Resonant communicators, effective communicators. Communicator's flow and credibility

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Abstract: Communication studies have been integrating the latest developments in cognitive sciences and acknowledging the importance of understanding the subjective processes involved in communication. This article argues that communication studies should also take into account the psychology of the communicator. This article presents the theoretical basis and the results of a training programme designed for audiovisual communicators. The programme is based on the theories of self-efficacy and flow and seeks to improve students' communication competencies through the use of presentation techniques and psychological skills to tackle communication apprehension. The programme involves an active methodology that is based on modelling, visualisation, immediate feedback and positive reinforcement. A repeated-measures ANOVA shows that the programme successfully decreases the level of communication apprehension, improves the perceived self-efficacy, improves the psychological state needed to perform better in front of the cameras (flow), and improves students' communication skills. A path analysis proved that the perceived self-efficacy and anxiety levels predict the level of flow during the communication act. At the end of the training programme, those who experienced higher levels of flow and enjoyment during the communication task achieved higher quality levels in their communication exercise. It is concluded that the concepts of self-efficacy and flow facilitate advancing in the understanding of the factors that determine a communicator's credibility and ability to connect with the audience.

Keywords: Public speaking; communication apprehension; self-efficacy; flow; training in communication.

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Effects of the training programme on students' psychological competencies and communication quality. 3.3. Effects of psychological competencies on communication quality. 4. Conclusions. 5. Bibliographic references.

Translation by **Cruz Alberto Martínez-Arcos, M.A.** (University of London)

1. Introduction

Speaking to an audience is an activity that provokes high levels of anxiety and fear in many people. Knowing that they will be assessed makes many people feel insecure and threatened to such extent that public speaking is considered to be one of the most difficult social situations (Bados, 1990; 2008).

Contrary to what many people believe, stage fright does not only occurs the first time someone has to speak in public, but also occurs in people with years of experience in occupations that involve speaking to an audience like, for example, in teaching or stage performance (Thomas, 2005).

The tension provoked by public speaking is added, at the moment, to the intense competition between media companies to be different and increase audience involvement and loyalty. In this context, excellent communicators, with their ability to develop an emotional connection with the public, have become an important competitive advantage. Consumers want the media to provide them with meaningful experiences, and one of these crucial experiences is the sense of personal connection with the journalist or communicator (Peer, Malthouse, Nesbitt and Calder, 2007).

Thus, broadcasters are expected to be emphatic, natural and able to transmit and provoke emotions, thereby generating a high involvement of the audience with the medium. This new demand increases the pressure to which communicators are subjected and the difficulty of the activity, especially during the training period, when communication skills are still very limited. Paradoxically, this difficulty increases the level of anxiety towards public speaking which, in turn, affects the communicator's expressiveness and naturalness. Research has shown that the psychological and physiological levels of communication apprehension predict the deterioration of the clarity of communication, the perception of the communicator's credibility, and the effectiveness of communication (Freimuth, 2006).

The feeling of failure in early attempts makes many communication students to avoid future exposure to the public in order to protect their self-esteem. Of those who continue, some will spontaneously develop stress coping strategies, but others will accumulate anxiety and feelings of personal inefficiency which in the medium or long term will deteriorate their health and work experience.

The reiterated exposure to stressful experiences at work determines the appearance of the burnout syndrome. This syndrome is characterised by emotional exhaustion, the development of a cynical and negative attitude towards the working environment, and the tendency to negative self-assessment, in particular with regards to the performance at the working place (Maslach, Schaufeli and Leiter, 2001).

In order to properly face the challenges posed by public speaking, communicators need to have psychological abilities to cope with communication apprehension and enable the development of a high level of self-perceived effectiveness, i.e., a strong confidence in their own ability to communicate and win the public's attention. Training in these skills can certainly determine the quality of communication and the control of vocal and interpretation techniques.

When people feel they have adequate resources to tackle a difficult task, they will stop seeing the task as an insuperable barrier and will start seeing it as a stimulus to unleash their full potential. Flow theory (Csikszentmihalyi, 1990) refers to the optimal psychological state for maximum performance in any human activity. The flow occurs when a person faces a difficult task and has the skills perceived as appropriate to complete it. In this situation, people are more focused, active, involved, creative, motivated, and satisfied with what they do. A state of flow unites the conditions that will allow individuals to be as effective as possible at what they do, like speaking in front of an audience.

On the contrary, when individuals are not prepared to complete a difficult task, they will feel anxiety, which is a psychological state that blocks their expressiveness, deteriorates the quality of communication, prevents enjoyment and provokes avoidance or separation (García Calvo et al., 2008; Mathwick and Rigdon, 2004).

Surprisingly, so far the training of communicators has not considered the psychological aspect as a determinant factor of the quality of communication in front a microphone or a camera. University or professional training programmes for presenters are limited to train students in vocal and non-verbal communication techniques, and do not take into account the fact that speaking to a microphone and, to a greater extent, to a camera can produce as much or more anxiety than speaking to an audience (Toral, Murelaga and Vidales, 2008).

The goal of our research has been to design a training programme for communicators and assess its impact. The programme incorporates the learning of vocal and interpretation techniques as well as the development of strategies to control communication apprehension, through such psychological techniques as cognitive restructuring, visualisation, and breathing and relaxation. The research is based on an active methodology based on modelling and practice of increasing difficulty, with immediate feedback and positive reinforcement, with a double and hierarchical intermediate objective: the aims is to provide experiences of task-mastering to promote self-efficacy, which in turn will facilitate a state of flow in public-speaking activities. The programme's ultimate objective is to improve students' communicative competencies.

The specific objectives of the data analysis are: a) to determine the effects of the programme on communication apprehension, perceived self-efficacy, the flow experience and the quality of public-speaking; and b) to quantify the influence of communication apprehension, perceived self-efficacy and the flow experience, i.e. the effect of the psychological variables, on the quality of students' public speaking skills.

The following section presents the theoretical basis of our training programme's design. Based on the theoretical basis, we will formulate the hypotheses that will guide the analysis of the data. The methodology section describes the research's sample, procedure, measurement instruments and statistical analyses. The results section presents a) the level of communication apprehension exhibited before the training programme, b) the development of students' skills as a consequence of the training, and c) the relations between the psychological variables and the quality of communication. Finally, the conclusion section presents the most relevant findings and implications of our work.

1.1. Public speaking fear

It is estimated that about 75% of the population suffers from stage fright, which makes it the most widespread social fear (Furmark, Tilfors and Everz, 1999; Richmond and McCroskey, 1995). In addition, between 20% and 30% of university students and 32% of the general population exhibits a high level of public speaking fear (Bados, 2008).

McCroskey (1984) defined the concept of communication apprehension as people's level of fear or anxiety associated to the actual or anticipated communication with another person or persons.

Communication apprehension can be manifested at the cognitive level, in the form of negative thoughts that precede and interfere with a speech, e.g. "I cannot do it", "I am going to get confused", "I will go blank", "they are going to think I am really bad at this", "I have nothing interesting to say". It can also provoke physiological responses (such as increased heart rate, sweating, dry mouth and butterflies in the stomach) and physical reactions (in the form of involuntary movements, use of pet words and phrases, rigid posture, etc.).

With regards to the causes, the lack of communication skills and the poor preparation in the topic to be presented increase what McCroskey (1984) has called rational communication apprehension. On the contrary, according to McCroskey, non-rational communication apprehension refers to the existence of a high level of anxiety despite the existence of satisfactory communication skills.

In the latter case, communication apprehension can be a relatively-stable personality feature that has hereditary origins and is manifested in different communicative situations, or can be a situational anxiety, i.e. a response of fear to a specific situation of communication.

Scholars have established the different elements that, regardless of the communication skills, can increase communication anxiety: the novelty of the experience (new communicative

situations generate greater anxiety), being the centre of attention ("everybody is looking at me"), feeling judged by others ("what are they thinking?"), the lack of familiarity and similarities with the audience, past experiences ("I failed before, I will fail again") and the degree of experience in public speaking in general, or in front of a particular audience (Gardner et al., 2005; Thomas, 2005).

The immediate consequence of a high level of communication anxiety is the deterioration of the quality of communication (Freimuth, 2006). Other far-reaching consequences include low grades, major difficulties to get a job, lower wages and less job promotion. In addition, at a psychological level, people with a high level of communication apprehension are perceived as little assertive and feel dissatisfied with their ability to express their ideas, meet people, become leaders and make decisions (Gardner et al., 2005; Schmidt, 2006).

Based on the previous literature review, two hypotheses have been formulated to guide our analysis:

H1: We expect to find a high level of public speech anxiety in a high percentage of students prior to receive the training programme.

H2: We expect that communication apprehension will be negatively related to the quality of the public presentation.

1.1.1. Intervention to control communication anxiety

Based on the previous distinction between rational and irrational anxiety, there are two fundamental objectives that should guide the interventions to improve the quality of public speaking. These two objectives are the improvement of communication skills and the reduction of irrational anxiety. The achievement of one of these objectives does not necessarily have to have an effect on the other.

The training to improve communication skills often focuses on three components: a) preparation of the presentation and verbal content (introduction, organisation of ideas, objectives, clarity of exposition, emphasis, conclusion), b) non-verbal aspects (gaze, facial expression, gestures, orientation, movements, posture), and c) vocal aspects (volume, intonation, fluency, speed) (Bados, 2008: 39).

Training programmes for the reduction of irrational communication apprehension can be classified into two major types: interventions of cognitive and affective orientation (Ayres, 1997).

Cognitive interventions are based on the idea that negative thoughts about a communication situation provoke anxiety, and therefore, that if those negative thoughts are eliminated the anxiety can be reduced.

These interventions include the cognitive restructuring, cognitive orientation therapy, and visualisation (Schmidt, 2006). Through cognitive restructuring people are taught to identify

their negative thoughts on a communication situation, to create alternative positive phrases, and use them to counteract the negative thoughts.

Cognitive orientation therapy focuses on instructing people to consider the oral presentation as an act of communication, rather than as a performance: instead of focusing on the fact that everybody is looking, the speaker must think about the opportunity to share ideas with the audience, and consider the possibility that the audience is interested in what he or she says rather than in discussing or criticising his or her oratory skills.

Finally, visualisation consists in creating positive mental images of the communication situation. Hall, Mack, Paivio and Hausenblas (1998) have pointed out that visualisation can be used with a cognitive or motivating role.

The cognitive function includes the imagining of specific skills (e.g., imagining oneself pronouncing correctly a difficult word or phrase, or maintaining a certain posture or facial expression) and the testing of strategies (e.g., imagining oneself continuing with the presentation after committing a mistake).

The motivating role includes the recalling of objectives (e.g., imagining oneself being congratulated by others after the presentation has ended), the controlling of the physical reactions (e.g. imagining oneself dominating the stress caused by the situation and staying calm), and fostering the sense of control, mental toughness and focused attention (e.g. imagining oneself staying focused in an unexpected situation).

The interventions of affective orientation focus on the negative feelings or emotions that are activated by the communication situation. These include physiological reactions, such as increased heart and breathing rates and transpiration.

This type of intervention includes the systematic desensitisation and the control of the respiratory rate. Systematic desensitisation uses muscular relaxation with gradual exposure to increasingly aversive stimuli in the communication situation. This technique teaches people to associate aversive situations with a state of relaxation, rather than a state of anxiety.

Breath rate control has been proven effective in lowering heart rate and stress and anxiety levels (Gatchel and Proctor, 1976; Cea and Reyes, 2005).

Section 1.4 details the incorporation of these techniques to our training programme for public speakers.

1.2. Self-efficacy theory: a positive approach to anxiety control

In the framework of his theory of self-efficacy, Bandura (1997) proposed a procedure based on active personal experience to deal with stimuli that provoke anxiety.

The procedure is based on progressive and guided practice, accompanied by two incentives: 1) immediate feedback about the performance that highlights the achievements, and 2) positive reinforcement. The objective is to provide the subject with experiences in which the

communication situation is under control in order to build an increasingly stronger perceived self-efficacy.

Perceived self-efficacy is defined as the perception of one's ability to achieve a certain level or type of performance in a given situation. Perceived self-efficacy is not a widespread and trans-situational feeling about oneself as a capable or incapable, valuable or worthless person (not the same as self-esteem). It rather refers to the skills perceived as necessary to perform a given action in a specific area of activity (Cervone and Scott, 1997)**.**

According to Bandura's theory (1977), self-efficacy is determined by four factors:

a) The first and most influential factor is the active personal experience. The active experiences of control, which allow enjoying success in difficult tasks, are the most influential source of information for self-efficacy.

b) The substituted or modelled experience. In part, the evaluation of our own capabilities is based on the performance of those who we perceive as similar to us. The effect of observing the accomplishments of others in the perceived self-efficacy corresponds to the effect known as "if they can, why not me?".

c) The verbal persuasion ("you can do it"), and

d) The physiological and emotional states: People's awareness of their own anxiety, fear or exhaustion can reduce the level of their self-perceived capacity to perform properly. There is an inverse mutual relationship between anxiety and self-efficacy. In this regard, the cognitive interpretation of the physiological signs of anxiety is crucial. This issue is addressed in section 1.4, which also describes our training programme.

People's judgments about their own efficacy provoke a series of behavioural, cognitive and emotional consequences, which are crucial for the performance (Cervone and Scott, 1997):

a) The choice of tasks to be performed: avoidance of situations due to subjective feelings of ineffectiveness may lead to the lack of development of important skills that would have been acquired otherwise. Thus, the avoidance of situations involving public speaking, in general, and presentation in front of cameras, in particular, is a very common phenomenon.

b) Once the activity has started, the perceptions of self-efficacy determine the degree of effort and perseverance in tasks that are difficult or provoke anxiety. Thus, the perceived self-efficacy will determine the ability to overcome the difficulties in communication (e.g. presentation errors or perception of disinterest or negative reactions in the audience).

c) People's judgements about their own efficacy determine the cognitive activity before and after the task. Those who doubt their capacity anticipate potential disasters ("I am going to look ridiculous"). After the communication event, the perceptions of self-efficacy determine the interpretation of the results ("the audience asked many questions because they are interested / because I did not convince them").

d) People with a high level of self-efficacy experience lower levels of anxiety when they face stressful or threatening situations.

Based on the previous review, we propose a third hypothesis:

H3: We believe people's perceived self-efficacy is negatively related to their communication apprehension.

The central prediction of the theory is not that a greater self-efficacy will inevitably generate superior results. Rather, the theory predicts that the perceptions of self-efficacy influence the choice of tasks, motivations and emotions. Through these processes, a perception of higher self-efficacy usually produces better performance (Cervone and Scott, 1997).

For this reason, we do not believe that students' perceived self-efficacy is directly related to the quality of their public speech. Instead, we think that the level of self-efficacy will determine the quality of their experience or their psychological state during the presentation, which, in turn, will determine the quality of the speech.

The flow theory (Csikszentmihalyi, 1990), which we present below, describes the optimal psychological experience for the maximum performance in different areas of human activity.

1.3. Flow theory

Figure 1

Different psychological states resulting from the combination of the different perceived skills and challenge levels (Csikszentmihalyi and Csikszentmihalyi, 1998: 263)
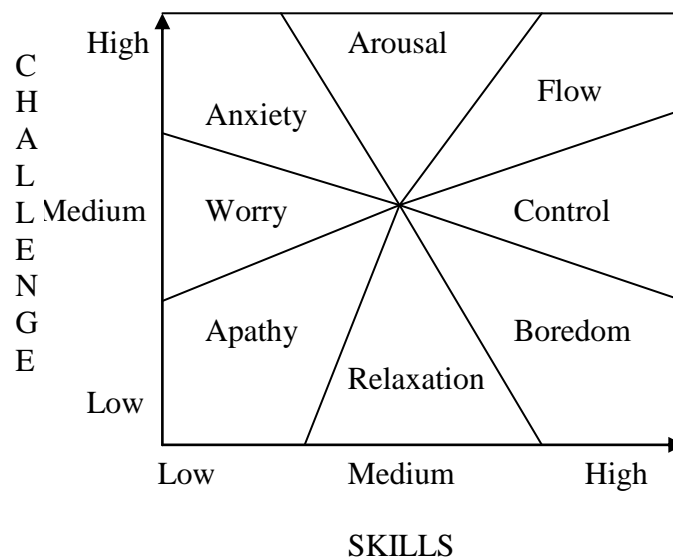
According to Csikszentmihalyi (1996), the best moments of our lives are not passive, receptive and relaxed moments, but happen when our body or mind have reached their limit in a volunteering effort to achieve something difficult and worthwhile.

The flow state occurs when individuals are fully connected with the activity they are performing, and believe their personal skills are appropriate to face the challenge posed by the task in question. The psychological results of the different possible combinations of the two variables of the flow experience (perceived skills and challenge levels) are shown in Figure 1.

The flow state has been defined as the optimal psychological experience that accompanies the moments of maximum performance in different areas of human activity (García-Calvo, Jiménez, Santos-Rosa, Reina and Cervelló, 2008; Jackson and Roberts, 1992). The flow experience includes nine components or dimensions (Jackson and Marsh, 1996):

1) Balance between the difficulty of the task and the perceived personal skills, when both are at a high level. In other words, the flow experience occurs when the individual is facing a difficult task for which he or she, however, feels ready.

2) Automaticity: the involvement in the task is so deep that it becomes spontaneous, automatic, not reflective or deliberate.

3) Clear objectives: the objectives are clearly defined, either because they have been established beforehand or because they emerge in the consciousness of the individual engaged in the activity. Thus, the individual has a clear idea of what he or she is going to do.

4) Immediate feedback: during the course of the activity, the subject receives clear positive signs of success.

5) Total concentration on the task.

6) Sense of control in difficult situations, a feeling that nothing can go wrong.

7) Loss of self-consciousness: attention is deviated from the ego, own thoughts, feelings or actions, and other people's evaluations.

8) Distortion of time perception: the speaker feels that time runs abnormally slow or fast, or loses time consciousness.

9) Autotelic experience: it is an intrinsically reinforcing, motivating and pleasant experience in itself.

The flow experience is not a state of all or nothing that remains constant. It must be understood as a continuum that goes from the absence of flow to the highest possible level of flow. It is a continuous in which individuals move along the time they dedicate to a given activity.

This state has been described in different areas, such as labour, academic, artistic, leisure and sports areas (Csikszentmihalyi and Csikszentmihalyi, 1998). Research has found evidence of

the relationship between flow and optimal performance of the activity (Jackson and Marsh, 1996).

Based on the previous review, we propose the following hypotheses:

H4: The level of self-efficacy will be positively related to the flow level.

H5: The level of communication apprehension will be negatively related to the flow experience.

H6: The flow level during the communication situation will be positively related to its quality level.

1.4. Our training programme

Figure 2 summarises our proposal. As it can be observed, we developed the factors associated with psychological training more extensively because they are the most innovative elements within the training of communicators.

The tasks of the programme incorporate the interventions for the control of communication apprehension that have been detailed in section 1.1.1 (cognitive restructuring, muscle relaxation, breathing rate control and visualisation).

Within cognitive restructuring, it is important to work on the interpretation of the physiological signs of anxiety. We should convey the idea that "speaking in public is always a challenging situation; for this reason, there is always some degree of physical reaction and it is unrealistic to expect these reactions will disappear altogether. Unless they are excessive, physical reactions should not be seen as nuisances, but as necessary stimuli to perform better" (Bados, 2008: 72).

The programme also includes modelling exercises which, as we have seen in section 1.2, are determinant factors in the self-efficacy. Students observe and learn from professional presenters in the different formats taught each week. Given that we are more influenced by people who we feel are somehow similar to us, the use of videos about the professional beginnings of admired presenters is very useful. Videos about presenters' performance in their first castings demonstrate, for example, that they were not born with their current confidence, but that it is a skill that they developed after years of practice.

In both face-to-face and non-face-to-face practices, students kept records of the key elements of the exercises. For example, in visualisation practices, they registered the difficulty/ease to view and control the desired image (scale of $0 =$ very difficult to $10 =$ very easy), as well as its sharpness ($0 =$ non-sharp to $10 =$ very sharp). In breathing control exercises the heart rate was registered before and after the exercise. In studio recordings, students' registered the level of self-efficacy and previous anxiety, the quality of the experience, and the subsequent self-assessment. All recordings were watched at the end of the class, and the professor offered immediate feedback and positive reinforcement, highlighting the achievements and improvements.

The tasks of the programme seek to develop the core competencies, which are described in a box within the following figure.

Figure 2

Training programme for audiovisual communicators
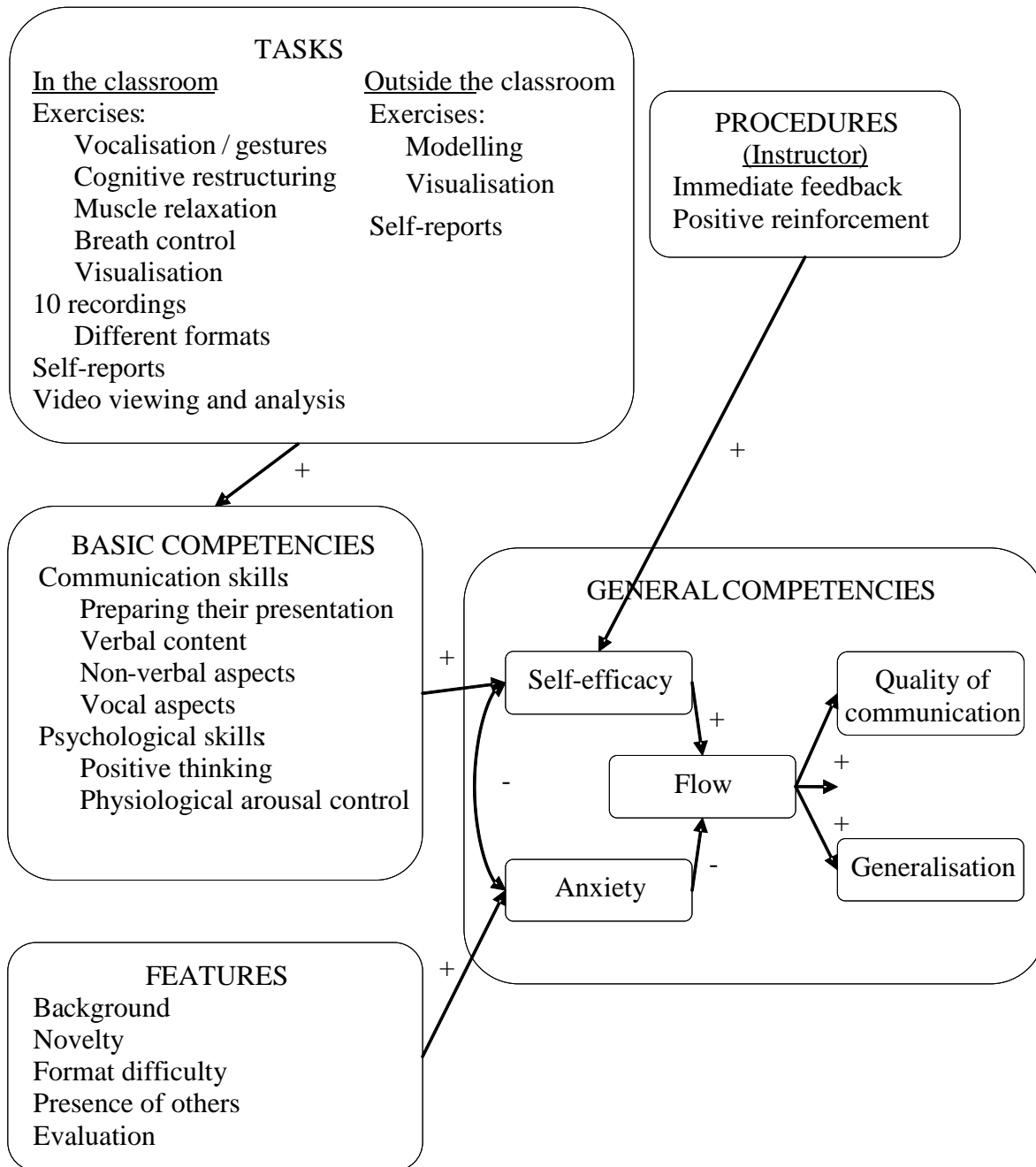
As the lowest box in the previous figure shows, the situation faced by audiovisual communication students has some features that make it look as a difficult challenge and can generate anxiety. This is a new task they have to perform in front of their classmates, and their

performance will be evaluated. All of them have an experience of reference in situations of public presentations (oral presentations in class) which, for many of them, are an important source of anxiety.

Finally, the different formats that students have to put into practice vary in difficulty. Some formats, such as the presentation of a news story using the teleprompter, are more closed and more easily controllable; while other formats require more eloquence and improvisation, are more open, and are perceived as more difficult.

The combination of tasks, procedures, basic skills and features of the situation seeks to develop the following general competencies in students: a) ability to cope with the communicative task with trust in their own ability to communicate and connect with the public (self-efficacy); b) ability to handle anxiety and achieve the optimum level of motivation for the communication situation; c) achievement of the flow state during the presentation; and d) ability to communicate in a natural, confident, clear, friendly and credible way.

We also expected the training programme to be a satisfactory and motivating experience, and to have positive impacts in other areas of participants' life (generalisation). Previous research has identified the relationships between communication apprehension and academic and employment success, and between communicative apprehension and psychological well-being (Freimuth, 2006; Gardner et al., 2005; Olivares and García-López, 2002; Schmidt, 2006).

The following analysis aims to evaluate the relationship between the variables included in the general competencies section, according to the hypotheses formulated above. In particular, we seek to determine the degree and direction of the relationship between self-efficacy and anxiety prior to the communication situation, their effect on the flow experience and, finally, the relationship between the flow experience and quality of communication.

According to our hypothesis, we expect that people with a greater confidence in their ability to communicate adequately will experience a lower prior anxiety and vice versa, people with high communicative apprehension will feel unable to perform well; we expect that the levels of self-efficacy and anxiety will jointly predict the level of flow during communication situation, i.e. the degree of concentration, the feeling of control, the automaticity and satisfaction, with the self-efficacy having a positive influence and anxiety having a negative influence. Finally, we expect that the flow experience during the communication exercise will predict the quality of this communication.

2. Methodology

2.1. Sample

The data analysed in this study were collected from students of subject *Locución en Televisión* (Presentation in Television) during the academic year 2008-2009. This is an optional subject for the bachelor degrees in Journalism and Audiovisual Communication. This course was taken by 36 students aged between 20 and 25 years. Of these participants, 23 were females (63.9%) and

13 were males (36.1%). These shares correspond to the presence of both sexes in the bachelor programmes under consideration.

The data collection procedure was integrated into the routines of the course, in which, as indicated in section 1.4, students wrote self-reports of the different tasks.

Students were informed about the existence of the research project dedicated to evaluate the efficacy of self-emotional regulation to deal with communication apprehension at the end of the course. All participants gave their consent for their data to be analysed in this project.

2.2. Research procedure and instruments

All participants answered the following questionnaires at the start of the course:

- Questionnaire on confidence as speaker. Reduced version of Paul's scale (1966), validated by Hook, Smith and Valentiner (2008). It consists of 12 items that measure the level of anxiety that people feel when they have to speak to an audience through 7-point scales. Examples of items: "While I prepare a presentation I am in a constant state of anxiety", "When I speak in front of an audience my thoughts are confusing and messy", "I sweat and tremble before I stand up to talk".

- Questionnaire on confidence as TV speaker. Adapted from McCroskey's *Personal Report on Communication Apprehension*, sub-scale of Speaking in Front of an Audience (1997). It consists of 12 items, six for radio and six for television, which measure the level of anxiety that people feel when speaking to a microphone or a television camera, using 7-point scales. Examples of items for television: "I feel scared when I have to speak in front of a TV camera", "Some parts of my body get tense and stiff when I am in front of a TV camera", "While I am presenting in television I get so nervous that I forget what I have to say".

Subsequently, on the first day of class all students recorded the presentation of a news item for a TV news programme (same news item for all). Throughout the course students made other ten recordings of programmes of different formats. At the end of the course they recorded the presentation of another news item (the same for all). Students' self-reports on the recordings of the two news items are examined here.

Prior to both recordings, participants responded to the following questionnaires:

- Questionnaire on the difficulty of the task (authors' own creation). Consists of only one item: "How easy or difficult do you think the exercise will be for you?" Participants could answer with a 7 point scale (1 = very easy - 7 = very difficult).

- Questionnaire on self-efficacy: Created by the authors following Bandura's recommendation (1997) of incorporating to the scale the behaviour that the experts in the field in question (in this case, communication) consider to be associated with the highest

performance (in this case, the maximum effectiveness in communication). Participants were asked to state, through 7-point scales, the extent to what they felt capable of controlling their stress level in order to prevent it from spoiling their presentation, their confidence to speak, and their ability to be natural, confident, friendly, clear and credible.

☐ Questionnaire of anxiety prior to the public speech. Adapted from the *Revised Competitive State-Anxiety Inventory* of Cox, Martens and Russell, (2003). This 12-item questionnaire measures, with 7-point scales, the level of physiological and cognitive anxiety immediately before the public speaking exercise. Examples of items: "My heart beats very fast", "I worry I won't do it right".

Immediately after both recordings, participants answered the following questionnaire:

☐ Questionnaire on flow (Jackson and Marsh, 1996). Spanish version validated by García Calvo et al. (2008). Questionnaire of 36 items, four for each of the nine dimensions of the concept of flow. Examples of items: "I felt that I was able to cope with the difficulty of the situation", "I was completely focused", "I knew exactly what I had to do", "I clearly knew I was doing it well", "I was really enjoying what I was doing".

In the last day of the course students answered once again the same questionnaires on confidence as public speaker and confidence as TV speaker.

The two recordings were subsequently viewed by a panel of 10 experts (university professors of communication), who assessed the quality of the presentation through a semantic differential of 7-point scales, which included the following items: uncomfortable-natural; insecure-secure; distant-friendly; confused-clear; untrustworthy-trustworthy.

2.3. Analysis

The statistical program SPSS 17.0 was used to analyse the data and calculate the frequency of appearance of a high level of fear during public presentations, when performing as TV presenter, and a high level of anxiety prior to the public presentation exercise.

The T test was used on independent samples to observe the differences between males and females in the different variables.

A repeated-measures ANOVA (analysis of variance) was performed to examine the effect of the training programme on the variables of interest, with the training programme (before and after) as independent intra-subjects variable and fear to public speaking, fear to perform as TV speaker, self-efficacy, anxiety before public speaking, flow during the performance as TV speaker and the quality of presentation as dependent variables.

To analyse the effect of self-efficacy, anxiety and flow experience on the quality of communication, we calculated the correlations between variables, performed a regression analysis and finally a path analysis with the program AMOS 18.

This technique is appropriate to verify the fit between a causal model and the set of correlations between the variables of the model. Path coefficients allow determining the degree of influence or explaining power of the independent variables on the dependent variables.

We have used the following indexes to verify the good fit of the model: a) Chi square: no meaningful values in this index indicate an acceptable correspondence between the proposed model and data; b) degrees of freedom (df) of the chi square: values under 5 are considered acceptable; c): CFI (Comparative Fit Index): considers values between 0 and 1. Values higher than .90 are considered acceptable (Bentler and Bonnet, 1980); d) RMSEA (Root Mean Square Error of Approximation): the minimum value of this index is zero, which would indicate a perfect fit. Values under .08 are considered to be acceptable (Browne and Cudeck, 1993).

3. Results

3.1. Communication apprehension

As anticipated in the first hypothesis, we found an initial high level of communication apprehension among students of the subject under study. Thus, considering those who agree to a greater or lesser extent with all the items of the scales, 23% of the sample exhibits a high level of fear to speak in public (score above 48 in the questionnaire), 23.5% is afraid to speak to a TV camera (score above 30) and 39.5% feels a high level of anxiety before the presentation exercise (score above 60).

Although we did not formulate any hypothesis about the effect of gender, it is interesting to note that, while there seem not to be significant differences between males and females in any of the psychological variables under analysis (public speaking fear, fear of performing as TV speaker, anxiety prior to presentation exercise, self-efficacy, flow), there seem to be significant differences in the quality of communication both before and after the training programme: the average score of women is higher than that of men (see table 1).

Table 1
Mean scores of the quality of the performance of men and women as TV presenters, and the statistical significance of differences

	Sex	Mean	SD	t	df	Sig.
Quality of 1st presentation	Women	13.22	2.41	2.35	32	.025
	Men	11.16	2.49			
Quality of 2nd presentation	Women	17.48	1.97	2.44	32	.020
	Men	15.61	2.41			

3.2. Effects of the training programme on students' psychological competencies and communication quality

A repeated-measures ANOVA (with the training programme [before and after] as independent intra-subjects variable and the fear of public speaking, fear to perform as TV presenter, self-efficacy, anxiety prior to public presentations, flow during the presentation and the quality of communication as dependent variables) shows that there is a significant improvement in all the variables as a result of the training programme (see table 2).

Table 2
Repeated-measures ANOVA of psychological variables and quality of communication

	Mean	SD	F	df	Sig.
Self-efficacy 1	25.74	6.18	8.757	1	.007
Self-efficacy 2	31.13	5.94			
Anxiety 1	55.09	13.78	12.512	1	.002
Anxiety 2	45.86	13.02			
Public speaking fear 1	43.52	9.10	21.695	1	.000
Public speaking fear 2	36.17	8.93			
On-TV speaking fear 1	26.09	5.11	36.452	1	.000
On-TV speaking fear 2	20.69	2.60			
Flow 1	187.60	42.21	17.327	1	.000
Flow 2	217.60	27.25			
Quality presentation 1	12.38	2.53	82.819	1	.000
Quality presentation 2	17.014	2.53			

With respect to the variables whose frequencies were listed in the previous section, after the training programme the share of students with a high level of public speaking fear was reduced to 14%. In the questionnaire on on-TV speaking fear nobody reached a 30-points score. The highest scores are 24-25, which were obtained by 13.9% of the sample. With regards to the level of anxiety prior to the TV presentation exercise, after completing the course only 12.1% of the sample reached a score above 60.

3.3. Effects of psychological competencies on communication quality

Before performing the path analysis we established the significant correlations between the variables of the programme. These correlations are shown in tables 3 and 4.

Correlations before the training programme

	Self-efficacy 1	Anxiety 1	Flow 1
Anxiety 1	-.348ª		
Flow 1	.604**	-.484**	
Quality of 1st communication	.115	-.355*	.207
Quality of 2nd communication	.046	-.055	.404*

* p <.05; * p <.01; ª.051

Table 4
Correlations after the training programme

	Self-efficacy 2	Anxiety 2	Flow 2	Enjoyment 2	Quality 1st communication
Anxiety 2	-.102				
Flow 2	.375*	-.507**			
Enjoyment 2	.271	-.238	.636**		
Quality of 1st communication	.109	-.285	.293	.140	
Quality of 2nd communication	.068	-.096	.283	.399*	.563**

* p <.05; * p<.01; ª p =.054

Regression analyses shows that before the training programme the flow experience correlated significantly with the self-efficacy and anxiety levels, $R^2 = .46$, $F (2.25) = 10.70$, $p < .001$, and that the partial effects of both variables were significant, $p < .01$ for self-efficacy and $p < .05$ for anxiety. The quality of communication significantly and negatively correlated with the level of anxiety before the presentation and, in regression analysis, this was the only variable whose effect was significant, $R^2 = .16$, $F (1.26) = 5.024$, $p < .05$.

After the training programme, the flow experience during the TV-presentation correlated significantly once again with the self-efficacy and anxiety levels, $R^2 = .36$, $F (2.30) = 8.560$, $p < .001$, and the main effects of both variables were significant, $p < .01$. The degree of enjoyment (subscale of the flow questionnaire) correlated with the flow experience during the communication exercise (scores in the eight remaining dimensions) and, in the regression analysis, this is the only variable whose effect is significant, $R^2 = .41$, $F (1.31) = 21.74$, $p < .001$. The quality of the communication significantly correlated with the degree of enjoyment during the on-TV presentation exercise and with the quality of the on-TV speaking exercise prior to the training programme, $R^2 = .40$, $F (2.30) = 10.135$, $p < .001$, and the partial effects of both variables were significant, $p < .001$ for the quality of communication 1 and $p < .05$ for enjoyment.

Based on these data, we proposed the model shown in figure 2 and carried out a path analysis to check the fit between the data and the proposed model.

As figure 3 shows, we have eliminated the connection between the quality of communication before the training programme and the quality of communication afterwards. This is because the degrees of freedom (df) of the model increased above 5, which is considered to be the acceptable maximum value.

The model's adjustment data are as follows:

Before the training programme:

Chi-square	df	p	CFI	RMSEA
.152	2	.927	1.000	.000

After the training programme:

Chi-square	df	p	CFI	RMSEA
1.052	5	.958	1.000	.000

The statistical chi-square is not significant, which indicates that the data fit the model. The degrees of freedom (df) do not exceed 5, which is considered to be an acceptable value (Hu and Bentler, 1999). Thirdly, the CFI (Comparative Fit Index) is 1, which indicates a perfect fit. Finally, the RMSEA (Root Mean Square Error of Approximation) value is 0, which also indicates a perfect fit of the model.

Figure 3
Path analysis of the model

Before the training programme
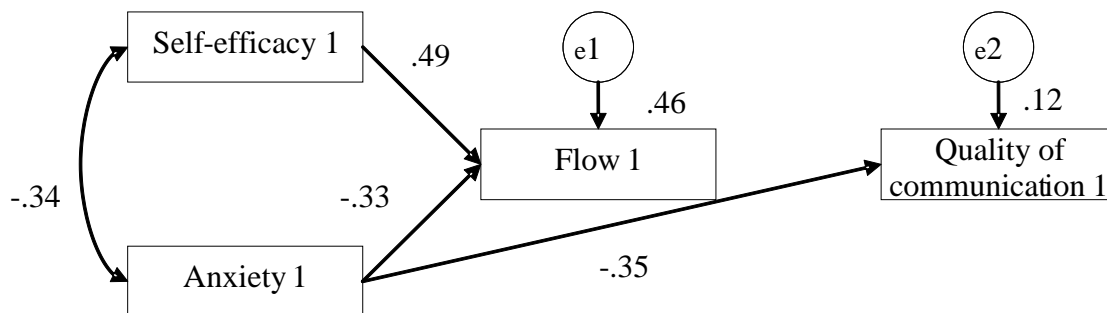
After reviewing our hypotheses, it can be noticed that the second hypothesis is confirmed with the data prior to the training programme, i.e. the level of anxiety negatively correlated with the

quality of communication. However, this correlation disappeared after the completion of the course.
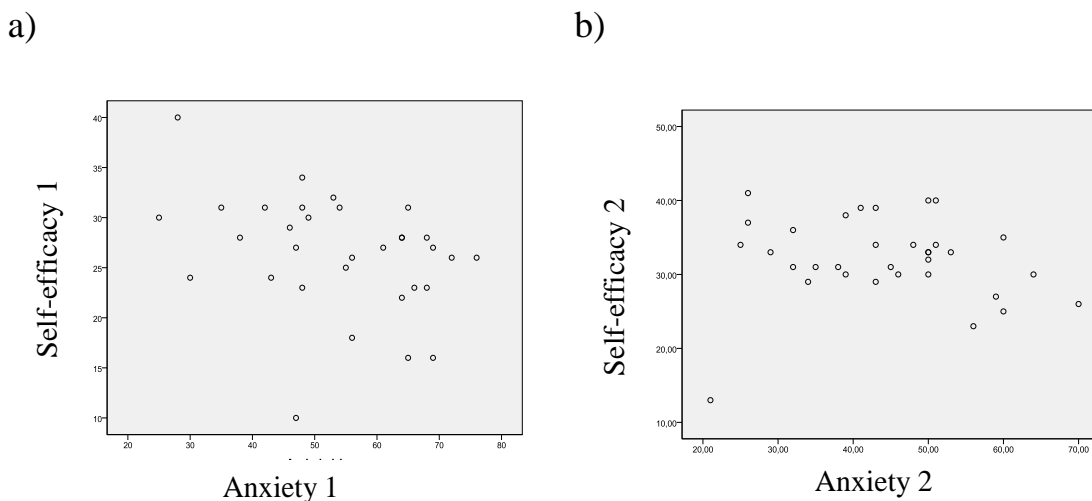

After the training programme
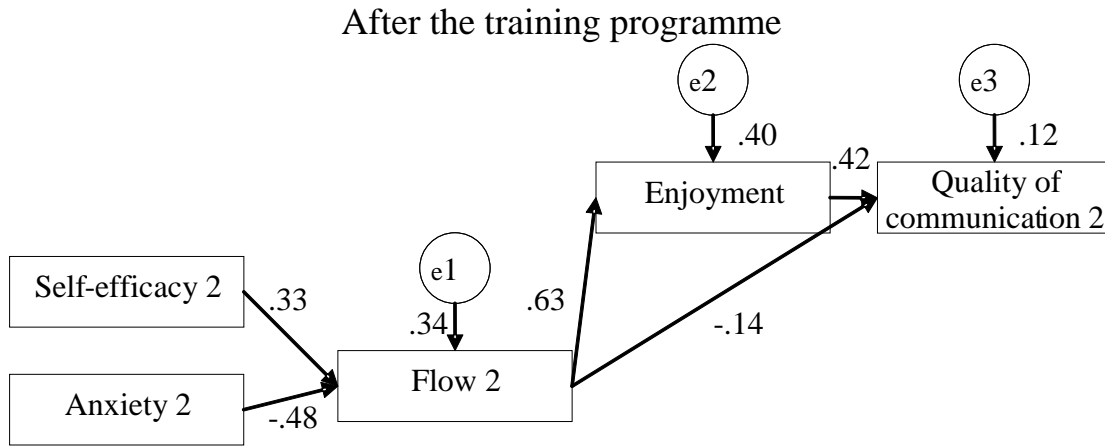
The same effect occurred in the relationship between the variables proposed in the third hypothesis: self-efficacy and anxiety negatively correlated before the training programme, but this correlation disappeared after the completion of the programme.

A more detailed analysis of the evolution of these variables allows us to interpret this process. Comparing the left graph in figure 4 (relationship between self-efficacy and anxiety before the training programme) with the right graph (after the programme), we can see that there has been an increase of the lowest scores of self-efficacy, which leads to a more horizontal cloud of points and an absence of relationship between these variables.

Figure 4
Graphical representation of the relationship between self-efficacy and anxiety: a) before the training programme and b) after the training programme

With regards to anxiety, table 5 shows that its decline after the training programme is significant in the physiological subscale, but not in the cognitive subscale.

Table 5
Evolution of the two subscales of public speech anxiety

	Mean	SD	(F)	df	Sig.
Physiological anxiety 1	9.09	4.55	8.24	1	.007
Physiological anxiety 2	7.03	2.82			
Cognitive anxiety 1	16.03	3.55	2.94	1	.09
Cognitive anxiety 2	14.62	4.11			

Thus, we can conclude that the programme has been effective in reducing physiological anxiety. Cognitive anxiety, i.e. students' concern or the sense of responsibility towards what they perceive to be an important test, remains as a constant indicator of the difficulty of the task, but now students think they have the skills or resources to cope with it (self-efficacy). The disappearance of the correlation between anxiety and quality of communication after the completion of the course seems to indicate that students' perception is well founded.

The fourth and fifth hypotheses have also been confirmed: both before and after the training programme, self-efficacy is positively related to the level of communication flow, while the level of anxiety has a negative effect on the flow experience.

There is a complex relationship between the flow experience and the quality of communication, which was expected by our sixth hypothesis. Based on the pattern of correlations between the variables and the results of the regression analysis, we have proposed a model in which, after the completion of the training programme, the autotelic or intrinsically satisfying nature of the communication activity mediates the relationship between the flow experience and the quality of communication. Thus, the flow experience is positively related to the enjoyment of the experience and, finally, this satisfaction predicts the quality of the communication in question.

The separation of the autotelic nature from the rest of the characteristics of the flow experience is justified because Jackson and Marsh (1996) indicate that the satisfactory nature of the flow is a factor of second order, and is related to the other characteristics of the flow experience. The authors indicate that for Csikszentmihalyi (1990) this is the crucial dimension of the flow experience, and that this is why this author often replaces the term *flow* with *autotelic experience* or *enjoyment*, which indicates that this factor is more global than the other dimensions. Thus, the enjoyment of the experience is the end result of the other characteristics of the flow.

It is interesting to emphasise that before the training programme, the flow experience during the public presentation did not predict its quality. However, although in the regression analysis the effect is not significant, there is a positive correlation between the flow experience in

communication before the training programme and the quality of communication achieved by students after completing the course. Thus, the data seem to demonstrate that the relationship between the flow and the quality of communication requires the command of communication techniques.

4. Conclusions

This article has presented the first results of our research project on an innovative training programme for communicators, which incorporates psychological strategies for the control of communication apprehension.

The data we obtained show that the idea of having to communicate to an audience, either face-to-face or through a camera, evokes an extreme degree of apprehension in a quarter of the sample of students. The data also showed that one of every three students experiences a high level of anxiety in actual communication in front of a camera.

The training programme that we are proposing has been effective in improving students' confidence on their ability to connect with the public, in teaching them to face and overcome the manifestations of anxiety to get closer to achieve the optimal mental state to communicate better, so that the communicative task is no longer perceived as something threatening and becomes a source of satisfaction and enjoyment. Finally, the training programme has also been effective in improving the credibility of future communicators.

Our data have also proved that the psychological skills (self-efficacy and anxiety management) and the mental disposition prior and during the communication act (flow) are factors that determine its effectiveness.

Two results are noteworthy in this section: firstly, that the satisfaction and enjoyment of the activity, i.e. the fact that the communicative action is motivating in itself, is a necessary condition for the concentration, clarity of objectives and anxiety-control to result in a better acceptance from the audience.

Secondly, getting close to the optimal mental state (flow) improves the quality of the communication act only after the training programme has been completed, i.e. when the speaker has developed the necessary technical skills needed to prepare and present verbal, non-verbal and vocal content.

These results highlight the need for a comprehensive training that, without neglecting the technical training, addresses the emotional literacy of the communicator.

The discovery of the mirror neurons has made it possible to understand the neural mechanisms underlying the understanding of other people's intentions, the reflection of feelings and emotions, intentional consonance and empathy.

It has been demonstrated that both feeling a certain emotion and observing the same emotion being expressed by the facial mimicry of other person activate the same areas of the brain.

When we observe a facial expression and identify an affective state, that emotion is rebuilt in our brain and understood directly through a physical simulation that produces a shared physical state with the observed person. It is not a deliberate simulation in which we voluntarily take the place of another person to try to see things from his or her perspective and to recreate his or her mental states with our imagination. In physical simulation there is no inference or introspection, but an automatic, pre-reflexive and unconscious reproduction of another person's mental states, which are directly understood and shared at the neuronal level, through what has been called "non-mediated resonance" (Gallese, Migone, Eagle, 2009).

This mechanism explains why the mental state of the communicator is crucial to achieve the acceptance of the message from the public. A technically perfect presentation can be absolutely indifferent to an audience at an emotional level if the communicator is not fully involved with the message or is insecure. On the contrary, this resonant mechanism would explain why the audience perceives the message as more credible, natural, friendly and clear when it shares a positive experience with a communicator who is convinced that he has something important or interesting to say, that he can transmit it effectively, and, therefore, enjoys the communicative act.

People often associate the spontaneous reduction of communication apprehension to the passing of time. This indeed occurs in some cases, but not in many others. Many of people, including journalists, simply avoid speaking in front of an audience, a camera or a microphone, i.e. they fail to develop this important skill. Others have no choice, they have to do it and do so, but they accumulate high doses of anxiety and feelings of personal inefficiency which in the medium or long term can lead to the appearance of the burn-out syndrome.

Journalism has many challenges (Fernández-Areal, 2010) and journalists face precarious work situations and an increasing deterioration in their working conditions (Cantalapiedra, Coca and Bezunartea, 2000). These circumstances add even more pressure to the performance of a stressful profession, which makes it even more urgent to provide training to these communicators for their emotional self-management, which will improve the quality of their communication and their own health.

It is true that there are people who do not experience a significant level of communication apprehension and are great communicators without having received specific training. This same situation also occurs in other professions. For example, there are many successful business men and women who have not received university education. However, our work aims to identify new factors that contribute to the development of a greater communicative competency and to offer that training to students, so that everyone can discover their personal expressive abilities, connect better with the public and develop a more effective communicative style.

The Internet and the social networks can increase public communication and also its plurality, as long as people develop the skills necessary to speak in front of others and share their vision of the world. Communication is an activity that generates certain degree of social-evaluation

anxiety in a high share of the population. This factor is an obstacle that limits the number of people who get actively involved and enrich the public space that increases with the social networks. Thus, despite the possibilities offered by technology for the expansion and democratisation of communication, there can remain a vertical structure in which few people are leaders and determine the content and the majority are passive followers.

In the framework of the creation process of the European Higher Education Area, we present a training project directed not only at media professionals, but also at the creative and active users of the new digital environment. The aim is to provide them with the skills needed to interact satisfactorily in the expanded public space, thus increasing individuals' autonomy and the plurality of public communication.

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