volume during the transmission of the message, and non-verbal behavior, among others. Numerous works in the scientific literature show that adequate performance of oral skills is related to the better academic performance of university students (Mowbray & Perry, 2015), as well as more effective communication when working in a team (Martinez et al., 2014). On the other hand, there is evidence that poor performance in these oral skills is related to inadequate behavior during the transmission of information, such as poorer fluency, clicking with the tongue, worse intonation, inadequate pauses, poorer organization and clarity, lumps, among others (Mancuso & Miltenberger, 2016; Montes et al., 2019) that have a psychological effect on students, such as lack of self-confidence during the speech (Simpson et al., 2019). All of this is associated with a specific context where these skills must be put into practice and which often generates a negative emotional, cognitive, and physiological correlate, such as the anxiety generated when speaking in public (Hancock et al., 2010). It is observed that anxiety has a very high prevalence in university students, specifically, related to communication skills (Charoensukmongkol, 2019; García-López et al., 2013). This fact can be a real obstacle in achieving academic goals for those who experience it. Therefore, another skill of special relevance to take into account within communication is the regulation of anxiety, since emotional mismanagement in this aspect can lead to avoidance behaviors in this context, consequently limiting student learning. In the scientific literature, several studies expose the relationship between learning and the associated emotional component (Marín, 2017; Morales-Domínguez & Navarro-Abal, 2013, Rueda et al., 2017; Vieco, 2019) so it is important to establish teaching or training based on specific skills that favor the prevention or reduction of anxiety when speaking in public (Espinar-Álava, 2019; Ros, 2005; Valladares, 2015; Wagner et al., 2014). Studies such as those by García-López et al. (2013) propose educational interventions based on training in oral communication skills for public speaking to promote its development.

In this line, there are different types of strategies that are used to facilitate the learning of these skills. Some of them are educational, for example, generating learning situations within the classroom (Gómez,

2017; Gutiérrez & Bucheli, 2017), specific courses for training these skills (Sawyer et al., 2019; Westwick et al., 2015), promoting group or cooperative work (Binti et al., 2013; Knight et al., 2016), using technological means for oral expression (Bobkina et al., 2020; Stupar-Rutenfrans et al., 2017; Yuen et al. al., 2019), organizing oral presentation activities (Worawong et al., 2019), or using techniques that involve feedback or instructions (Abdelshaheed, 2019; Elfering et al., 2012). Others are psychoeducational, using psychological techniques along with some principles of human learning to address the fear or anxiety of public speaking. Within the latter, there are some well-established techniques based on scientific evidence on their efficacy, such as exposure, test, or desensitization techniques (Barkowski et al., 2016; Powers et al., 2008; Raja, 2017). It has also been shown that cognitive-behavioral-based strategies offered in online or virtual formats are just as effective as those carried out in person or face-to-face (Ebrahimi et al., 2019).

However, within the academic field, educational strategies are often applied almost exclusively, and psychoeducational or psychological techniques are commonly used with the clinical population (that is, with people with established anxiety problems) and/or in healthcare contexts (such as primary or secondary care). The use of both types of strategies in combination with a more preventive approach to developing skills and promoting specific skills has been little explored in the field of higher education.

2. Objectives

The general objectives of the present study were: 1. favor the learning of oral skills (OS) and help reduce anxiety or fear of public speaking in university students through different educational intervention strategies (debate and confrontation of discussion groups to improve communication skills) and psychoeducational strategies (cognitive-behavioral, such as a communication and desensitization workshop for coping, reducing, and controlling anxiety); 2. check which of these strategies was more effective in improving oral skills and reducing anxiety when speaking in public.

Achieve the following general competencies: that the students know how to apply their knowledge to their work or vocation in a professional manner and possess the competencies that are usually demonstrated through the elaboration and defense of arguments and the resolution of problems within their area of study; Manage and coordinate centers, institutions, and associations according to the different contexts and needs in the fields of socio-educational intervention; Advise, accompany, and mediate in the promotion of people and groups based on educational needs and demands, promoting active participation in the transformation of their reality.

2.2 Specific objectives of the intervention

Achieve the following specific skills:

Develop specific skills for public speaking (adequate body expression, gesticulation, gaze towards the public, speech fluency, volume, intonation, capturing the public's interest and attention, speech structuring, speech clarity, and adjustment of time to content) and, therefore, have a fluent and adequate level of language and oral expression.

Promote interaction and communication in the social climate of the classroom with classmates, and therefore, that students get a predisposition to interdisciplinary collaboration and increase their oral and written communication skills, as well as teamwork.

Know and handle some basic techniques of regulation of anxiety to speak in public, being able to present in public individually and/or in groups.

Expose students, progressively, to various public speaking situations for better management of anxiety (desensitization), being able to present in public individually and/or in groups.

Provide basic tools to select and transmit information to different audiences.

Facilitate the expression of ideas, opinions, and arguments in the classroom and reinforce speaking skills through immediate feedback from the teacher.

3. Methodology

3.1. Participants

The sample consisted of N= 51 students of the Psychology of Organizations and Work Teams subject, in the 2nd year of the Degree in Social Education, aged between 21 and 24 years ($X= 22.06$; $SD= .99$). None of the participants presented any type of pathology or disorder contemplated by the DSM-V, and all had the same average socioeconomic level. The selection of the sample was carried out using an accidental non-probabilistic model following the accessibility criterion (students enrolled in the subject). These students were randomly assigned to each of the three intervention groups.

3.2. Instruments

As instruments, on the one hand, a continuous evaluation was used throughout the teaching-learning process using systematic observation, registration, and corrections with feedback to the students of all the activities carried out during the development of the subject as strategies. On the other hand, as a global evaluation, to contrast the acquisition of specific skills related to public speaking skills, as well as to measure confidence when speaking in public and anxiety levels, the following standardized instruments were used:

Personal Report of Confidence as Speaker of Méndez et al. (2004), consists of 12 items that measure confidence when speaking in public and the level of anxiety generated, with responses using a Likert-type scale (1 – totally disagree to 5 – totally agree). Of the total items, 6 were raised positively (items 2, 3, 4, 5, 7, and 9), that is, a high score meant having a good level of confidence to speak in public, while the other 6 items were worded negatively (items 1, 6, 8, 10, 11, and 12), so having high scores meant having a very low level of confidence when speaking in public.

Oral Competency Assessment Scale -ECO Scale- 10 (Roso-Bass, 2014), which measures the progression of the OS through self-observation of the participants. The variables to observe were body expression; gesticulation; gaze; fluency; volume; intonation; interest; structuring; clarity; and content-time adjustment. Therefore, this scale was made up of 10 factors that were scored on a Likert scale (1 – very low level to 5 – very high level). In this instrument, higher scores meant having higher levels of the competence in question.

3.3. Design

The study was carried out using a pre-post design with a control group (two intervention groups and one control group), to which the participants were randomly assigned. Group 1 (composed of 15 participants) was the control group (CG1) since group tasks were assigned with the elaboration of written arguments as is usually done in the subject. In group 2 (G2) (composed of 19 participants) debate and confrontation strategies of discussion groups were used, where the students had to carry out a debate, argumentation, and discussion between the different small workgroups (between classmates within the same group and with other groups). Subsequently, the students had to comment on the conclusions they had reached by submitting a written assignment. In group 3 (G3) (composed of 17 participants) a communication workshop was applied, where communicative aspects and oral skills were addressed. This workshop was carried out by the teacher through a PowerPoint presentation and numerous examples of effective communication by viewing a video to establish the appropriate model,

in which concepts such as anxiety when speaking in public were explained and coping strategies, reduction and control of anxiety, and specific guidelines for effective communication were described. After the workshop, the students had to discuss and argue the different ideas related to the practice with the rest of their classmates from other small groups, receiving immediate feedback from the teacher regarding the suitability of the communication used, giving corrections, and reinforcing effective communication behaviors. Subsequently, the students reflected on what they had commented on in a written work. In turn, the three groups of students made an oral presentation as a group, at the beginning and at the end of the practices of the subject, which served to collect the baseline and post-test data, respectively.

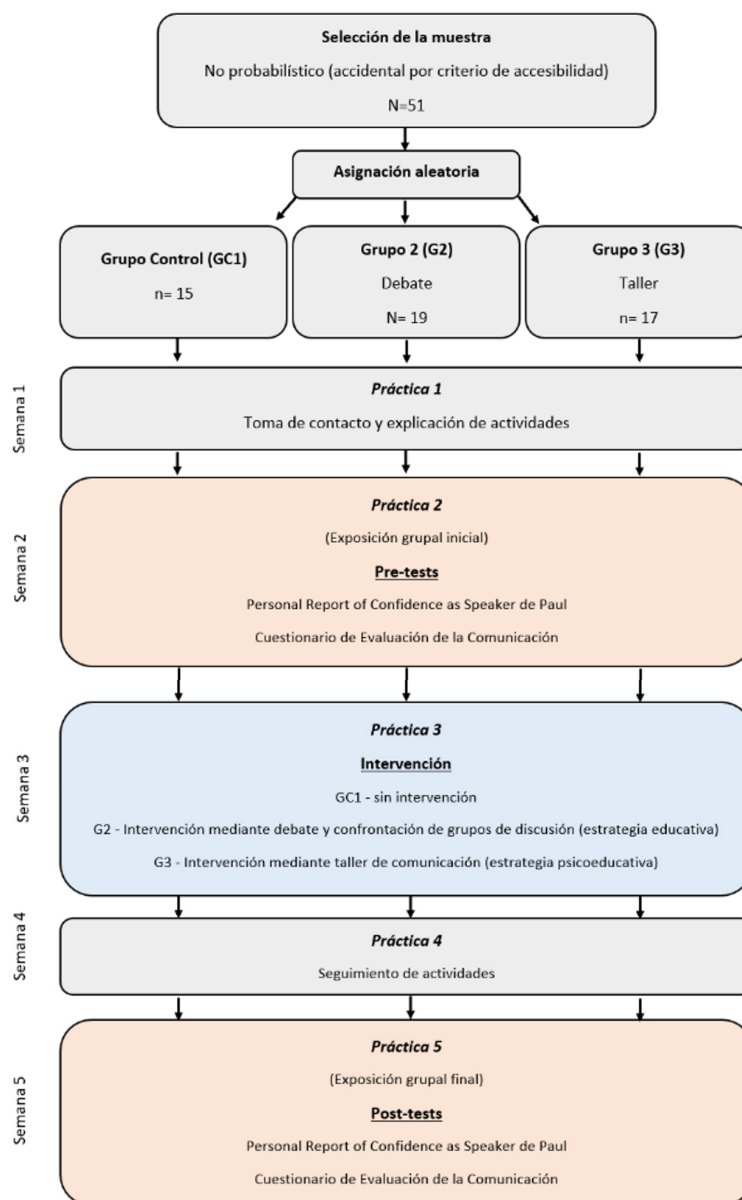
Didactic strategies were designed, based on educational and psychoeducational techniques that have proven to be effective for the development of skills and abilities to speak in public. A series of activities were scheduled and some content was adapted and incorporated into the planning of the theoretical and practical classes of the subject involved. In table 1 of appendix 1, a detailed description of the techniques and type of activities that were developed over 5 weeks is presented.

These techniques or strategies were implemented in face-to-face format and were applied gradually, following the logic of a progressive approach to exposure situations (desensitization) and increasing complexity (from autonomous work tasks to oral group presentations) as an intervention in two of the three groups. A participatory and didactic methodology was followed by the students through the development of the various written, oral, debate, and discussion activities, to favor the development of different skills in the students. These activities were developed to establish and implement different procedures, but they were carried out in parallel at the same time for the three groups.

The participants of the three groups developed a total of five practices related to the content taught during this subject. Throughout these practices they had to plan and build, in groups of five or six people, an organization from the beginning, attending to all the psychological and organizational factors studied in the content of the subject. In other words, all the practices were interrelated and concatenated with each other. In this way, it was intended to encourage students to integrate and interrelate all the theoretical contents of the subject through various practical works that followed a logical thread and were framed within the same context: the creation, planning, and management of their own organization.

Therefore, in this study the independent variable was the type of intervention applied to each of the groups and the dependent variable was the scores obtained in the questionnaire on confidence when speaking in public and the level of anxiety generated, as well as the scores achieved. on the oral proficiency scale. All phases of the study can be seen in Figure 1, and are described in greater detail in the corresponding procedure and annexes.

Figure 1: Type of selection and allocation of the sample, phases of the study carried out, and timing.



Source: own elaboration.

3.4. Process

In the first place, the participants were given an informed consent, in which they were explained what type of tasks they were going to carry out, as well as its approximate duration, and where they gave their express consent to participate in this study voluntarily and anonymously.

The procedure was developed over five phases, in which the Personal Report of Confidence as Speaker questionnaire and the ECO-10 scale were implemented as a pre-test (phase 2) and post-test (phase 5) evaluation of oral skills and fear and anxiety when speaking in public, respectively, after carrying out the different educational and psychoeducational strategies carried out in the two groups of students and in CG1 where no intervention was applied (phase 3).

Next, the distribution of the phases of the study is detailed along with the objectives and strategies used as an intervention in each group. To see the exhaustive description of the process, see annex 2.

3.4.1. Phase 1 - Practice 1

The objective was to establish the first contact with the students and with the work methodology in the classroom naturally through a written activity where the different components of an organization were described. This was developed in person in the classroom and its duration was one hour in each of the three groups. Small working groups (five or six people) were randomly established within each group. During the session, the students developed the work while they could ask questions, and discuss ideas with their classmates, and the teacher gave feedback.

3.4.2. Phase 2 - Pre-test - Practice 2

The objective was to establish the baseline from a pre-test evaluation. The students had to make a general description of what was established in the previous practice, also adding new content about the subject. This activity was developed by making a PowerPoint presentation in which, as a group (small groups of five or six people), the students had to present and argue all the previous sections. This activity was face-to-face in the classroom and was developed during two one-hour sessions (two hours in total) for each study group. Before giving the presentation to the students during practice 2, the students were given a short questionnaire that measured the level of confidence and anxiety when speaking in public (Personal Report of Confidence as Speaker by Paul). This questionnaire had to be filled out by the students themselves individually before beginning the group presentation. In addition, the self-observation Communication Evaluation Questionnaire (ECO) was used, which measured aspects related to oral skills. This scale was completed by the teacher during the presentations, evaluating the commented aspects of each of the students in each of the groups that presented their work.

3.4.3. Phase 3 – Intervention - Practice 3

The objective of this phase was to carry out the different interventions in each group. The activity associated with this phase had to do with the elaboration of the processes of analysis and definition of a job, as well as the skills and selection of personnel. In this practice, the different educational and psychoeducational strategies or methodologies were implemented by the teacher. The distribution was as follows:

CG1. In the first place, it was explained what the elaboration of the practice consisted of and later the students were asked to carry out the activity in a group as they had been doing previously without any type of strategy on the part of the teacher, having to deliver the activity in a written form in within one week. The work session was face-to-face and lasted one hour.

G2 (Intervention through debate and confrontation of discussion groups). The students were explained how the practice should be carried out, asking them to carry out the activity through a debate, argument, and discussion between the different small workgroups (among classmates from the same small group and with other small groups). Subsequently, the students had to comment on the conclusions they had reached by submitting a written assignment within a week. This session was face-to-face and lasted one hour.

G3 (Intervention through communication workshop). The first activity within this group was a brief workshop in which communicative aspects and oral skills were addressed. The realization of this workshop was carried out by the teacher through a PowerPoint presentation and numerous examples of

communication by viewing a video as a model of effective communication, in which concepts such as anxiety when speaking in public were explained, and coping strategies, reduction and control of anxiety strategies, and specific guidelines for effective communication were described. After the workshop, the students had to discuss and argue the different ideas related to the practice with the rest of the classmates in other small groups, receiving immediate feedback from the teacher regarding the suitability of the communication used, giving corrections, and reinforcing the effective communication behaviors. Subsequently, the students reflected on what they had commented on in a written work delivered within a week. The session was face-to-face and lasted one hour.

3.4.4. Phase 4 - Practice 4

In this case, the objective of the phase was to monitor the activities proposed naturally in the classroom. An activity related to the analysis, management, and negotiation strategies of the conflict within the organization described in the previous practices was carried out. This activity had to be developed through written work attending to all the previous sections. The work was carried out in person in the classroom, in a one-hour session for each medium group. The dynamic followed on this occasion was the same as in previous practices (explanation of how to carry out the practice by the teacher and elaboration of it by the small workgroups). Similarly, the deadline for the delivery of the conclusions was one week.

3.4.5. Phase 5 - Post-test - Practice 5

This last phase aimed to carry out the post-test. The activity consisted of making a general description of everything developed in the previous practices through the elaboration of a PowerPoint presentation in which, as a group, (groups of five or six people), the students had to expose and argue everything that was developed in the previous practices concerning the established organization. This was carried out in a one-hour session for each medium group. The dynamics of presentations followed the same logic as in practice 2, so on this occasion, a post-test evaluation was carried out using the same instruments used in that practice. Unlike practice 2, after finishing all the group presentation sessions and having implemented the evaluation instruments, the teacher gave feedback to each group taking into account the content exposed and all the aspects related to the communication used.

The development of the commented activities was intended to emphasize and favor collaborative group work, the use of debates, discussions, and arguments as communication tools, to increase participation, and improve the different oral skills of the students.

3.5. Data analysis

First, a descriptive analysis of the data was carried out. Subsequently, a statistical analysis was performed using Student's t-tests for paired samples through which the mean pre-test and post-test scores on the ECO Scale and the Confidence Questionnaire for Public Speaking were compared (intragroup analysis) for each of the three groups. And Anova of one factor for independent samples to find the possible statistical differences in the average scores of the post-tests of both instruments between the three groups.

3.6. Ethical aspects

All the procedures carried out in the studies with human participants were following the ethical standards of the ethics committee for human research at the Universidad de Córdoba and the 1964 Declaration of Helsinki and its subsequent amendments or comparable ethical standards (International Code of Ethics in Humanities and Social Sciences of the Centre for Research Ethics & Bioethics).

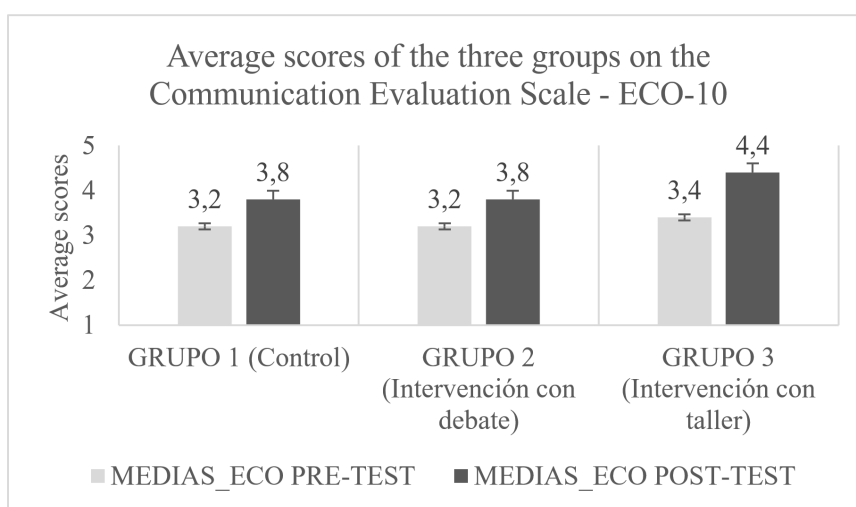
Informed consent was freely and voluntarily obtained from all the individual participants included in the study, and their anonymity was respected, keeping the confidentiality of personal data by encoding the information.

4. Discussion/Results

From a descriptive point of view, it can be said that the number of interventions, presentations, and oral arguments within the classroom by the students has increased throughout the learning process. An improvement has also been observed in terms of the skills and competencies to make presentations and defend arguments before different audiences (informally during the development of some classes or in formal presentations), so qualitatively substantial improvements are observed. Similarly, a general improvement has been observed in terms of the level of language and oral expression, which have been fluent and appropriate in the context in question. It has also been verified that exposing the students progressively to participation and intervention during the sessions seems to have favored the expression of diverse ideas, arguments, and opinions, both individually and in groups, giving rise to a good predisposition for active participation in the classroom and teamwork. Therefore, it has been possible to foster a climate of openness, participation, and social interaction within the classroom, thus creating a "safe space" for students to express themselves effectively, actively participating and favoring the oral and communicative skills in question.

After a preliminary analysis of the data collected to check if there were differences between the initial evaluation (pre-test) and the evaluation after the intervention (post-test), it can be seen in Figure 2, that there are changes in a positive direction, of the post-test evaluation compared to the pre-test evaluation, in the averages of the scores obtained in the Oral Competency Evaluation Scale (ECO) (body expression; gesticulation; gaze; fluency; volume; intonation; interest; structuring; clarity; and content-time adjustment), increasing after the psychoeducational strategies used in the two intervention groups and even in CG1. However, as can be seen, there are also differences in the means obtained in the post-test evaluations of each group, with better average scores being obtained in G3 (communication workshop).

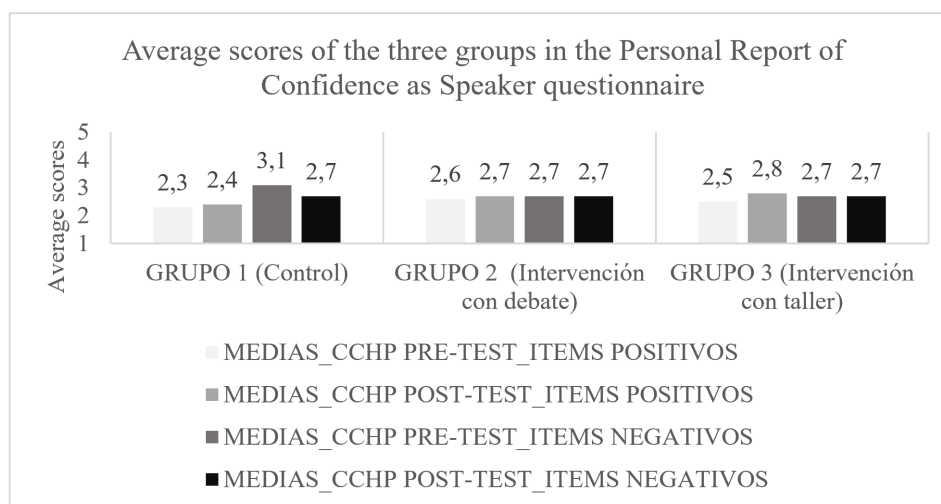
Figure 2: Average pre-post scores on the Communication Evaluation Scale (ECO) of the 3 groups depending on the intervention.



Source: own elaboration.

Regarding the preliminary results of the data obtained in the Confidence Questionnaire for Public Speaking and generated anxiety, a slight improvement was also perceived in all groups. If Figure 3 is observed, there are positive changes in terms of the means obtained from the post-test versus the pre-test in the positive items, so there has been a slight general improvement in the students about their confidence to speak in public and a slight decrease in their anxiety. Regarding the negative items of this questionnaire, it can be observed that there is a decrease in the average scores of the CG1 of the pre-test compared to the post-test, which indicates a positive tendency of the students to reduce their anxiety and increase their confidence. However, this group has a higher average pre-test score than the other two groups, so these data should be taken with caution. In any case, in the other two groups, this data remains the same in both evaluations, so we cannot speak of improvement in this aspect.

Figure 3: Average scores in the pre-test and post-test of the positive items and the negative items separately from the 3 groups according to the intervention, in the Confidence Questionnaire for Public Speaking and generated anxiety (Personal Report of Confidence as Speaker).



Source: own elaboration.

On the other hand, the following intragroup statistical analyses, Student's t-test for paired samples, were performed to verify the differences in the average scores obtained in pre-test versus post-test of the 3 groups of participants, both for the ECO Scale as for the Confidence Questionnaire for Public Speaking and generated anxiety. The statistical data of these tests can be seen in the tables in Appendix 3 of this study.

It can be seen that there are statistically significant differences in the average scores obtained in pre-test and post-test for the ECO scale in CG1, of all the factors analyzed, except for the structuring and the time-content adjustment. Similarly, there are statistically significant differences in the average scores obtained in pre-test and post-test in G2, of all the factors analyzed, except for fluency, structure, and clarity. Regarding G3, statistically significant differences were found in the average scores obtained in the pre-test and post-test of all the factors analyzed, so the data seem to indicate that this last intervention is the one that produces the best effect in general terms.

Regarding the average scores obtained in the pre-test and post-test for the questionnaire on confidence in public speaking, in CG1 there are no statistically significant differences in the average scores obtained, except for item 1 (when I speak in public, my thoughts are confused and mixed). Regarding G2, there are statistically significant differences in item 1 (same as above) and item 7 (I feel relaxed and at ease

while I speak). Concerning G3, statistically significant differences are found in items 9 (My mind is clear when I am in front of an audience) and item 12 (I feel terrified at the idea of speaking in front of a group of people) so that all interventions have partially favored increased confidence when speaking in public and decreased anxiety.

Finally, a between-group analysis was performed, in this case, a one-way ANOVA for independent samples, to verify the statistical differences in the post-test of the ECO scale between the three groups. Statistically significant differences were found in all the factors analyzed except for intonation and time-content adjustment. Furthermore, a Bonferroni post hoc test was performed between all groups in which statistically significant differences can be observed in the average scores of all factors, except for gaze, intonation, interest, and time-content adjustment. These differences are found mainly between G3 (workshop intervention) and CG1 and G2, so the data indicate greater effectiveness of group 3. This same test was carried out to verify the statistical differences in the post-test of the Confidence Questionnaire for Public Speaking and generated anxiety, among the three groups. Statistically significant differences were only found in item 4 (I face with complete confidence the prospect of giving a talk). A Bonferroni post hoc test was performed between the three groups, in which no statistically significant differences were found, except for item 4 between the control group and the discussion group. These data can be seen in the tables in appendix 3.

5. Conclusions

After analyzing the results obtained, it can be concluded that the first general objective proposed in this study has been achieved, since the learning of oral skills (OS) of the students who participated in it has been favored, through the educational and psychoeducational intervention strategies designed. However, although an improvement or positive trend in confidence when speaking in public and a decrease or negative trend in anxiety can be observed after the interventions, the statistical data are not conclusive.

On the other hand, the second objective of the study was achieved (verify which intervention was more effective), since everything seems to indicate that the intervention through a workshop on communication skills was the most effective for learning this competence. However, although the data seem to indicate a slight improvement in terms of increased confidence when speaking in public and decreased anxiety, it cannot be concluded that any of the interventions is more effective than another. However, from a qualitative point of view, the specific objectives were achieved by managing to develop a higher level of general and specific skills at the communicative level in the students.

Specifically, the interventions in G2 (debate) and G3 (workshop), in general, favor an improvement in oral skills, compared to group 1 (control) where no intervention was carried out. However, in CG1 there is also an improvement in the post-test compared to the pre-test in terms of oral skills evaluated through the ECO scale, so it is concluded that the mere exposure to the work sessions practices carried out during the development of the subject, even without intervention, produces a certain improvement in oral skills. This, together with the learning process obtained through other subjects during the development of the course, or even a possible effect of modeling by observing the skills acquired by other students, may have led to this improvement, which is a strange uncontrolled variable for this study, although a benefit for students. On the other hand, the intervention carried out in G3 (workshop) seems slightly more effective, in terms of increasing average scores in oral skills, than that in G2 (intervention through discussion).

In the case of the Confidence Questionnaire for Public Speaking and generated anxiety scores, although there are slight improvements in all groups, none of the interventions carried out seems to be clearly more favorable in terms of increasing these scores.

However, through this study through intervention with educational and psychoeducational strategies, the students have achieved the general and specific competencies proposed. Despite not finding statistically significant differences in the results obtained, it can be said that the three groups that participated in the study have increased the number of interventions, presentations, and oral arguments in the classroom throughout the learning process, which has led to more active participation. In the same way, substantial and progressive improvements have been observed in the acquisition of skills and competencies to make presentations and defend arguments before different audiences and in different formats, in terms of the level of language and oral expression, increasing the fluency and adequacy of the vocabulary to the context.

On the other hand, exposure to diverse, guided, and free situations of oral expression in public seem to have contributed to habituation to these situations, increasing performance and confidence, and decreasing the feeling of fear or anxiety levels. Furthermore, the trend of the data indicates that the debate and workshop strategies used through systematized practical sessions, with a cognitive-behavioral base in general, favor an improvement in oral skills, increase confidence, and reduce the fear of speaking in public.

As mentioned, these data must be taken with caution, since the interventions carried out seem to be going in the right direction, but we cannot conclude that there have been statistically significant differences, specifically, in the increase in confidence when speaking in public and reducing anxiety.

The data of the present study, therefore, have special relevance from a perspective applied to the field of education. As described above, within the European Higher Education Area, students' communication skills are increasingly acknowledged and given greater importance (Barrio del Campo & Barrio-Fernández, 2018; Rodríguez, 2007; Ruiz, 2012). This makes special sense in academic or professional contexts where the development of these skills is currently a priority for the good performance of students or future professionals. This is supported by numerous scientific evidence through various studies that show that an adequate performance of oral skills is related to a better academic performance of university students (Mowbray & Perry, 2015), as well as a more effective communication when working as a team (Martínez et al., 2014).

However, traditionally, communication skills have not been explicitly trained, so until now there has been a certain lack in the acquisition of these skills and their development (Ruiz-Muñoz, 2012) for students who innately do not have a sufficient level of communication skills. As Ander-Egg (2006) states, the ability to speak in public is a combination of these innate components with learned elements. Along the same lines, it has been shown that a lower degree of communication skills harms learning and its expression by students in the aforementioned contexts. There is evidence that poor performance in these oral skills would be related to certain inappropriate behaviors when speaking in public and transmitting a message (poor fluency, the clicking of the tongue, poor intonation, inadequate pauses, poorer organization and clarity, lumps, among others) (Mancuso & Miltenberger, 2016; Montes et al., 2019). These maladaptive behaviors can have a psychological effect on students, such as lower self-confidence during speech transmission (Simpson et al., 2019), establishing an emotional, cognitive, and physiological correlate that can lead to anxiety (Hancock et al., 2010) and avoidance behaviors in these situations that undoubtedly limit the learning of these and other associated skills (Marín, 2017; Morales-Domínguez & Navarro-Abal, 2013, Rueda et al., 2017; Vieco, 2019).

Anxiety related to situations in which students must expose themselves to speaking in public has a high prevalence among university students (Charoensukmongkol, 2019; García-López et al., 2013), which is why it can become a great obstacle to the achievement of academic and later professional objectives. Therefore, it is necessary to design educational intervention strategies to improve one's own

communication skills (Abdelshaheed, 2019; Binti et al., 2013; Bobkina et al., 2020; Elfering et al., 2012; García-López et al. 2013; Gómez, 2017; Gutiérrez & Bucheli, 2017; Knight et al., 2016; Sawyer et al., 2019; Stupar-Rutenfrans et al., 2017; Westwick et al., 2015; Worawong et al., 2019; Yuen et al., 2019) in combination with psychoeducational intervention strategies to regulate, in this case, anxiety or fear of public speaking and increase confidence (Barkowski et al., 2016; Ebrahimi et al., 2019; Espinar-Álava, 2019; Powers et al., 2008; Raja, 2017; Ros, 2005; Valladares, 2015; Wagner et al., 2014). The combined application of both types of strategies as a preventive approach for the development of skills and promotion of specific abilities has not been widely studied in the field of higher education, however, everything seems to indicate that the design and implementation of both types of strategies can favor the development of communication skills and the management of anxiety in students, so it is advisable to continue researching in this regard for a better subsequent application.

As for strengths of the study, we found that many of the didactic activities incorporated, for example, the debate sessions, presentations with feedback, discussion groups, or workshops, are of interest to the students, so they connect more with the content and are more actively involved with the specific activities and with the subject in general. The study has in turn contributed to generating a climate of greater trust and interaction within the classroom.

The main weaknesses detected refer to the format in which the contents that serve as the basis for the specific tasks are presented. On many occasions, it has been material focused mainly on the theoretical content of the subject. Possibly the use of other types of content or topics, more of everyday life, could facilitate initial training in oral skills and favor the generalization of learning to more diverse social and academic contexts. On the other hand, the effect of modeling or habituation in the control group as an extraneous variable could be controlled by extracting this group out of the classroom, and avoiding contact with the other two groups while the intervention is being carried out.

6. References

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7. Appendices/Annexes

7.1. Appendix 1

Table 1: List of selected strategies to develop oral skills or reduce anxiety to speak in public applied in the subject.

Strategies	Explanation
Assignment of virtual homework	It consists of planning and assigning short and simple tasks to promote students' autonomous work through, for example, self-observation and self-registration tasks, scientific writing, and watching videos. The objective is the development of oral skills based on rehearsal, progressive exposure, training of specific skills, and direct feedback.
Confrontation of focus groups (debate)	In general, it consists of giving an initial idea or theme to one group and giving the opposite idea or theme to another group. Discuss in a reasoned way the arguments between groups and reach a conclusion to have to transmit it as a group to the rest. The act of arguing, according to Vignaux (1986), should be considered as a "staging" for the other. That is, a person makes a speech and transmits it. On the other hand, in these types of activities, there must be someone who counters and configures their discourse based on discursive strategies. It is thus understood that argumentation is a complex process, in which both people involved are sender and receiver at the same time, having to adjust their speech and arguments on the fly based on the reply of the other person. That is, the discourse must go through a process of deconstruction, construction, and reconstruction. In this process, comprehension, interpretation, thought and carrying out reasoning schemes that include beliefs and values are involved, thus providing different points of view and forming more critical and reflective students through this communicative skill, which implies an active interaction between two or more people when communicating.
Communication workshop	Topics related to communication in its different forms or contexts will be addressed. In the work with the students, the different forms of expression (verbal, non-verbal, etc.) will be valued. Fluency and clarity in the language used will be taken into account to transmit knowledge on the subject to be addressed. It can be considered as an individual or group activity. The phases will consist of: 1st baseline. Check the level of communication from which they start (different measurements can be established). 2nd Intervention, for example, a seminar where communication skills are worked on and activities where immediate feedback is given to students. 3rd post-test. Check the level of communication achieved (different measurements can be established). Authors such as Garello and Rinaudo (2013) affirm that the feedback provided to students is a very important part of their learning process, not only to obtain information about their academic results but also to reinforce the responses they give and the different cognitive components involved in these responses, such as the elaboration of the mental representation of the task demand or the operations that must be carried out to carry them out. Regarding the type of feedback, Koedinger and Corbett (2006) indicate that the one that produces the most benefits in the entire learning process is the one that is administered immediately after the completion of the task demanded by the students. This type of feedback generates more efficient results than other types of feedback, also correcting errors and incorrect preconceived ideas, being further enhanced when access is given to the argumentation and explanation of the correction. All this could generate faster and more effective learning if applied to the teaching of communication skills. For this reason, observation and feedback will be incorporated during the learning process and the performance of this type of activity.

Source: Own elaboration.

7.2. Appendix 2

Table 2: *Description of the procedure applied during each of the five phases of the study, activities, and objectives.*

Phase	Objective	Description
Phase 1 - Practice 1.	Establish the first contact with the students and with the work methodology in a natural way in the classroom.	Through a written work, the name, facilities, logo, image, mission, vision, purpose, strategic plans, necessary resources, formal structure (organizational chart), functions and positions, analysis of the environment, similar organizations, and future projects had to be established. The activity was developed in person in the classroom and the duration was a 1-hour session for each medium group, in which firstly it was explained what the students had to do in the practice, and later, within each of the three groups, small groups of 5-6 people were established randomly, and their elaboration began. The work was to be delivered in one week. In this way, the students were able to develop the work in a collaborative and participatory way during the face-to-face session, since they could ask questions and discuss ideas with their groupmates and later continue working more autonomously at a distance. Throughout the process, the teacher administered feedback in the form of comments during the session or through subsequent email queries.
Activity		
Practice 1. The organization: concept, types, and structure		
<p>The following practice must be done in a group (5-6 components) and delivered in Moodle at the link enabled for this task within the established date (you can use Word or PowerPoint, as long as it is uploaded to Moodle in PDF format). You must begin to propose your “Organization Project”. To do this we will begin by establishing the bases of it, defining a name, physical location, and logo, and stipulating the mission, vision, purpose (objectives, activities, etc.), strategy/s (along with the necessary resources), besides creating a formal structure (organizational chart) with its respective functions and positions occupied by yourselves. An analysis of the environment (weaknesses, threats, strengths, and opportunities), similar organizations, as well as future projects, should be proposed.</p> <ol style="list-style-type: none"> 1. Name: 2. Facilities or headquarters: 3. Logo: 4. What is? <ol style="list-style-type: none"> a. Mission: b. Vision: c. Purpose (general and specific objectives, activities, etc.): d. Strategies: 5. Necessary resources (human, material, etc): 6. Formal structure (Organizational chart) – functions and positions to be filled: 7. Environment analysis: <ol style="list-style-type: none"> a. Weaknesses: b. Threats: c. Strengths: d. Opportunities: e. Similar organizations: 8. Future projects: 		

Phase	Objective	Description
Phase 2 - Practice 2. Pre-test	Establish the baseline from a pre-test evaluation through Paul's Personal Report of Confidence as Speaker questionnaire and the ECO scale.	Through a group oral presentation, a general description of what was established in the previous practice should be made, adding an evaluation of the psychological/organizational factors (motivation, satisfaction, implication, and/or organizational commitment), how they have been measured, and the result (in a fictitious way, the result will be negative). Propose an intervention or action plan, from any of the perspectives, theories, or approaches studied, to improve/increase these factors among the workers (in this case, creativity was valued since it was a free section within the activity). Description of the expected results and how it is remeasured. This activity was developed by making a PowerPoint presentation in which, as a group, (groups of 5-6 people), the students had to expose and argue all the previous sections. This activity was face-to-face in the classroom and was developed during 2 sessions of 1 hour (2 hours in total) for each study group. During the first session, it was explained how they should prepare the work and what was the final objective (a group oral presentation). In this same session, the small groups began to develop the activity by asking questions and showing the teacher how they were constructing the work collaboratively and receiving feedback from the teacher throughout the process. During the second session, group oral presentations were carried out to explain what was established in the work. Before giving the presentation to the students during practice 2, the students were given a short questionnaire that measured the level of confidence and anxiety when speaking in public (Personal Report of Confidence as Speaker by Paul). This questionnaire had to be filled out by the students themselves individually before beginning the group presentation. Furthermore, the self-observation Communication Evaluation Questionnaire (ECO) was used, which measured aspects related to oral skills. This scale was completed by the teacher during the presentations, evaluating the commented aspects of each of the students in each of the groups that presented their work.
Activity		
<p>Practice 2. The individual in the organization: basic concepts of perception, attitudes, motivation, and satisfaction.</p> <p>The following practice must be carried out in a group (5-6 components) through an oral presentation in class in a structured manner, using PowerPoint support. Hypothetically, we are going to suppose that in the organization you created (practice 1) an evaluation of the different psychological components that we have seen throughout unit two has been carried out. In other words, you have evaluated the motivation, satisfaction, involvement, and/or organizational commitment of your workers and the result has not been very positive. Therefore, you must propose an intervention to improve/increase all or some of these psychological aspects that are influencing the performance of your organization. You must also explain what results you expect to obtain with your action plan and how you are going to re-evaluate it. Therefore, the following information should appear in the PowerPoint however you want:</p> <ol style="list-style-type: none"> 1. Brief description of your organization (practice 1 briefly). 2. Evaluation of the psychological/organizational factors discussed (motivation, satisfaction, involvement, and/or organizational commitment). They can be all or some (it will be valued if it is more than one). In this section, you present the factors, how you have measured them, and that the result has been negative. 3. As your evaluation of these factors has been negative, you have to propose an intervention or action plan to improve/increase these factors among your workers. You can do it from any of the perspectives, theories, or approaches that we have seen in topic 2 for any of the factors. Here, creativity will be valued, this section is free. 4. Once your intervention has been implemented, what results do you expect to obtain? And how do you measure again? The same instrument as at the beginning? Others? Free section. <p>The presentation must be in a group (the same small practice groups that you already have) and should not last more than 5 or 6 minutes. You can use PowerPoint or similar.</p>		

Phase	Objective	Description
Phase 3 - Practice 3. Intervention	Carry out the different interventions in each group.	<p>This consisted of the elaboration of the process of analysis and definition of a job, the definition and evaluation of competencies, and the selection of the optimal person for the position within the framework of the organization previously invented in the previous practices. The following sections should be addressed: 1. Analysis (brief search for job information) and job description (job title, tasks and functions, responsibilities, and obligations of the job). 2. Description of the job profile (ideal person). What characteristics, training, and, above all, skills (and at what levels) should the right person for the position have. 3. Definition and evaluation of competencies (how they are evaluated, which ones do the hypothetically evaluated people have). 4. Selection of personnel. In this practice, the different educational strategies or methodologies were implemented by the teacher. The distribution was as follows:</p> <p>Group 1 (control): In the first place, it was explained what the elaboration of the practice consisted of and later the students were asked to carry out the activity in a group as they had been doing previously without any type of strategy on the part of the teacher, having to deliver the activity in writing in the within one week. The work session was face-to-face and lasted 1 hour (Annex 3).</p> <p>Group 2 (Intervention through debate and confrontation of discussion groups): The students were explained how the practice should be carried out, asking them to carry out the activity through a debate, argumentation, and discussion between the different small workgroups (among classmates from the same group and with other groups). Subsequently, the students had to comment on the conclusions they had reached by submitting a written assignment within a week (Annex 4). This session was face-to-face and lasted 1 hour.</p> <p>Group 3 (Intervention through communication workshop): The first activity within this group was a brief workshop in which communicative aspects and oral skills were addressed. The workshop was carried out by the teacher through a PowerPoint presentation and numerous examples of communication by viewing a video as a model of effective communication (see Annex 5), in which concepts such as anxiety when speaking in public were explained and coping strategies, reduction and control of anxiety strategies, and specific guidelines for effective communication were described. After the workshop, the students had to discuss and argue the different ideas related to the practice with the rest of their classmates from other small groups, receiving immediate feedback from the teacher regarding the suitability of the communication used, giving corrections, and reinforcing effective communication behaviors. Subsequently, the students reflected on what they had commented on in a written assignment delivered within a week (Annex 6). The session was face-to-face and lasted 1 hour.</p>
Activity – Group 1 control		
<p>Practice 3. Processes between the Individual and the Organization/Human Resources Management. Concept and evaluation by Competencies</p> <p>The following practice must be carried out in a group (5-6 components) through the elaboration of the process of analysis and definition of a job, the definition and evaluation of competencies, and the selection of the optimal person for the position. Hypothetically, we are going to assume that you need a new job and therefore a person to hold that position in your organization. To do this, you must work on the following sections.</p> <ol style="list-style-type: none"> 1. Analysis (brief job information search) and job description. That is job title, tasks and functions, responsibilities, and obligations of the position. You can put other information about the position that you deem appropriate. 2. Description of the job profile (ideal person). What characteristics, training, and, above all, skills (and at what levels) should the right person for the position have. 3. Definition and evaluation of competencies. How do you evaluate them, and which do the hypothetically evaluated people have. 4. Selection of personnel. Here simply select the person who best fits the profile. <p>You must deliver the corresponding written work answering in this same template.</p>		

Activity – Group 2 debate, argumentation, and discussion between groups

Practice 3. Processes between the Individual and the Organization/Human Resources Management. Concept and evaluation by Competencies

The following practice must be carried out in a group (5-6 components) through the elaboration of the process of analysis and definition of a job, the definition and evaluation of competencies, and the selection of the optimal person for the position. This will be done through debate and confrontation in discussion groups, whereby each group belongs to a department within their organization and is brought together to present the issues described above, through debate and constructive discussion. Hypothetically, we are going to assume that you need a new job and therefore a person to hold that position in your organization. To do this you must work on the following sections.

1. Analysis (brief job information search) and job description. That is job title, tasks and functions, responsibilities, and obligations of the position. You can put other information about the position that you deem appropriate.
2. Description of the job profile (ideal person). What characteristics, training, and, above all, skills (and at what levels) should the right person for the position have.
3. Definition and evaluation of competencies. How do you evaluate them, and which do the hypothetically evaluated people have.
4. Selection of personnel. Here simply select the person who best fits the profile.

This will be done as a group, exposing the different ideas to the rest of the classmates, debating them, attending to the ideas of the others, and contributing and refuting through arguments, as if you were in a meeting of the organization. Later you must deliver the corresponding written work answering in this same template.

Activity – Group 3 communication workshop

Practice 3. Processes between the Individual and the Organization Human Resources Management. Concept and evaluation by Competencies

The following practice must be carried out in a group (5-6 components) through the elaboration of the process of analysis and definition of a job, the definition and evaluation of competencies, and the selection of the optimal person for the position. This will be done by simulating that each group belongs to a department within their organization and is meeting to expose the issues described above, through a previous communication workshop, after which immediate feedback will be given by the teacher during the argumentation of the groups. Hypothetically, we are going to assume that you need a new job and therefore a person to hold that position in your organization. To do this, you must work on the following sections.

1. Analysis (brief job information search) and job description. That is job title, tasks and functions, responsibilities, and obligations of the position. You can put other information about the position that you deem appropriate.
2. Description of the job profile (ideal person). What characteristics, training, and, above all, skills (and at what levels) should the right person for the position have.
3. Definition and evaluation of competencies. How do you evaluate them, and which do the hypothetically evaluated people have.
4. Selection of personnel. Here simply select the person who best fits the profile.

This will be done as a group, exposing the different ideas to the rest of the classmates, as if you were at an organization meeting, through a prior communication workshop to optimally address both content and communication aspects. Later you must deliver the corresponding written work answering in this same template.

Communication Workshop – Modeling through video viewing in effective communication

Taller breve de Comunicación

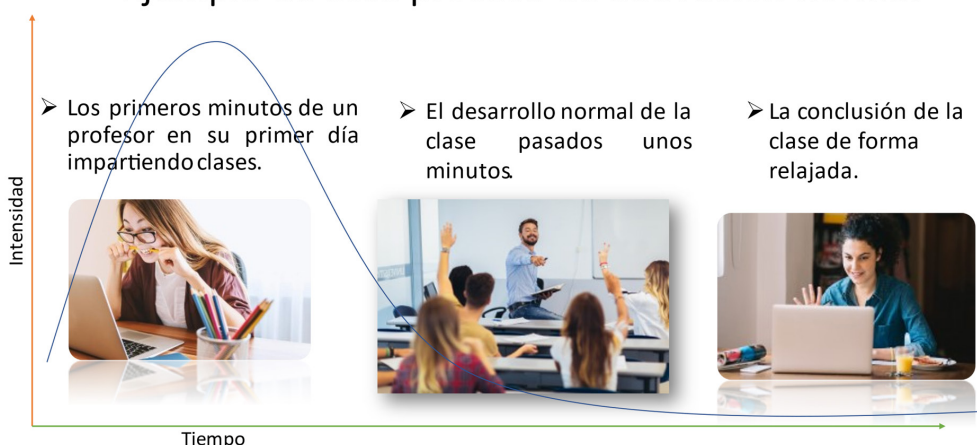
PSICOLOGÍA DE LAS ORGANIZACIONES Y EQUIPOS DE TRABAJO
2º Grado Educación Social
GM3



Conceptos Básicos al hablar en público

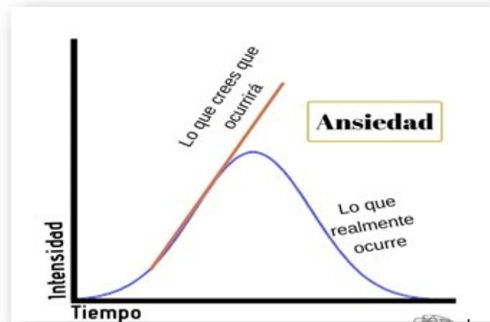


Ejemplo de este proceso de activación normal



Ansiedad/Nervios/miedo al hablar en público

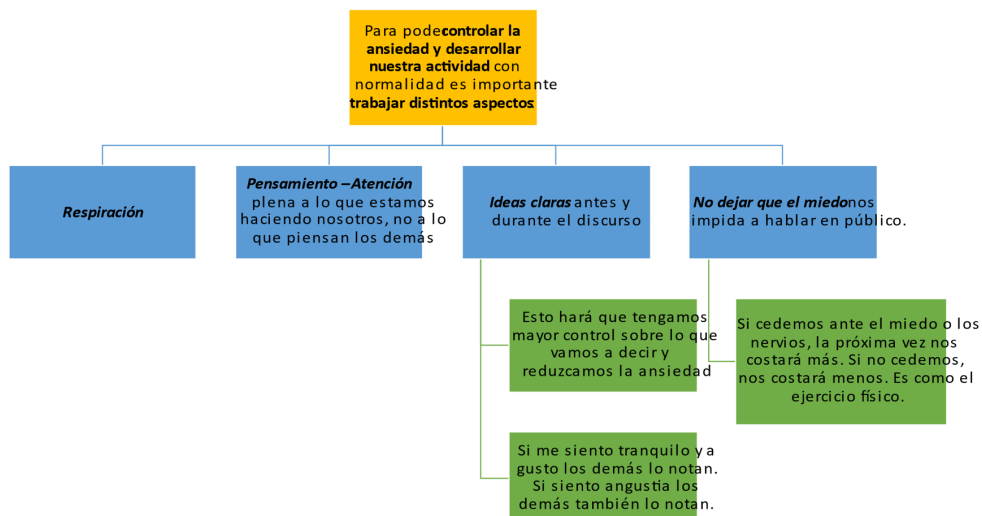
La ansiedad (nervios) propios al hablar en público sigue un proceso de causal o activación según la curva normal.



Pautas a tener en cuenta para hablar en público



Nervios/miedo al hablar en público





Ejemplo de comunicación eficaz

<https://www.youtube.com/watch?v=LtMQDPAnauE>



Phase	Objective	Description
Phase 4 - Practice 4.	Carry out a follow-up of the activities naturally proposed in the classroom	Through written work, an activity related to the analysis, management, and negotiation strategies of the conflict was carried out. The following sections should be described: 1. Reason for the conflict. 2. Need, demand, or problem of the party involved A. 3. Need, demand or problem of the party involved B. 4. Evolution of the conflict following the curve or pyramid of conflict escalation (escalation, stagnation, de-escalation) or (discomfort, incidents, misunderstandings, tension, crisis). 5. Type of conflict (task-oriented or people-oriented). 6. Voltage level (low, intermediate, high). 7. Interdependence of goals (positive or negative). 8. Specific strategies for stimulating conflict if necessary. 9. Type of intervention or style that has been followed to manage the conflict. The work was carried out face-to-face in the classroom, in 1 session of 1 hour for each medium group. The dynamic followed on this occasion was the same as in previous practices (explanation of how to carry out the practice by the teacher and elaboration of it by the small workgroups). Similarly, the deadline for the delivery of the conclusions was one week.
Activity		
Practice 4. Description of conflict and negotiation strategies		
<p>In this activity, we are going to hypothesize that there is a conflict in our organization. You will have to describe the following aspects of it briefly:</p> <p>Analysis, management, and conflict negotiation strategies</p> <ol style="list-style-type: none"> 1. Reason (in one sentence): 2. Need, demand, or problem of the party involved A: 3. Need, demand, or problem of the party involved B: 4. Briefly describe the evolution of the conflict following the curve or pyramid of conflict escalation (escalation, stagnation, de-escalation) or (discomfort, incidents, misunderstandings, tension, crisis): 5. Type of conflict (task-oriented or people-oriented): 6. Voltage level (low, medium, high): 7. Interdependence of goals (positive or negative): 8. If conflict needs to be stimulated at some point in the process, what specific strategies would be used? 9. Type of intervention or style that has been followed to manage the conflict: 		
Phase	Objective	Description
Phase 5 - Practice 5. Post-test	Perform a post-test based on Paul's Personal Report of Confidence as Speaker questionnaire and the ECO scale.	Through a PowerPoint presentation in which, as a group, (groups of 5-6 people), the students had to expose and argue everything developed in the previous practices concerning the established organization. This was carried out in 1 session of 1 hour for each medium group. The dynamics of presentations followed the same logic as in practice 2, so on this occasion, a post-test evaluation was carried out using the same instruments used in that practice. Unlike practice 2, after finishing all the group presentation sessions and having implemented the evaluation instruments, the teacher gave feedback to each group taking into account the content exposed and all the aspects related to the communication used. The procedure, as well as the evaluation instruments used during this post-test phase, were identical to those used in the pre-test (practice 2), this time implemented in practice 5.
Activity		
Practice 5. Final presentation on the organization and all the aspects dealt with up to now		
The following practice must be carried out in a group (5-6 components) through an oral presentation in class in a structured manner, using PowerPoint support.		

This presentation must collect all the aspects dealt with in the previous practices so that a general vision of everything related to your organization is presented.

1. Description of your organization and all the aspects dealt with in the previous practices.

The presentation must be in a group (the same small practice groups that you already have) and should not last more than 5 or 6 minutes. You can use PowerPoint or similar.

Source: Own elaboration.

7.3. Appendix 3

Table 3: *T-test for paired samples between the pre-test and post-test of the ECO questionnaire of the three groups.*

	Paired differences														
	Group 1					Group 2					Group 3				
	Average	DE	t	gl	Sig.	Average	DE	t	gl	Sig.	Average	DE	t	gl	Sig.
PRE_Body Expression POST_Body Expression	-.66	1.11	2.32	14	.03*	-.68	.47	6.24	18	.00***	-1.11	.78	5.89	16	.00***
PRE_Gesticulation POST_Gesticulation	-.80	1.08	2.86	14	.01*	-.78	.41	8.21	18	.00***	-1.17	.63	7.62	16	.00***
PRE_Gaze POST_Gaze	-.73	1.03	2.75	14	.01*	-.73	.65	4.91	18	.00***	-.88	1.11	3.27	16	.00**
PRE_Fluency POST_Fluency	-.60	.91	2.55	14	.02*	-.26	.87	1.31	18	.205	-1.00	.86	4.76	16	.00***
PRE_Volume POST_Volume	-.66	.81	3.16	14	.00**	-.78	.63	5.45	18	.00***	-1.00	.70	5.83	16	.00***
PRE_Intonation POST_Intonation	-.80	.77	4.00	14	.00**	-.84	.68	5.33	18	.00***	-1.00	1.17	3.51	16	.00**
PRE_Interest POST_Interest	-.80	.67	4.58	14	.000***	-.47	.51	4.02	18	.00**	-.88	.85	4.24	16	.00**
PRE_Structuring POST_Structuring	-.20	.56	1.38	14	.18	-.05	.22	1.00	18	.331	-.82	.80	4.19	16	.00**
PRE_Clarify POST_Clarify	-.26	.45	2.25	14	.04*	-.05	.22	1.00	18	.331	-1.00	.70	5.83	16	.00***
PRE_Time/Content Adjustment POST_Time/Content Adjustment	-.40	.82	1.87	14	.08	-.47	.51	4.02	18	.00**	-1.29	1.31	4.06	16	.00*

Source: Own elaboration.

Note:: *p < .05; **p < .01; ***p < .001

Table 4: Paired-sample t-test between the pre-test and post-test of the Confidence Questionnaire for Public Speaking of the three groups.

	Paired differences														
	Group 1					Group 2					Group 3				
	Average	DE	t	gl	Sig.	Average	DE	t	gl	Sig.	Average	DE	t	gl	Sig.
ITEM 1 PRE_POST_When I speak in front of an audience, my thoughts are confused and mixed	.66	1.11	2.32	14	.03*	.42	.60	3.02	18	.00*	.05	.55	.43	16	.66
ITEM 2 PRE_POST I'm not afraid to be in front of an audience	-.26	1.16	-.88	14	.38	-.10	1.55	-.29	18	.77	-.17	1.55	-.46	16	.64
ITEM 3 PRE_POST_Although I am nervous just before I stand up, I soon forget my fears and enjoy the experience	-.066	1.43	-.18	14	.86	.52	1.21	1.88	18	.07	-.35	.70	2.07	16	.05
ITEM 4 PRE_POST_I face with complete confidence the prospect of giving a talk	.00	1.13	.00	14	1.00	-.21	1.13	-.80	18	.42	-.05	.82	-.29	16	.77
ITEM 5 PRE_POST_I think I am in complete possession of myself as I speak	-.33	1.04	1.23	14	.23	.00	1.00	.00	18	1.00	-.29	1.04	1.15	16	.26
ITEM 6 PRE_POST_Although I speak fluently with friends, I can't find the words to express myself on stage	.00	.84	.00	14	1.00	.00	.81	.00	18	1.00	.29	.98	1.23	16	.23
ITEM 7 PRE_POST_I feel relaxed and at ease while I speak	-.20	.77	1.00	14	.33	-.63	1.06	2.58	18	.01*	-.11	.60	-.80	16	.43
ITEM 8 PRE_POST_Whenever possible, I avoid speaking in public	.06	1.33	.19	14	.84	-.10	.99	-.46	18	.65	.23	.66	1.46	16	.16
ITEM 9 PRE_POST_My mind is clear when I am in front of an audience	-.33	.97	1.32	14	.20	.05	1.02	.22	18	.82	-.47	.71	2.70	16	.01*
ITEM 10 PRE_POST_My posture seems forced and unnatural	.33	.89	1.43	14	.17	-.26	.80	1.42	18	.17	-.11	.78	-.62	16	.54
ITEM 11 PRE_POST_I am scared and tense the whole time I am speaking in front of a group of people	.40	.91	1.70	14	.11	.21	.91	1.00	18	.33	.17	.95	.76	16	.45
ITEM 12 PRE_POST_I feel terrified at the idea of speaking in front of a group of people	.40	.91	1.70	14	.11	-.05	.91	-.25	18	.80	-.52	.94	2.31	16	.03*

Source: Own elaboration.

Note: *p < .05; **p < .01; ***p < .001

Table 5: One-way ANOVA for independent samples and multiple comparisons (Bonferroni post hoc test) of the post-test of the ECO questionnaire between all groups.

Dependent variable		gl	Anova		Bonferroni			
			F	Sig.	(I) Group	(J) Group	DE	Sig.
POST_Body Expression	Between groups	2	10.38	.00***	Control_Group	Workshop_Group	.23	.00*
	Within groups	48			Debate_Group	Control_Group	.23	1.00
	Total	50				Workshop_Group	.22	.00***
POST_Gesticulation	Between groups	2	6.88	.00**	Control_Group	Workshop_Group	.25	.00**
	Within groups	48			Debate_Group	Control_Group	.24	1.00
	Total	50				Workshop_Group	.23	.00**
POST_Gaze	Between groups	2	3.32	.04*	Control_Group	Workshop_Group	.28	.06
	Within groups	48			Debate_Group	Control_Group	.27	1.00
	Total	50				Workshop_Group	.26	.15
POST_Fluency	Between groups	2	8.92	.00**	Control_Group	Workshop_Group	.25	.01*
	Within groups	48			Debate_Group	Control_Group	.24	1.00
	Total	50				Workshop_Group	.23	.00***
POST_Volume	Between groups	2	9.48	.00***	Control_Group	Workshop_Group	.21	.00**
	Within groups	48			Debate_Group	Control_Group	.21	1.00
	Total	50				Workshop_Group	.20	.00**
POST_Intonation	Between groups	2	2.00	.14	Control_Group	Workshop_Group	.26	.35
	Within groups	48			Debate_Group	Control_Group	.26	1.00
	Total	50				Workshop_Group	.25	.21
POST_Interest	Between groups	2	5.74	.00**	Control_Group	Workshop_Group	.26	.13
	Within groups	48			Debate_Group	Control_Group	.26	.80
	Total	50				Workshop_Group	.25	.00**
POST_Structuring	Between groups	2	6.73	.00**	Control_Group	Workshop_Group	.18	.04*

	Within groups	48			Debate_Group	Control_Group	.17	1.00
	Total	50				Workshop_Group	.17	.00**
POST_Clarity	Between groups	2	10.16	.00***	Control_Group	Workshop_Group	.16	.00**
	Within groups	48			Debate_Group	Control_Group	.15	1.00
	Total	50				Workshop_Group	.15	.00***
POST_Time/Content Adjustment	Between groups	2	1.51	.23	Control_Group	Workshop_Group	.21	.87
	Within groups	48			Debate_Group	Control_Group	.21	1.00
	Total	50				Workshop_Group	.20	.27

Source: Own elaboration.

Note: *p < .05; **p < .01; ***p < .001

Table 6: One-way ANOVA for independent samples and multiple comparisons (Bonferroni post hoc test) of the Confidence Questionnaire for Public Speaking post-test between all groups.

Dependent variable		Anova			Bonferroni			
		gl	F	Sig.	(I) Group	(J) Group	DE	Sig.
ITEM 1_When I speak in front of an audience, my thoughts are confused and mixed	Between groups	2	.89	.41	Control_Group	Workshop_Group	.37	.57
	Within groups	48			Debate_Group	Control_Group	.36	1.00
	Total	50				Workshop_Group	.35	1.00
ITEM 2_I'm not afraid to be in front of an audience	Between groups	2	.64	.52	Control_Group	Workshop_Group	.45	1.00
	Within groups	48			Debate_Group	Control_Group	.43	.91
	Total	50				Workshop_Group	.42	1.00
ITEM 3_Although I am nervous just before I stand up, I soon forget my fears and enjoy the experience	Between groups	2	1.43	.24	Control_Group	Workshop_Group	.37	.92
	Within groups	48			Debate_Group	Control_Group	.36	1.00
	Total	50				Workshop_Group	.35	.29
ITEM 4_I face with complete confidence the prospect of giving a talk	Between groups	2	3.82	.02*	Control_Group	Workshop_Group	.34	.48
	Within groups	48			Debate_Group	Control_Group	.33	.02*
	Total	50				Workshop_Group	.32	.54
ITEM 5_I think I am in complete possession of myself as I speak	Between groups	2	2.40	.10	Control_Group	Workshop_Group	.33	1.00
	Within groups	48			Debate_Group	Control_Group	.33	.74
	Total	50				Workshop_Group	.32	.10

ITEM 6_ Although I speak fluently with friends, I can't find the words to express myself on stage	Between groups	2	.25	.77	Control_Group	Workshop_Group	.39	1.00
	Within groups	48			Debate_Group	Control_Group	.38	1.00
	Total	50				Workshop_Group	.37	1.00
ITEM 7_ I feel relaxed and at ease while I speak	Between groups	2	1.13	.33	Control_Group	Workshop_Group	.36	1.00
	Within groups	48			Debate_Group	Control_Group	.35	.42
	Total	50				Workshop_Group	.34	1.00
ITEM 8_ Whenever possible, I avoid speaking in public	Between groups	2	1.10	.34	Control_Group	Workshop_Group	.45	.47
	Within groups	48			Debate_Group	Control_Group	.44	.84
	Total	50				Workshop_Group	.42	1.00
ITEM 9_ My mind is clear when I am in front of an audience	Between groups	2	.22	.79	Control_Group	Workshop_Group	.33	1.00
	Within groups	48			Debate_Group	Control_Group	.33	1.00
	Total	50				Workshop_Group	.31	1.00
ITEM 10_ My posture seems forced and unnatural	Between groups	2	.54	.58	Control_Group	Workshop_Group	.37	1.00
	Within groups	48			Debate_Group	Control_Group	.36	1.00
	Total	50				Workshop_Group	.35	.90
ITEM 11_ I am scared and tense the whole time I am speaking in front of a group of people	Between groups	2	.12	.88	Control_Group	Workshop_Group	.39	1.00
	Within groups	48			Debate_Group	Control_Group	.38	1.00
	Total	50				Workshop_Group	.37	1.00
ITEM 12_ I feel terrified at the idea of speaking in front of a group of people	Between groups	2	.38	.68	Control_Group	Workshop_Group	.40	1.00
	Within groups	48			Debate_Group	Control_Group	.39	1.00
	Total	50				Workshop_Group	.37	1.00

Source: Own elaboration.

Note: *p < .05; **p < .01; ***p < .001

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