

Disruptive Integration of Digital Tools to Improve the Communicative Dimension in University Students in the Current Context

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ABSTRACT

Education in current times has profound changes, at all levels and in all disciplines; in the case of universities, new elements and aspects to be considered in the teaching-learning process have been integrated; a fact that allows to empower the professional that society needs in the current context, maintaining the quality of higher education. The future professional requires substantially communication skills to access employment, work and entrepreneurship. The objective is to analyze how the disruptive integration of digital tools enhances the communicative dimension: ability to express, communicate and increase the technical vocabulary related to their specialty, identify the media and the way they use them to achieve their profile. The methodology used was descriptive - correlational, with a non-experimental observational design. The study sample consisted of 450 university students from the Social Sciences Area of the public university of the city of Ica, selected by probability sampling, to whom the questionnaire instrument was applied to evaluate the relationship of the variables under study. The result obtained shows a significant correlation at the 0.01 level, which allows determining the relationship between both variables.

1. Introduction

The teaching-learning process suddenly stopped all over the world due to the COVID-19 pandemic, generating profound changes in teaching practice, which was forced to bring the development of subject content to virtuality. Faced with this forced process, the problems were not unrelated to the University under study that develops its teaching under the face-to-face modality and to continue its academic work it installed the Laurassia platform that has digital didactic tools such as forums, readings, tasks, calendar, chat, groups, videoconferences and grades, which in virtuality serve as interaction between teacher-student and student-student for the improvement of learning and development of the student's communicative potential to interact with others.

The use and application of digital tools in the field of teaching undoubtedly modifies the modes of communication between the teacher and the student, and between the students themselves

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(Larraguivel, 2020), which implies knowing what to say, to whom and how to say it properly, in a given situation. According to Olmos (2020), in the academic environment the development of communicative competence is of vital importance, it is the starting point to achieve the social interaction that occurs in the educational task, where the teacher must determine the form of communication taking into account the codes so that this is possible and understood.

In the current context and in the face of the use of technology and digital tools, the teacher assumes a role of counselor, guide and facilitator, developing a pedagogy based on dialogue with students and encouraging formative research, teamwork, discussions and exchange of knowledge generating interest in learning and feeling comfortable (Barrero, Parra & Conde, 2020). Likewise, these activities allow innovating learning strategies, achieving greater participation and communication among students, leading them to be more communicative, participatory, which is one of the professional competencies considered in the study plan. In the current context and in the face of the use of technology and digital tools, the teacher assumes a role of counselor, guide and facilitator, developing a pedagogy based on dialogue with students and encouraging formative research, teamwork, discussions and exchange of knowledge generating interest in learning and feeling comfortable (Barrero, Parra & Conde, 2020). Likewise, these activities allow innovating learning strategies, achieving greater participation and communication among students, leading them to be more communicative, participatory, which is one of the professional competencies considered in the study plan.

In the development of the communicative dimension, spaces are created to interact among students, share experiences, ask questions, because learning is a process of interaction between students, teachers and the resources that are used in the learning environment (Setyawan, Aznam, Paide & Citrawati, 2020). The disruptive use of digital tools, such as: Office 365, Zoom, Google drive, Google Calendar and those provided by the University platform, are the most used by students in the Academic Area of Social Sciences of the University's Academic Education Program Public of the city of Ica.

This advance in technology and the use of digital tools constitutes a support for the development of teaching practice, activities that can be proposed through games, videos, readings, investigations that have the support of the teacher in a synchronous activity; As Gutiérrez and Andrade (2012) affirm, the application of digital tools produces changes in our environment. It is important to use interactive digital software in higher education to develop skills related to the professional life offered by today's digital society.

The new educational modality requires diligent, decisive and collaborative students, so that the predominant focus of communicative competences is fundamentally related and integrated in the preponderance of speaking, reading, writing and listening in an adequate and efficient way, discerning ideas and knowledge from successful way (Corredor, 2018). Since information and communication technologies are constantly evolving, this implies their use in educational processes through a series of tools to carry out collaborative work online (Grillo et al., 2019), which in turn integrates the student in a virtual work, encouraging participation and dialogue, building collaborative interactions, to enhance oral and written communication and gradually incorporating pedagogical terminology, due to their professional training.

Moreira (2019), considers that the use and management of ICTs currently plays a fundamental role, since they have become an imperative basis in the progress and development of teaching and learning, with important contributions to progress continuum of education, fostering the development of innovative approaches to the development of learning and teaching (Jihad,

Klementowicz, Gryczka, Sharrock, Maxfield, Lee & Kim, 2018). La esencia del acto de comunicarse e interactuar es la expresión que los estudiantes manifiestan a través del lenguaje. Likewise, the teaching-learning process determines the impulse of communicative competence in students, which contains various communication skills (Cubas, 2020). According to Hussin, Harun & Shukor (2019), the teaching carried out by the teacher is synchronous or asynchronous, in the first of them he manages to interact, asking questions, generating cognitive conflict, team discussion work, a fact that leads to the development of the dimension communicative of oral expression, where he expresses his ideas and thoughts in an organized way, achieving effective communication. Likewise, Adell and Sales (2021), state that the training that the online trainer must have is based on three large nuclei of theoretical-practical knowledge: First, in a learning session it is necessary to know the course contents well, include the materials and resources relevant to learning, secondly, to achieve a communicative environment in which the training takes place, that is, about communication mediated by a computer and thirdly, about the theory and practice of education to distance consider the functions, objectives, methods, strategies, evaluation, tutoring, among others.

Currently, the university implements various methodological and didactic experiences in relation to the communication skills that each student must develop, achieving assiduous participation in their production process, which will enrich their oral and written skills (Torres, et.al, 2020), through various methodologies developed by the educator himself and that should allow the student to develop and grow in the development of multiple activities that must generate plausible learning in each of them (Lara, 2019).

Knowing how to express oneself, read and write correctly is a great challenge facing undergraduate students today. The change from regular basic education to university higher education faces challenges that they must overcome to achieve the goal of their teaching profession; Difficulties in exposing their interlocutors, inadequate syntax, sentence order, poor command of spelling and vocabulary reflect the notable deficiencies in the development of these communication skills that must be taken into account in each learning session. Therefore, the purpose of the research was to analyze how digital tools improve the communicative dimension in university students in the current context.

1.1. Experiences Told by Teachers

1.1.1. Case Study N ° 1

Within the team of researchers, each one participated in the learning sessions during the Academic Semester with students of various academic mentions, with whom the practices were developed using free educational applications and software, as well as the Laurassia platform of the University. The beginning of the session was carried out by collecting the previous knowledge of the students making use of the mentimeter, padlet, and google forms; achieving active participation, during development, challenging questions were posed, encouraging constant participation through chat or zoom. At the close of the session, the tasks left in the forum, activity on the topic discussed and a reply to their colleagues were indicated. Teacher and students establish a communicative relationship and express their ideas about some questions that are posed to them, participate actively and become more expressive when presenting their tasks, they themselves tell the experience of how they have managed to do their practices.

As a teacher, the work was always oriented, providing guidance and feedback at the right time and through asynchronous tasks, which gave me the opportunity to make personal recommendations. Finally, what I was able to observe is that the students gradually improved in the three dimensions.

1.1.2. Practical Case N ° 2

In the subject of learning strategies, which is developed in the first semester of their professional training, the session begins with the collection of previous knowledge, the students make use of the chat and others orally, an interaction is achieved between the entire team, they feel motivated and participate constantly. Virtual dynamics such as kahoot games are also applied, where students had a time limit to answer the established questions that are then developed by the teacher. Participation in collaborative work on the zoom platform, creating individual rooms for each group team, allowed students to share information with the use of Google Drive, and asynchronously through the forums that allowed replications of the work, they had the opportunity to express your point of view. These motivating experiences managed to improve in each one of them the communicative dimension that is fundamental for their professional training. Likewise, participation in forums and tasks allowed the teacher to provide feedback, make grammatical observations in the writing; all of them motivating experiences managed to improve in each one of them the communicative dimension that is fundamental for their professional training.

2. Methodology

The research design that was applied was descriptive - correlational, with a non-experimental - observational design. The study population was made up of students from the public university of the city of Ica, belonging to the Social Sciences Area, and through sampling, an intentional sample made up of 450 students from the academic program of Education was selected. The variables under study are digital tools and the communicative dimension. The instrument that allowed data collection was a questionnaire and observation sheet to measure the ability to express oneself, communicate and increase the technical vocabulary related to their specialty, as well as identify the means of communication and the way in which they are used to achieving the communicative dimension in the virtual classroom.

The instrument consists of 18 items that measure two fundamental aspects of the research: a) the use of digital tools and b) the communicative dimensions, and which has a high, medium and low rating scale. For the process and application, we have the consent of the students and teachers of the subjects, who allowed entry to the virtual classroom on several occasions to observe the development of the student, as well as entry to the virtual classroom to verify the fulfillment of their homework. and progress in understanding professional education terminology. The instrument consists of 18 items that measure two fundamental aspects of the research: a) the use of digital tools and b) the communicative dimensions, and which has a high, medium and low rating scale. For the process and application, we have the consent of the students and teachers of the subjects, who allowed entry to the virtual classroom on several occasions to observe the development of the student, as well as entry to the virtual classroom to verify the fulfillment of their homework. and progress in understanding professional education terminology. During the development of the teaching practice, it was also observed that the beginning

of the learning session was carried out with the collection of previous knowledge, which allowed the active participation of the students; Directly or by message through chats, a change was evidenced, a synchronous teamwork was carried out, creating rooms so that they could debate the issues, thus achieving an active participation, which culminated in the support of the work.

The observation was carried out in order to collect information that allows corroborating the answers that the students resolved in the application of the questionnaire. Likewise, to analyze the comprehension of the texts and the debates asynchronously, the participation of the students in the forum and the tasks of reading comprehension and analysis were visualized, in order to know how they wrote their work and what it was about. The vocabulary, which they used in writing and in the expression of their exhibitions.

3. Results

The test statistic used was the simple correlation coefficient and simple linear regression, obtaining the results shown in Table 1; the collected data were entered into the statistical program SPSS version 22, obtaining as a result that there is a high positive correlation between the use of digital tools and the communicative dimensions, represented by 0.712; demonstrate that a greater use of digital tools corresponds to a greater communicative dimension or a lesser use of digital tools corresponds to a lesser communicative dimension.

Table 1.

Pearson's correlation coefficient between the use of digital tools and the communicative dimension

		Digital tools	Communication dimensions
Digital tools	Pearson's correlation	1	, 712 **
	Sig. (bilateral)		, 000
		450	450
Communication dimensions	Pearson's correlation	, 712 **	1
	Sig. (bilateral)	, 000	
		450	450

** The correlation is significant at the 0.01 level (bilateral)

Taking into account the communicative dimensions considered at work, Table 2 shows that the students developed more the capacity for written expression by creating and sharing documents online between different fellow students. This is followed by the increase in technical vocabulary, related to the education career, for which files were shared through Google drive and synchronously zoomed in, where the teacher encouraged them to participate and correct expressions. The dimension increase of technical vocabulary also shows participation through the Google drive, the tasks were entrusted with the purpose of expanding the knowledge of words related to the specialty.

Table 2.

Number of students according to use of digital tools and mastery of the communicative dimension

Variable X: Digital tools	Dimension 1: Expression capacity	Dimension2: Communication skills	Dimension 3: Increased technical vocabulary.	Total N °	%
Work environments: office 365	35	20	30	85	19
Resources to communicate, debate and collaborate: Zoom	15	40	30	85	19
File sharing tools: Google drive	50	44	46	140	31
Resources to organize work: Google Calendar.	60	35	45	140	31
Total	160	139	151	450	100

Likewise, according to Figure 1, it was obtained that 54% (243) of the university students surveyed identified themselves with a high level of communication skills, followed by 35% (158) and 11% (49) who showed a level medium and low respectively in relation to the communicative dimension.

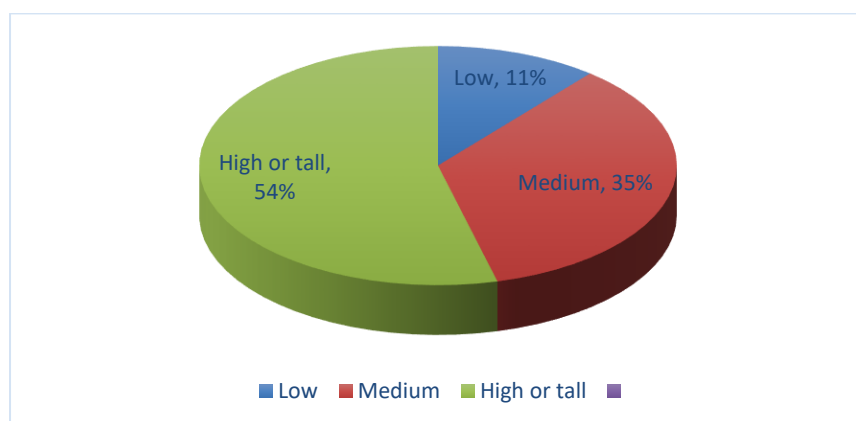


Figure 1. Domain of the digital tools of the students of the Public University

As shown in Figure 2, throughout the development of the contents of the subjects, the student was enhancing the communicative dimension, a high level of participation was found in Google Drive, where it has allowed them to share files, edit and comment or just view the file, as directed by the teacher. When reviewing the files, a good communicative expression was observed, in relation to writing and technical words.

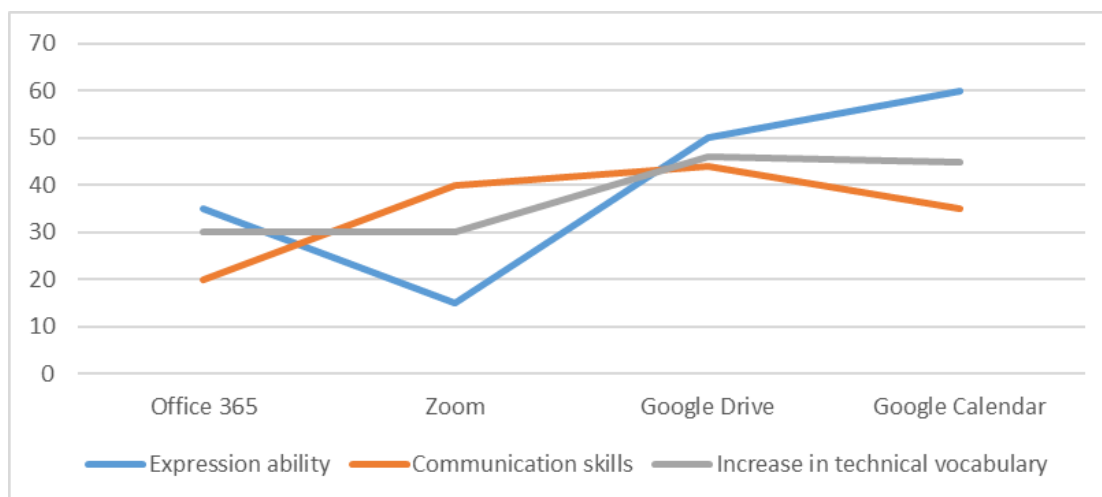


Figure 2. Digital tools and communication skills of university students

Likewise, using only the digital resources offered by the University platform such as: forums, readings, tasks, calendar, chat, groups, videoconferences and grades, it was found that the students did manage to develop the communicative dimension as shown in Figure 3.

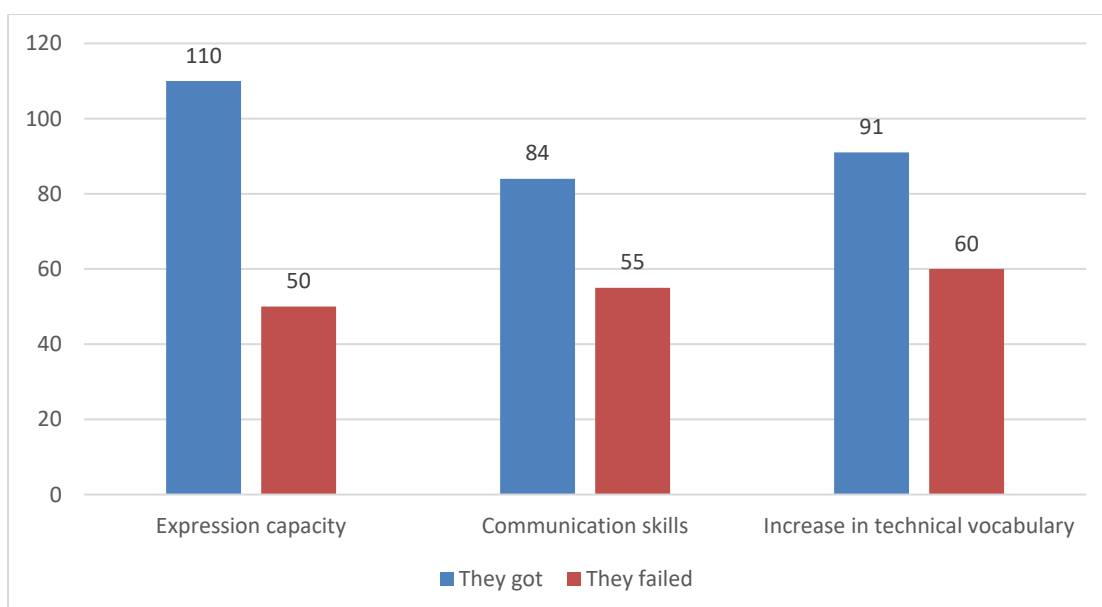


Figure 3. Logro de la dimensión comunicativa lograda a través de las herramientas didácticas digitales de la plataforma de la Universidad

4. Discussions

It has been determined that there is a direct relationship between the variables: digital tools and communication dimension, the Pearson correlation coefficient has a value of 0.712, which indicates a high positive correlation.

From Table 1, it has been determined that 19% of university students demonstrate better written expression skills, making use of Office 365 that has allowed them to create, access and share documents, thus demonstrating writing skills. 19% of university students demonstrate better oral communication skills, using resources such as zoom to integrate video conference communications synchronously, to debate and express their ideas. 31% of the students make use of

Google Drive, which allowed them to share all kinds of documents and folders, as well as edit documents directly online with Google Docs, with the teaching support it was possible to verify the increase in technical vocabulary. Furthermore, as stated by Torres, et al. (2020) the teacher must use ICT as a support for an attractive class, must know how to identify and use evaluation strategies and tools that are consistent with the purposes for which the evaluation is carried out and, above all, allow students to demonstrate their learning, developed during the process. The communicative dimension in a virtual classroom is a fundamental dimension for the educational quality of the teaching-learning processes developed through E-Learning. If these technological communication resources are used little, the virtual classroom will probably become a repository of documents and files (Olmos, 2020). The practical application of different knowledge and skills related to the oral and written use of the language: such as the production of a text, in this case dialogue that required the correct use of the written language (including spelling, punctuation, use of vocabulary, etc.), as well as the adoption of a register appropriate to the context and intention of the message and a good articulation of the text to give it coherence and cohesion (Moral, 2016), It is very important in the training of education students. If these technological communication resources are used little, the virtual classroom will probably become a repository of documents and files (Guasch, González & Cortiñas, 2020).

5. Conclusion

It has been determined that there is a significant relationship between the disruptive integration of digital tools and the communicative dimension in students of the Academic Program of Education Sciences and Humanities. This is reflected in a Pearson coefficient equal to 0.712, which shows that the greater the use of digital tools corresponds to a greater communicative dimension or the lesser use of digital tools corresponds to a lower communicative dimension.

Digital tools represent an important component in student communication, they become a good didactic support in the teaching-learning process, which, properly organized, generates a didactic complement that motivates and encourages the student to develop tasks and work to share documents. The results obtained show a high level of 54% in the domain of digital tools and that benefits the communicative dimension.

The sample consisted of 450 students who are studying to be future teachers and who require development, leadership, communication; the management of the tools and the development of the communicative dimensions from the university platform is important, managing to develop the communicative dimension at a high level 285 students that represent 63%.

Another very important conclusion, which is worth mentioning, is the constant training of teachers, in the management of digital platforms and tools, which has made it possible to strengthen capacities and good performance in educational practice. Agreements were reached through the Ministry of Education of Peru with the Tecnológico de Monterrey and other institutions, managing to train teachers to be University trainers and to master the management of technology.

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