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Metacognition-Communication relationship: Proposed actions for effective communication in Psychology students

Relación Metacognición-Comunicación. Propuesta de acciones para una comunicación efectiva en estudiantes de Psicología

Relação Metacognição-Comunicação: Ações propostas para uma comunicação eficaz em estudantes de Psicologia

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ABSTRACT

The objective of this study is to disseminate actions based on the relationship between metacognition and communication that foster, from the training process, the achievement of effective communication in blended-learning Psychology students. The following theoretical methods were implemented: analysis-synthesis and induction-deduction; empirical methods: document analysis, observation, and interviews; and statistical-mathematical methods: percentage analysis. The proposed actions address the demands of competence-based training within the framework of the E curriculum, the specificities of communication, and specifically the development of communicative

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competence; as well as the need for the dimensions of metacognition to be expressed in actions aimed at the effective development of communication. The importance of guiding students toward: identifying the objective of the activity, the conditions of the communicative situation, and possible metacognitive actions to apply for the continuous improvement of verbal and nonverbal communication is emphasized. The treatment of the metacognition-communication relationship transcends its mere application to professional practice and positively impacts student behavior in different contexts. The teacher's role is essential to ensure that the orientation toward the activity, its execution, and evaluation consider elements that stimulate metacognitive development in students. This should be a topic of analysis within the program, discipline, and subject groups for the assessment of intra and interdisciplinary links, aimed at optimal treatment of the metacognition-communication relationship.

Keywords: communication; metacognition; student; psychology.

RESUMEN

El objetivo del estudio es socializar acciones que, sustentadas en la relación entre metacognición y comunicación propicien, desde el proceso formativo, el logro de una comunicación efectiva en el estudiante de Psicología de la modalidad semipresencial. Se implementaron métodos teóricos: análisis-síntesis e inducción-deducción; empíricos: análisis de documentos, observación y entrevista; y de los métodos estadístico-matemáticos: análisis porcentual. Las acciones propuestas atienden a las exigencias de la formación por competencias en el marco del plan de estudio E, a las particularidades de la comunicación y, en específico, al desarrollo de la competencia comunicativa; así como a la necesidad de que las dimensiones de la metacognición se expresen en acciones dirigidas al desarrollo efectivo de la comunicación. Se destaca la importancia de orientar al estudiante hacia: la identificación del objetivo de la actividad, las condiciones de la situación comunicativa y las posibles acciones de naturaleza metacognitiva a aplicar para el mejoramiento continuo de la comunicación verbal y la no verbal. El tratamiento a la relación metacognición-comunicación trasciende la mera aplicación al ejercicio profesional e impacta positivamente en el comportamiento del estudiante en diferentes contextos. El rol del docente resulta esencial en función de que la orientación hacia la actividad, su ejecución y la evaluación contemplen elementos que estimulen el desarrollo metacognitivo en el estudiante. Este debe ser un tema de análisis en los colectivos de carrera,

disciplina y asignatura para la valoración de vínculos intra e interdisciplinarios, dirigidos al tratamiento óptimo de la relación metacognición- comunicación.

Palabras clave: comunicación; metacognición; estudiante; psicología.

RESUMO

O objetivo deste estudo é disseminar ações pautadas na relação entre metacognição e comunicação que promovam, a partir do processo formativo, o alcance da comunicação efetiva em estudantes de Psicologia em regime híbrido. Foram utilizados os métodos teóricos: análise-síntese e indução-dedução; métodos empíricos: análise documental, observação e entrevista; e métodos estatístico-matemáticos: análise percentual. As ações propostas atendem às demandas da formação por competências no âmbito do currículo E, às especificidades da comunicação e, especificamente, ao desenvolvimento da competência comunicativa; bem como à necessidade de que as dimensões da metacognição sejam expressas em ações voltadas ao desenvolvimento efetivo da comunicação. Ressalta-se a importância de orientar os estudantes para: identificar o objetivo da atividade, as condições da situação comunicativa e as possíveis ações metacognitivas a serem aplicadas para o aprimoramento contínuo da comunicação verbal e não verbal. O tratamento da relação metacognição-comunicação transcende a mera aplicação à prática profissional e impacta positivamente o comportamento dos estudantes em diferentes contextos. O papel do professor é essencial para garantir que a orientação para a atividade, sua execução e avaliação considerem elementos que estimulem o desenvolvimento metacognitivo nos alunos. Este deve ser um tópico de análise dentro do programa, da disciplina e dos grupos de disciplinas para avaliar as conexões intra e interdisciplinares, visando o tratamento ideal da relação metacognição-comunicação.

Palavras-chave: comunicação; metacognição; aluno; psicologia.

INTRODUCTION

Improving the teaching-learning process is at the heart of the work of educational institutions. Training professionals capable of applying integrated knowledge relevantly and effectively to practical demands is, in this sense, a priority. With the implementation of E curricula in Higher Education, new

training requirements have emerged. In the Psychology program, there is a shift from skills-based training to competence-based training, which generates transformations in the planning and management of the teaching-learning process.

According to Tobón Tobón (2012), competence-based training implies a paradigm shift compared to traditional education. It leads to people being trained to face the challenges of different contexts with the necessary knowledge, with a commitment to quality, an attitude of improvement and ethics. The key axes of the competences are the following: resolution of contextual problems based on integrated knowledge; evaluation is based on evidence of performance; continuous improvement is sought and there is a link among knowledge, disciplines and areas. He also proposes that competencies are addressed, from a socio-formation perspective, as integral performances to identify, interpret, argue and solve contextual problems, with suitability, ethical commitment and continuous improvement, systemically integrating knowing how to be, knowing how to coexist, knowing how to do and knowing how to know.

Psychology students must be good communicators. Communicative competence is expressed and must be developed throughout the psychologist's training.

Several researchers have addressed the issue of effective communication (Saborit Valdés, 2019; Estévez Abad & Estévez Vélez, 2021). Saborit Valdés (2019) states that an aspect that contributes to the development of optimal communication in Cuban education is the conception of curricula, which seek a higher level of cognitive independence in the training process from the student's intellectual activity. Estévez Abad and Estévez Vélez (2021) state that:

> When considering communication as part specific skills of the profession, it is important that training curricula include tools that allow for its improvement. Potential conflict situations, such as communicating bad news, making decisions, or understanding a forecast, should be part of effective communication training (Estévez Abad & Estévez Vélez, 2021, p. 87).

We agree with the authors on the importance of effective communication and considering its improvement in the training process. In the training of psychologists, achieving effective communication is essential for their performance in the various areas of professional practice: clinical, organizational, social, and educational. The optimal expression of verbal and nonverbal

communication is very important in professional practice. However, regardless of the impact that developing effective communication has on this professional, it is possible to identify weaknesses in the knowledge related to this process in the blended-learning Psychology student and in their performance in communicative situations.

In a previous study carried out by the authors of this research, in which, among other empirical methods, non-participant observation, group interviews, and surveys were applied, it was found that a significant portion of students have difficulties maintaining effective two-way communication; based on the triangulation of the results obtained in each of the dimensions studied, it was concluded that Psychology students in the non-presential course have limited knowledge about dialogic competence (Fernández Morciego *et al.*, 2022).

In analyzing the possible causes that explain this, weaknesses emerge, among others, in the student's reflection process regarding the communicative act itself and in self-assessment, control, and monitoring of this act. This allows us to articulate two categories that are involved and that must be addressed: metacognition and communication.

Furthermore, the blended learning experience in the Psychology program, the analysis of course products such as integrative assignments, and classroom observations demonstrate that students experience difficulties in evaluating their own performance and planning actions to meet the demands of the course. These weaknesses are inextricably linked to metacognitive development.

Metacognition refers to the subject's awareness of their own learning actions. It is the knowledge of knowledge, of the individual way of learning. It is self-knowledge in terms of identifying the subject's potential and needs and, consequently, creating their own learning strategies (Corrales Peña *et al.*, 2021). It manifests itself in the knowledge of one's own cognitive processes, in the regulation of actions, and is essential for the successful resolution of the activity.

Metacognition and its development must be a central axis in the formative process at any level of teaching, according to the particularities of the moment of development in which the student is. Its relevance in learning has been referred to by authors from various investigations: Corrales Peña *et al.* (2021), Espinoza Pastén (2021) and Linares González *et al.* (2022). Likewise, the importance of metacognition for communication has been reflected in different studies (Vargas Schüler & Aguilar Bustos, 2021; Linares González *et al.*, 2022).

In the training of psychologists, the effective and systematic approach to the development of metacognition is essential for achieving coherent and contextualized professional practice, tailored to the diverse situations of practice. In the face-to-face, semi-presential course, students devote a greater number of hours to independent study under the guidance of the instructor, and consequently, self-regulation and self-assessment of learning processes acquire special importance. Similarly, in the development of communicative competence in Psychology students, aspects related to the proper functioning of metacognitive processes, which are inevitably involved in the act of learning, must be considered.

The objective of this study is to share actions that, based on the relationship between metacognition and communication, foster, through the training process, the achievement of effective communication in the blended learning psychology student.

MATERIALS AND METHODS

A descriptive study was conducted. The research followed a mixed approach, using theoretical, empirical, and statistical-mathematical methods.

The theoretical methods used were analysis-synthesis and induction-deduction, which facilitated the process of theoretical systematization. Regarding empirical methods, document analysis was implemented; documents such as the Psychology program's E curriculum, as well as syllabi for disciplines and subjects, were examined in depth. In addition, observation during teaching activities and student interviews were used, which provided information on the development of students' communicative competence, on the expression of this competence in activities carried out by students in the teaching context (observation), and on aspects related to students' assessment of their communicative performance (interview). Likewise, indicators of the expression of metacognition in the communicative act were analyzed. Regarding statistical-mathematical methods, percentage analysis was applied to process the data obtained.

The sample consisted of 29 second-year students from the Psychology program at the University of Camagüey. The results allowed us to identify possible actions for developing effective communication among Psychology students in the blended learning program.

RESULTS

Through the implementation of empirical methods, several limitations in the development of communicative competence were identified among students in the Psychology program at the University of Camagüey. This calls for work aimed at addressing these limitations throughout the training process.

Among the limitations, it was found that a portion of students presented difficulties in achieving effective two-way communication (72.9%), especially in activities that require the elaboration of shared meanings and the execution of actions to reach consensus. There were also some difficulties in finding relevant linguistic resources, according to the context, and weaknesses in relation to the management of nonverbal communication, in tune with verbality. Deficiencies were manifested in the identification and expression of kinesthetic, proxemic, and paralinguistic indicators of non-verbal communication. 54% of students showed difficulties in paying attention to tone and volume in communication, according to the demands of the communicative situation; and 27% in relation to the fluency, speed, and clarity of language.

Regarding emotional regulation, students' perceptions revealed deficiencies in their ability to self-monitor and regulate emotions during communication. Furthermore, it was found that 38% of students have difficulty identifying their own emotions, regulating themselves, and perceiving the emotions of others.

The aforementioned limitations revealed deficiencies in cognitive elements related to the communication process, including how this process should be deployed to ensure its effectiveness. Weaknesses were evident in the self-assessment and monitoring processes of the communicative act.

At the same time, potential was identified for the development of communicative competence. Students demonstrated their appreciation for values such as responsibility and respect for others, which are important aspects of achieving assertive communication. In addition, the Psychology of Communication course is taught, which, despite having only 16 hours of face-to-face instruction in the meeting-based course, addresses important communication-related content. Topics related to interpersonal communication, mass communication, persuasive communication, and the psychosocial approach to information and communication technologies, among others, are covered,

allowing for a deeper understanding of the topic of communication. Other courses in the program cover some content related to this topic, which is essential for designing actions aimed at developing communication.

Given the lower number of presential hours of the Psychology of Communication course in the face-to-face course compared to the daytime course, it is essential to develop actions aimed at achieving effective student communication across the various disciplines and subjects. These actions must be implemented not only in the teaching-learning process but also in other settings throughout the training process.

After analyzing the bibliographic sources consulted, the analysis of the governing documents of the career and the results obtained from the application of the interview and observation, actions are presented. These courses, based on the metacognition-communication relationship, are aimed at achieving effective communication in Psychology students in the blended learning modality. These courses address the requirements of competence-based training within the E curriculum and are aligned with the specificities of metacognition, communication, and, specifically, the development of communicative competence in Psychology students.

The design of these actions takes into account the expression of the dimensions of metacognition aimed at developing effective communication. Their implementation planning should be analyzed by the discipline and subject groups, in program-level activities that facilitate the assessment of possible intra- and interdisciplinary links aimed at addressing the metacognition-communication relationship.

The proposed actions are as follows:

- Teachers should plan systematic activities designed to help students apply communication content in a practical way. These activities should be structured with a gradual level of complexity based on the content and context of application; first in simulated situations and then in contextualized practical activities, through the connection established between the program's subjects and disciplines and based on the application of integrated knowledge.
- Develop activities that require a breakdown of communication skills. Planned communication situations should be characterized by variability, such that the student must assess the particularities of the situation and, based on this, adjust communication procedures and techniques directly related to professional practice; for example, determining when a

psychologist's use of silence is important in an interview. This allows for the application of reflective processes, control, and self-regulation of communication actions.

- Guide students toward the objective of the activity being developed and, furthermore, toward self-assessment of performance indicators related to the communicative act. The self-assessment process must be based on a mastery of the requirements for adequate communication. Through a process of reflection on the characteristics of the request and execution, students will be able to communicate their successes and main difficulties, and analyze how to correct errors for future performance. It is important to apply self-assessment during the communicative act (self-monitoring of actions) and in the retrospective analysis of performance. It encourages reflection on how short- and long-term goals were achieved in the activity and the quality of the procedures used, in this case related to the communicative act. Once this is achieved, direct the student's focus toward a prospective vision of the performance, how they would develop communication in similar situations in the future. In this way, the teacher facilitates the transfer of what they have learned to new situations.

- Use questions, by the student, aimed at reflecting on the execution; examples of these: What is the objective of the activity? Have I planned the actions to be carried out in correspondence with the objective to be achieved? What are the demands of the learning activity that I must respond to? Did I achieve clear communication? Have I taken into account indicators for achieving assertive communication? Did I self-assess my communicative performance during the execution of the activity and at its conclusion? Do the results achieved correspond to the objective of the activity? Did my communicative performance contribute to its success? What were the errors and main successes in the performance?, among others that facilitate both self-observation and the evaluation of what happened.

- Guide students toward the use of metacognitive actions for the continuous improvement of verbal and nonverbal communication. It is important for teachers to develop activities where the learning demand leads students to reflect on how they organize actions to achieve a successful result. This can be explicitly stated in the activity guidelines. Teachers may even prefer to initially communicate metacognitive actions that can be taken into account in the development of the activity toward a result, as well as how to verify them. Teachers should base their explanations on indicators to evaluate the effectiveness of the verbal and nonverbal subsystems of communication. The characteristics of the group and the communicative activity can influence the alternative to be implemented. Teachers must be prepared for a

variety of expressions of the metacognitive act, since students' personality traits are also reflected in learning and, therefore, in the activity regulation and control processes.

- Promote teamwork, in order to achieve, through interaction with others, the exchange of criteria on how to achieve effective communication.
- To promote, in the functioning of student scientific groups, the approach to the importance of metacognition in terms of communicative development.
- Continue improving the treatment of the metacognition-communication relationship in various subjects, especially those related to professional practice.

Furthermore, it is important to foster student motivation toward developing effective communication. For students to remain focused, attentive, and willing to engage in the learning activity planned by the teacher, it is crucial to ensure adequate evaluation and monitoring of their actions. This aspect is essential for the successful expression of metacognition and the proper development of communication.

DISCUSSION

The actions proposed in this study respond to the need to address current limitations regarding the development of communication among Psychology students in the meeting-based course. Focusing on the metacognition-communication relationship from the educational process is considered essential and distinguishes the research presented.

The implications of metacognition on the effectiveness of the communicative act are crucial. We agree with Tobón Tobón (2019), who states that there is often no impact on the resolution of real problems or on the entrepreneurial process, due to: communication failures, such as lack of clarity in what is wanted to transmit; lack of clear purposes; absence of metacognition to evaluate what is said and make corrections or clarifications; low coherence in non-verbal language; lack of kindness and respect for the ideas of others, and little impact on interaction with others. It is considered that the author demonstrates in this way, among other aspects, the importance of metacognition to improve the communicative act.

The proposed actions are in line with the criteria relating to the components of metacognition. We agree with Schraw & Dennison (1994), cited in Gutiérrez de Blume (2021), that metacognition consists of two components. main: knowledge of cognition and regulation of cognition.

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Cognition knowledge is composed of declarative knowledge, procedural knowledge, and conditional knowledge. The regulation of cognition involves: planning (preparing the groundwork before a task, which may involve anticipating the resources needed to complete it and having a prior plan related to how the task may unfold during execution); information management (the set of strategies for effectively managing the incoming information needed to complete the task); debugging (the set of strategies available to solve learning difficulties); monitoring comprehension (the skills needed to effectively monitor progress toward task completion), and evaluation (generally recognized as a holistic and overall judgment of how well the task was accomplished, and used to measure future performance) (Schraw & Dennison, 1994, cited in Gutiérrez de Blume, 2021).

Within the framework of communication, metacognition should be understood as a process that involves the cognitive and regulatory dimensions in relation to the communicative act itself. It facilitates the presentation of the aspects necessary for effective communication in the appropriate manner and, in the event of any failure, enables the subject to correct it through a reflective process regarding communication.

It is understandable that, in the study presented, achieving perfection in the communicative act is essential through the application of communication planning, self-monitoring, and self-regulation processes by the student in training. Hence, the proposed actions aim to express these processes. Metacognition favors the evaluation of communication as part of its regulatory dimension. It accounts for the self-monitoring required in the communicative act, reflecting on how it is carried out and the possible errors that have been made in the pursuit of its optimization.

In the case of the proposed actions, based on the metacognition-communication relationship, the need for self-assessment to be applied during the development of the communicative act (self-monitoring of actions) and in the retrospective analysis of performance is made explicit. This facilitates the transfer of what has been learned to new communicative situations, based on the assessment of errors and their connotation as a learning-generating aspect, if reflections on the mistakes made and how to resolve them in future performances are considered and encouraged. Hence, the need for a prospective view of performance is also stated: how to develop communication in similar situations in the future.

The motivation towards the communicative activity planned by the teacher and towards achieving effective communication is essential for the adequate expression of metacognitive actions, which is

explicit in the proposal presented. It coincides with the criteria of Salazar Béjar and Cáceres Mesa (2022), who refer to the fact that recently the majority of proposals related to self-regulated learning consider that it depends not only on the knowledge of the specific strategies of the task and the control over them, but also on the subject's motivation for learning.

To achieve effective communication, it is essential to consider, among other aspects, the following: clarity of language, verbal fluency, adequate interpretation of the message, observation of nonverbal expressions, active listening, assertiveness, respect for others when communicating, and emotional regulation. These aspects should be self-assessed by the Psychology student during the course through various activities planned by the instructors, both those developed in the classroom and in the context of pre-professional practices. It is very important to assess the message: both the message received and the message sent, the specifics of the context, and the coherence between verbal and nonverbal communication to avoid inconsistencies or misunderstandings.

Among the proposed actions, the following stand out: providing guidance to the student regarding the activity objective and self-assessment of performance; systematically planning activities aimed at helping students apply communication content within a practical framework, with a gradual level of complexity based on the content and context of the application. The planned communication situations should be characterized by variability, such that the student must evaluate the specifics of the situation and, based on these, adjust communication procedures and techniques directly related to professional practice.

is important to guide students toward self-assessment of performance indicators related to the communicative act and toward the use of metacognitive actions to continuously improve verbal and nonverbal communication. It is also necessary to encourage teamwork, based on the exchange of criteria for achieving optimal communication.

The teacher`s role has been reflected in the proposed actions. It is essential that processes such as activity orientation and assessment, as a non-personal component of the teaching-educational process, include elements that stimulate metacognitive development in students. Similarly, practical, extracurricular, and research activities should contribute to the comprehensive development of students in the program and, consequently, consider the regulatory and self-regulatory processes in communicative activity as one of the aspects of analysis.

The proposed actions are in line with current training requirements. They are consistent with the characteristics of metacognition, communication, and, specifically, the development of communicative competence, which is necessary for adequate performance in psychology students. They respond directly to the link established between metacognition and success in communicative activity and, therefore, aim to express the components of metacognition in actions aimed at the effective development of communication.

The treatment of the metacognition-communication relationship transcends its application to professional practice and positively impacts student behavior in different contexts. It should therefore be a topic of analysis within the program, discipline, and subject groups, based on the assessment of possible intra- and interdisciplinary links aimed at addressing metacognition and its optimal expression in the communication process.

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Conflict of interest

Authors declare no conflict of interests.

Authors' contribution

The authors participated in the design and writing of the article, in the search and analysis of the information contained in the consulted bibliography.