http://doi.org/10.14393/ER-v30a2023-42

The Statistical Poster, an instrument for the statistical training of future teachers[1]

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ABSTRACT

This article presents the pedagogical experience of the poster as a final project in the subject of Statistics, for first-year students of Education at a public university. The systematization to prepare the poster as an instrument for statistical literacy in the training of educators is part of the objective. This study, in the form of a trial, began in the 2018-2019 academic period, considered the diagnostic stage, however, it had an evolutionary process in its methodology in times of pandemic. Among the findings, pedagogical support is prioritized to integrate the content seen in class with a technological platform, for the promotion of an interaction forum on educational approaches during the confinement period. These results were based on the Project Based Learning model of the statistical poster as a central axis in the research experience for teacher training in Statistical literacy.

KEYWORDS: Statistical poster. Scientific poster. Research. Teacher training. TIC.

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O pôster estatístico, uma ferramenta para o treinamento estatístico de futuros professores

RESUMO

Este artigo apresenta a experiência pedagógica do pôster como projeto final do curso de Estatística para alunos do primeiro ano do curso de Pedagogia em uma universidade pública. A sistematização do desenvolvimento do pôster como um instrumento para o letramento estatístico na formação de educadores faz parte do objetivo. Este estudo, em forma de ensaio, teve início no período acadêmico 2018-2019, considerado como fase de diagnóstico, porém teve um processo evolutivo em sua metodologia em tempos de pandemia. Entre os achados, destaca-se o acompanhamento pedagógico para integrar os conteúdos vistos em sala de aula, por meio de uma plataforma tecnológica para a promoção de um fórum interativo sobre abordagens educacionais durante o período de confinamento. Esses resultados foram baseados no modelo de Aprendizagem Baseada em Projetos do pôster estatístico, como um eixo central na experiência de pesquisa para a formação de professores em Cultura Estatística.

PALAVRAS-CHAVE: Pôster estatístico. Pôster científico. Pesquisa. Formação de professores. TIC.

El Poster estadístico, un instrumento para la formación estadística de futuros maestros

RESUMEN

En este artículo se expone la experiencia pedagógica del póster como proyecto final en la asignatura de Estadística, para estudiantes del primer año de la carrera de Educación en universidad pública. La sistematización para elaborar el póster como instrumento para la alfabetización estadística en la formación de educadores forma parte del objetivo. Este estudio en forma de ensayo se inició en el periodo académico 2018-2019 considerada como la etapa diagnóstica, sin embargo, tuvo un proceso evolutivo en su metodología en tiempos de pandemia. Entre los hallazgos se prioriza el acompañamiento pedagógico para integrar los contenidos vistos en clase con una plataforma tecnológica, para la promoción de foro de interacción sobre planteamientos educativos durante el periodo de confinamiento. Estos resultados fueron fundamentados en el modelo del Aprendizaje Basado en Proyecto del póster estadístico como eje central en la experiencia investigativa para la formación docente en la Cultura Estadística.

PALABRAS CLAVE: Póster estadístico. Cartel científico. Investigación. Formación docente. TIC.

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Introduction

Educational institutions have been challenging the effects of globalization in the last two decades. From the perspective of making borders more flexible, it rethinks the geophysical conditions, making the learning process more accessible and immediate. They consider that this phenomenon of the 20th century in its significance and intention has become "[...] a possibility to generate mechanisms in which all effectively feel they have the potential to develop humanly" (ARIAS, 2007). This undoubtedly encourages the interest in knowing the conditions of sustainable human development and, above all, sustainable for the environment that concerns it.

To this end, technological progress is added, which has functioned as a mediation tool to achieve or enhance the globalization process, which, linked to education, seeks to generate a strategic resource for the training of citizens of the future.

From this perspective, a change in the educational paradigm is necessary that allows progress from teaching focused on content, which in turn contributes to a learning orientation based on the development of skills and attitudes to live and work in changing times (CABRAL, 2019).

Under this environment of variability, some teaching strategies are necessary that respond to identifying how students learn, how they can associate the contents to apply it to the job market, given that more and more tasks are automated, digitized, to the point of generating an information overload translated into data, which is exposed in different media for educational use.

In this framework, Engel, Ridgway and Weber (2021) highlight the importance of statistics in democratic society, since they consider it a fundamental competence of every citizen to know and critically understand the quantitative evidence to which they are exposed. This is what different authors call *Statistical literacy*, which Gal (2002) defines as the ability to interpret, critically evaluate statistical information, arguments related to data or stochastic phenomena; as well as express opinions about it. This is why most countries have included statistics and probability from the first years of elementary education, as a basis for training citizens until they reach advanced educational levels.

This situation gives the teacher a double need to develop Statistical literacy. On the one hand, they are in charge of the task of forming statistically literate citizens, but they are also citizens, so they must have a critical attitude towards the statistics that they must face daily (SALCEDO, GONZÁLEZ, SARCO LIRA Y GONZÁLEZ, 2021). This situation transfers an important responsibility to the teacher trainer, who must help him or her develop these two facets.

Statistics is inseparable from its application, hence its teaching must reflect that characteristic. Therefore, it is suggested to solve problems through research, based on fundamental statistical ideas (WATSON, FITZALLEN, FIELDING-WELLS AND MADDEN, S, 2018). The problems must be meaningful to students and allow them to: (a) formulate and solve problems; (b) become involved collecting, organizing and describing data; in turn (c) read and interpret the results.

In addition, cooperative work and the communication of research results should be promoted, both in writing and orally. In this sense, the*International Statistical Literacy Project* from*International Association for Statistical Education*, proposes the use of a statistical poster, seen as the final link in a chain of activities that seek to promote teamwork, for the solution of a significant problem for students, which can be addressed from a quantitative perspective.

From everything described above, this work seeks to systematize a statistical training experience for future teachers with the support of the poster, seen as an instrument that seeks to respond to educational approaches under a reflective, critical and synthesized perspective in the application of Statistics. This approach focuses on the narrative about the evolution that the statistical poster activity has been presenting in the search to develop Statistical literacy.

Context of the experience

The experience presented was carried out in the School of Education at Central University of Venezuela (UCV), specifically in the subject *Statistics applied to education*, which seeks to promote the ability to read, understand, analyze and use statistical data, under the research methodology to analyze situations in a country, environment and society in general.

The subject is studied in the first year of the annual study program and is developed for five hours per week, for 36 weeks. Because it is a degree in the area of Social Sciences, students are not very inclined to subjects in the numerical area, at least that is the common case in Venezuela.

The subject combines theory with practice on quantitative statistical knowledge -mostly- to apply it critically and appropriately, with the support of research processes, which together aim to be useful throughout the degree to face educational scenarios. It is part of the general training of teachers at that institution. Commonly, the academic performance of students is usually low in statistical skills, so the search for strategies that make learning attractive is a constant among the group of teachers.

Some research has described experiences to promote and improve students' ability to think statistically (ESTRELLA, 2017). The same author points out that in the training of teachers who teach statistics, it is an area under development by the research community in Statistics Education. In this regard, various authors (GARFIELD, 2002; ESTRELLA, 2017) point out

the need to strengthen statistical training in future teachers with the purpose of developing statistical reasoning in the student.

For these purposes, there is a reference framework for the development of cognitive levels and teaching models of statistics and probability, among them we can mention GAISE (Guide for Evaluation and Instruction in Statistics Education) cited in Del Pino and Estrella (2012) and PPDAC (Problem, Plan, Data, Analysis, Conclusions) on their fundamental processes in Wild and Pfannkuch (1999). The contributions that are developed from these aim to guide fundamental ideas to face the teaching challenges of the Teaching of Statistics in the classroom.

From this perspective and under the guidelines of the aforementioned reference frameworks, the idea arises of establishing an activity that encompasses all the fundamentals of the subject, but at the same time serves as an experience in research from the first year of the degree, as a of the substantive functions of the future educator, which is a reference for him as a citizen and teacher who will possibly teach subjects related to statistics. This is how the poster or statistical poster is presented as a proposal for a closing activity in the subject, forming the content – research – application triad.

This proposal was inspired by Project Based Learning (PBL), which, according to Vargas, Arregocés, Solano, Peña (2021), is one of the constructivist pedagogical models, which promotes the development of the subject contents linked to possible Projects in order to integrate theory with practice and collaborative work (linking to the GAISE and PPDAC guidelines), reflecting the applicability of the knowledge acquired from the diferente areas of academic training and those obtained through the student's experience, using the instrument of the poster or statistical poster.

This pedagogical strategy integrated with ICT (Information and Communication Technology) promotes the role of the teacher as a facilitator, capable of optimizing spaces created with technological tools, such as interaction forums, to mediate the teaching and learning processes. With this type of dynamic, the student feels motivated because he works on his own

ideas, manages his time, integrates the learning worked in classes with reality, develops problem-solving and decision-making skills, situations or elements that are important for the development of statistical thinking.

The didactic introduction of this experience was linked to the International Statistical Literacy Project – Venezuela, which seeks to promote Statistical literacy among young people and adults around the world, in various areas of life. However, its greatest pedagogical impulse, paradoxically, was achieved in times of pandemic.

The use of confinement, the experimentation of dynamic activities, personalized attention and permanent pedagogical support were some of the factors that made the statistical poster a didactic proposal for the generation of effective and interactive knowledge.

Description of the experience

As a foreword to the description of the poster application, it is pertinent to know its meaning. It is said that the name of cartel or better yet from its derivation from the Anglicism called *poster* It is a term that was admitted by the Royal Academy of the Spanish Language in 2001 (RAE, 2001), defined as a "Poster that is fixed on the wall without advertising purposes or having lost that character". However, this concept has been evolving from a didactic and pedagogical sense in academic activities such as: conferences, symposiums, seminars, teleconferences, and also posters as other research dissemination trends.

The creation of a poster is not simply an academic article presented in another format. A good poster in academia includes a set of attributes that ranges from a design with visual logical sense to integrating a hierarchical structure that emphasizes the phases of a scientific work (BERBEY, 2017).

For this reason, the scientific or academic poster becomes a communication tool (CAMPOS, 2000) that: enables the concise, clear and permanent transmission of its content; It can be analyzed carefully and at the

speed that suits the abilities and interests of the readers and allows direct communication with the author and exchange of opinions.

In general terms, the poster should be self-explanatory, sound easy, but in practice be a great challenge. Its possibility depends on a simple design, in addition to the size adjusted to the typography specifications that guarantee the effective attention of those interested (HESS, 2009).

From this conceptualization, then *What is the statistical poster for the subject of Statistics Applied to Education*? It includes a cross-sectional closing activity within the planning of the learning units of the subject. His presentation focuses on a page that summarizes and explains an investigation carried out on a set of data (mostly collected by instrument prepared by groups of students of the subject of study). Organized under the essential phases of scientific research. In addition, it includes graphs and tables describing the data. Among its functionalities is to be self-training, that is, on its own it must be understandable and with an educational meaning for its observers. Finally, it must be visually attractive and creative, to achieve the effect of being read from a distance of two meters.

The fundamental purpose of the statistical poster is to present statistical information with educational approaches - mostly - in a didactic, creative way under design structures, size, organization and distribution of content for an audience interested in the shared information (GUERRA, 2006).

The didactic introduction of the poster in the subject of Statistics begins with a visit to the website of the International Statistical Literacy Project (ISLP- http://www.iase-web.org/islp/), in it students find an online repository of resources provided by various countries, which includes Statistics and Probability activities and international news related to statistical literacy.

As a second source of information is the website of the International Statistical Literacy Project – Venezuela (https://n9.cl/3dmu8), where the bases of the International Poster Contest are found. This is an initiative aimed at students at various levels of education to participate in projects that

promote *Statistical literacy*, which, in the case of Venezuela, is associated with the Chair of Quantitative Methods of the UCV School of Education and is part of the activities it undertakes to support statistical literacy.

These initiatives seek to promote a research experience in quantitative subjects, since many of the first-year students. Sometimes this type of proposal is usually the first time they experience it.

From the pedagogical point of view, the teacher assumes the role of facilitator, who seeks to promote cognitive skills through the use of technological resources, as a means for understanding and applying statistics (ADRIÁN, 2007). At the same time, it links the development of soft skills such as: teamwork, effective and reflective communication, proactive attitude, habit of permanent reading on the selected topic, as other contributions that this practice derives for the training of educators (COBO, 2011; GÓMEZ, 2019; FUENTES, 2021).

Description of the poster's experience in the subject of Statistics Applied to Education.

The first experience of the activity of *Statistical Poster i*n the training of trainers at the UCV, it emerged in the 2018-2019 academic period. At that time, the idea of a poster was based on proposing certain guidelines for research methodology, leaving the topic selected and the times for its presentation to the participants development.

The results obtained were not entirely satisfactory. Among the weaknesses was the little pedagogical experience to address the doubts that the students had in the development of their research approaches, added to the little guidance regarding the design of the poster structure, such as some of the critical points that were not addressed with care rigor during the performance of this activity in its beginnings. Understanding that this closing project within the programmatic content of the subject was more than presenting a simple work.

In order to advance the evolutionary process of the poster in the training of teachers in statistics topics, the 2019-2020 academic period continues. On that occasion, an online course management platform was incorporated *Google* called *Google Classroom*. The purpose of this tool was to promote other spaces for interaction and a digital repository of materials for the creation of the poster, as a complement to the attention of the classroom meetings.

During the development of this activity, the COVID-19 disease appeared (UN-ECLAC, 2020), officially declared a pandemic in Venezuela in March 2020. All social, personal, and organizational activities were interrupted by the extreme measures taken in this context, generating the temporary closure of classrooms and mandatory social isolation. Consequently, schools, institutions and universities had to continue with their academic activities, but this time with the support of technologies, a resource that became a key element in this transition stage for global societies.

This is how the pandemic context forced the creation of new educational spaces known as "virtual classrooms", to teach and learn in a different, interactive, dynamic and participatory way for the training of citizens (PALLOFF AND PRATT, 2002; CABERO, 2006).

With this type of educational communities, it was possible to adapt the pedagogical processes with the use of technologies, which, without a doubt, meant for that moment of confinement "an indispensable and very popular service due to its great ease of use, because it is intuitive and that has a large number of tools available for its use and use" (LIZCANO Y CHINCHILLA, 2013, p. 23). Its implementation allowed students to be served individually and collectively, immediately during live or delayed classes.

Furthermore, these communities encouraged greater integration between the teacher and other students, for the exchange of opinions derived from an academic article, events on statistical education or some bibliographic reference linked to certain programmatic content.

Among the aspects that arose with the pandemic in the attention of the scheduled courses, was the promotion of the interaction forum to elucidate approaches related to topics specific to the subject. Among some of the activities are the calculations of descriptive and inferential measures, construction of graphs with interactive tools for the presentation and visualization of data, discussing points of interest or requesting support to clarify doubts about the preparation of the poster simultaneously with the contentes seen in class.

The above coincides with Gutiérrez and Chaparro (2021), who affirm that these spaces were created to promote: discussion forum, creation of a database, questionnaire, lessons, workshops, online exams, classes in video format, activities, online advice, portfolio construction of learning units, individual or group presentations or exhibitions online.

The interesting thing about this pedagogical conception under environments of uncertainty such as the pandemic meant, was undertaking an educational vision based on self-education (RUÍZ, 2021; GALARRAGA, 2022). By the way, this assessment coincides with one of the functionalities of the poster in its initial approach to the subject and that in this context its application took on greater relevance.

This conception of teaching, as described above, would mean that the student should assume responsibilities for their learning, work collaboratively with their classmates, share ideas and information, be autonomous in their learning and design strategies for planning, control and evaluation during the educational process.

In our case, in addition to everything indicated in this narrative, the reorganization of the didactic structure was proposed to continue classes (after six months of recession), but this time promoting the virtual classroom of *Google Classroom,* as the main space for teaching and learning the subject of statistics in times of pandemic.

This way of teaching with the use of technologies forced the establishment of a more structured methodology, which included the systematization of the publications of the learning units in digital format each week.

In addition, it facilitated the internal organization of resources, delivery/reception of evaluation and training activities, as well as the timely attention of the interactive space for its progress during the academic period. Within the framework of this new educational design, a session could be considered with only reading materials for the poster project, as the central theme of this experience, but in a virtual environment.

In the first weeks of the rescheduled subject, the general guidelines for the preparation of the statistical poster were specified. At first with the dynamics of forming groups of 4 to 6 students. Each group had an exclusive space for its members within the virtual classroom, to encourage internal interaction and with the teacher (the author) about the selected theoretical-practical materials.

During the preparation of the poster project, the following activities were planned in the subject and covered:

- Advance (Phase I)
- Poster delivery (Phase II)
- Poster defense (Phase III)

Phase I. The advance it includes the first evaluation of the poster (group rating). It included the preparation of a descriptive report in format *Word*, complying with APA (2020) standards. This evaluation activity covered:

1. Selection of a topic linked to the educational context (preferably)
2. Review of the scientific literature on the selected topic, to contextualize it to the situation posed, which then contributed to the formulation of the question that generated the problem statement. Methodology route suggested with authors such as Hernández et al. (2014).
3. Formulation of the general objective and specific objectives of the research, formulated according to the problem statement.
4. Theoretical framework
5. Methodological framework

Phase II. Poster presentation. After reviewing the progress, the teacher shared his opinions with each group (in scheduled online consultations) to be considered in the final poster.

The interesting thing about the pedagogical activity during the preparation of the poster in times of pandemic was the systematic recording of progress in the virtual classroom, to support them in activities on:

6. Processing and presentation of data according to the design of the instrument, which was previously validated by teachers from said institution. Activity that promoted exchange in teacher training, in learning statistics from an interdepartmental perspective.
7. Analyze the results obtained, observing the coherence with the objectives initially set by each research group.

As pedagogical support to develop points 6 and 7 mentioned above, the participation of some teachers from the same department was planned, scheduled every 15 days alternating with live classes (via videoconferencing tool) in the subject itself.

Part of this experience between guest professors and the teacher was the creation of teaching materials based on the thematic forum cycle, related to experiences on the poster project in the academic setting, research methodology, digital design, collection, analysis and presentation of data (theoretical – practical), as some of the essential knowledge areas for the advancement of the poster (Figure 1).

This initiative was inspired by the approach of Escudero (2005) when he says that the "training and collaboration between teachers, their beliefs, their relationships and practices (…) will represent so many sources of factors of school success (…)".

Figure 1. Thematic lines for the preparation of the statistical poster, during the 2020-2021 academic period.

Guest professors	Topic	Teaching resource	Format	Modality	Type of content	ICT
1	What is a statistical poster? How is a statistical poster made?	Slide presentation	Power Point Templates, Multimedia material	Synchronous	Theoretical	Zoom
2	How to collect data?.	Slide presentation	Power Point Templates	Synchronous		
3	How to design the poster?	Slide presentation	Power Point Templates	Synchronous	Theoretical -Practical	Zoom, Canva
4	Care about quality in the poster	Slide presentation	Word Templates	Synchronous	Theoretical	Zoom
5	How is data for a scientific project analyzed?	Slide presentation	Power Point - Microfot Excel	Synchronous	Theoretical -Practical	
6	Stating Conclusions	Slide presentation	Word Templates	Synchronous	Theoretical	

Source: Own elaboration (2020).

This strategic way of producing content takes on greater relevance in a subject such as Statistics, since it promoted the students' interest in deepening the concepts, exploration and visualization of data, as well as the procedures or analysis implicit in the poster development phases. At the same time, the idea of incorporating the participation of guest teachers was very useful in the production of new study materials and permanent consultation in the virtual classroom.

While these activities were carried out, the social environment was increasingly compromised by the health crisis that prevailed at that time. It was the most critical stage that the world was facing in times of the pandemic, outlined on the website of the World Health Organization (WHO, 2020) when it reported that “More than 2.9 million people have died worldwide due to

Covid-19", so the pedagogical efforts to promote motivation, dedication, discipline, commitment during the undertaking of the learning communities that were emerging in the midst of this historical context, were key to the advancement of the subject. .

Therefore, it can be deduced that this didactic strategy given by the creation of new illustrative materials, more than a simple dissemination of knowledge, resulted in a different way to communicate, understand and efficiently prepare the poster. With this set of conversation-style activities, Phase I and II culminate.

Phase III. Defense of the poster. It consisted of planning logistics to present the project orally. At this time, another teacher specializing in the area of Statistics, or a similar area is invited to support the regular teacher in the development of this activity. In this phase the following criteria were raised:

- All members of each group had to be connected through the selected virtual platform throughout the activity.
- The mandatory use of a camera and/or microphone at the time of the presentation.
- Have a good appearance, speak slowly, announce your first and last name before starting your presentation.
- Duration of the presentation 20 minutes for each group
- Once the presentation time is over, it closes with the cycle of questions and answers.
- Regarding the evaluation, it was based on:

a. Self-assessment: Assessment of the student himself for his dedication during the preparation of the poster.

b. Co-evaluation: Evaluation of the other research groups for the work presented in the poster.

c. Evaluation of teaching staff: Teachers' assessment of the participation of the exhibiting group.

All the grades were recorded in an evaluation rubric, which would be published in the virtual classroom for the participants' knowledge of the performance in the defense of the poster, completing Phase III (individual grading).

The afore mentioned describes the second didactic experience promoted by the Chair of Quantitative Methods, considering the satisfactory results.

The quantitative balance in this second experience was the permanence of more than 20 students connected for 36 consecutive weeks at the scheduled time (five hours per week). The digital review of five descriptive reports of the groups, not counting the interactions shared during the development of this activity.

From a qualitative point of view, considering that the context of the health crisis caused by the pandemic, they were not the most appropriate environments for the assimilation of any type of learning, much less numerical learning, as was the case with learning statistics.

Teaching strategies through the use of technological resources and communication skills were essential qualities for achieving the proposed objectives.

The organization and scheduled distribution of the resources available in the virtual classroom, especially those related to the poster project as the central theme of this research under the same conditions established in the second experience, were reviewed and approved by the chair to continue its implementation in the following courses that included the 2021-2022 academic period (Table 1).

Table 1: Poster number presented in the subject of Statistics Applied to Education during – UCV, academic period (2018-2022).

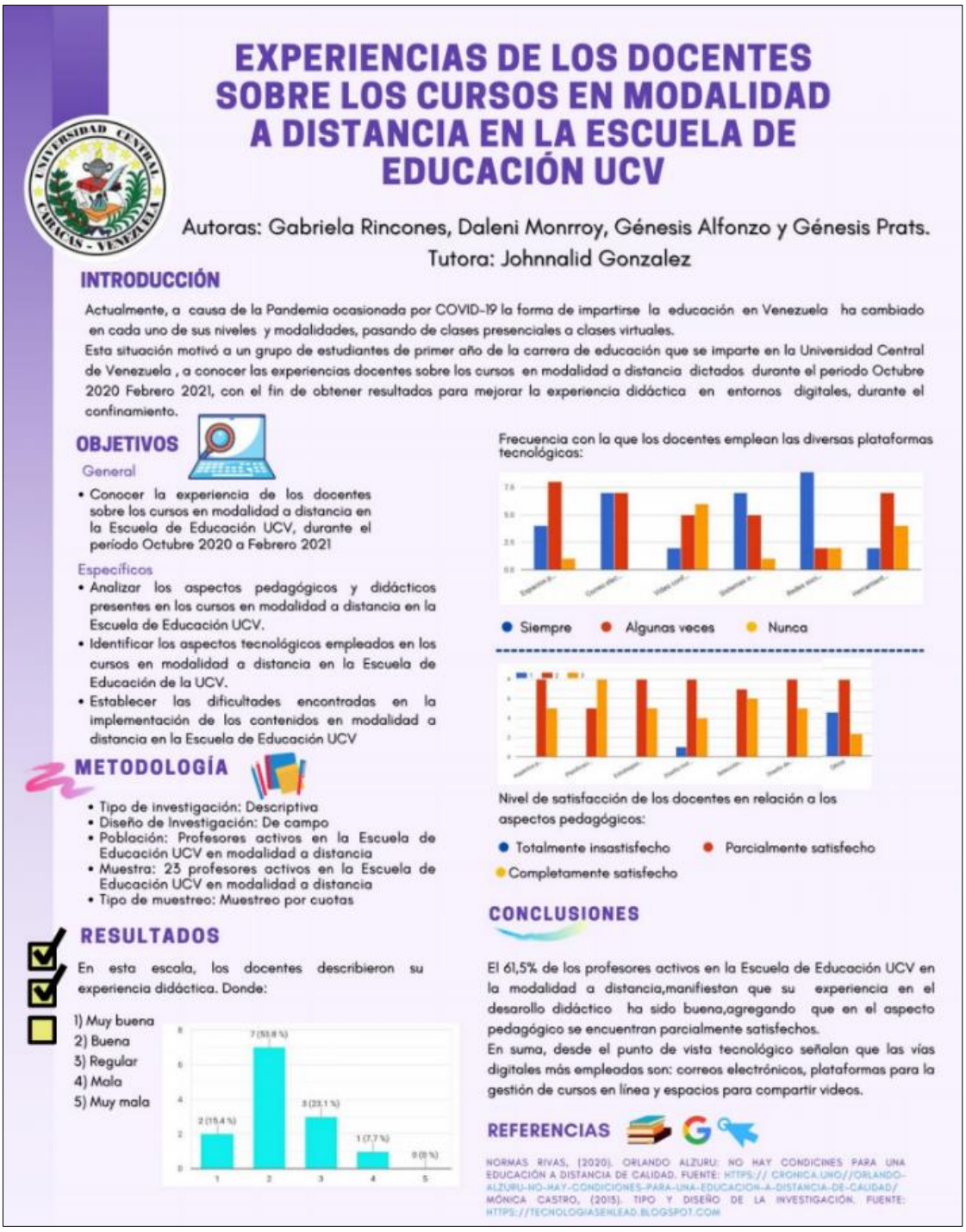
N°	2018-2019	2020-2021	2021-2022
Number of posters presented	5	5	6
Number of students enrolled since the beginning	41	50	69
Number of students enrolled until the end	37	24	19

Source: Own elaboration (2022).

Table 1 brings together the crucial scenarios of the poster during its evolution. At first (2018-2019) the majority of students remained active, presenting five posters at the end of the subject. But in the second moment in which the pandemic was declared (2020-2022), the dropout of students increased considerably, but those who tried to finish their scheduled activities until the presentation of the poster passed the subject.

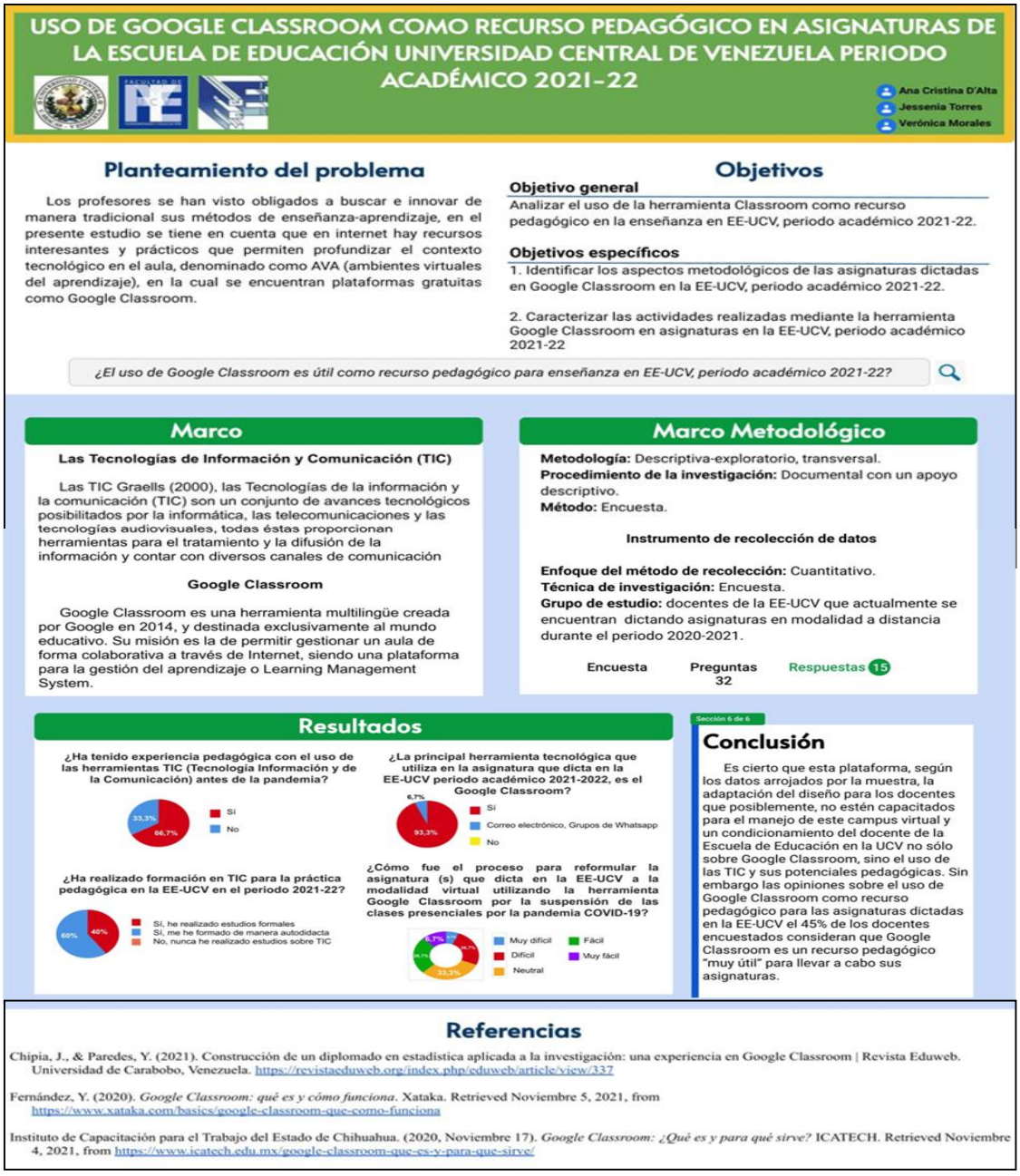
As a sample of the results obtained, the most representative posters that participated during these experiences are presented below.

Figure 2: Poster *Teachers' experiences on distance learning courses at the UCV School of Education.*



Source: Subject of Statistics Applied to Education (annual course, 2020-2021) – UCV.

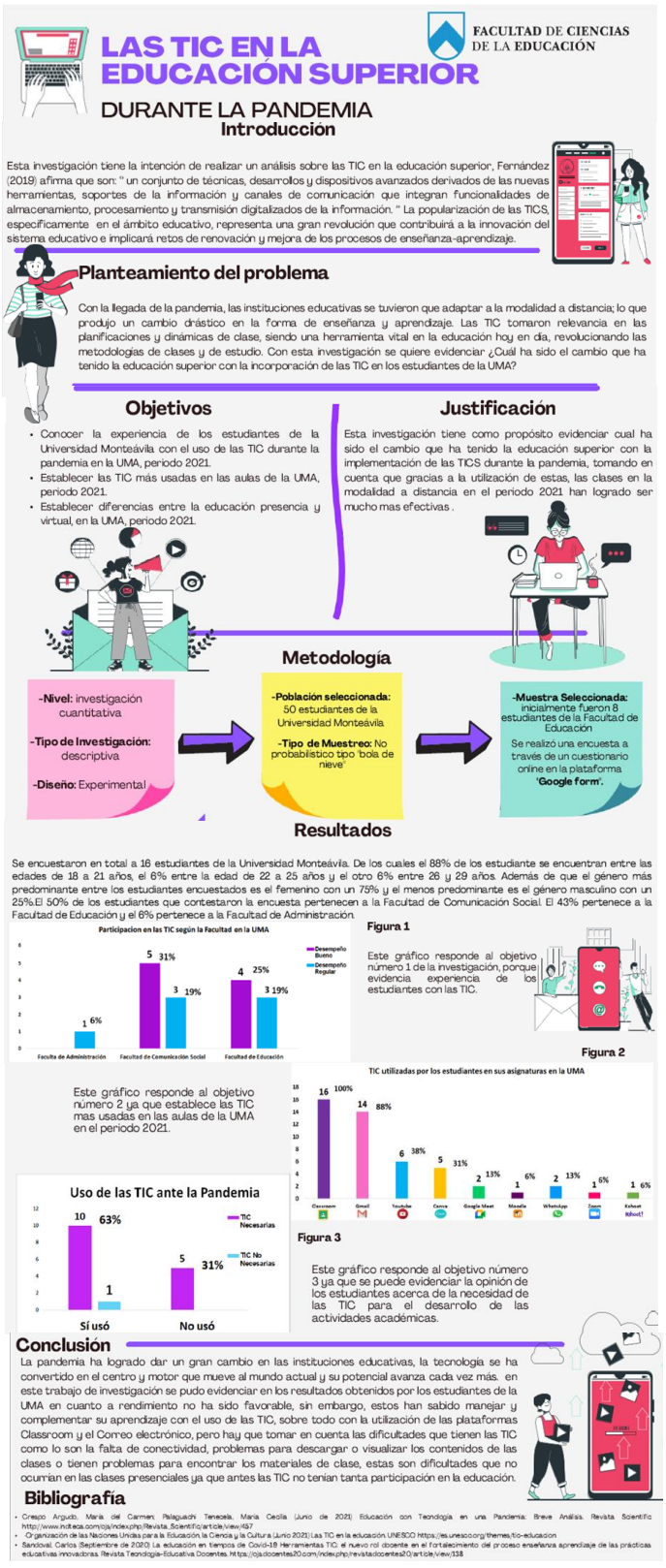
Figure 3: Poster *Use of Google Classroom as a pedagogical resource in a subject of the School of Education Universidad Central de Venezuela academic period 2021-22.*



Source: Subject of Statistics Applied to Education (annual course, 2021-2022) – UCV.

The posters in Figures 2 and 3 correspond to the UCV annual course. In both cases, a methodological structure was established, which addresses the contents of descriptive statistics on the approach of the selected topic.

Figure 4: Poster *ICT in Higher Education*



Source: Subject of Statistics Applied to Education in the private institution (semester course, 2022).

The poster in Figure 4 corresponds to the semester course of a private university, as an example of the adaptation of the didactic guidelines suggested in the annual courses to the semester courses taught at UCV. This approach involved adapting the teaching structure from 36 to 18 weeks, going from annual to semiannual, and allowing students to also report an investigation through the poster. The idea is to continue taking advantage of virtuality and its functionalities, as well as the experiences described above, to fulfill the objective of the chair of developing statistical culture in future trainers.

Particularly, in Figure 4, in addition to the methodological route, other elements that could facilitate the process for statistical literacy are highlighted. It involves the incorporation of images alluding to the selected topic to present content on descriptive statistics, in an attractive and formative way on the most outstanding results according to the proposed objectives.

Conclusions

Pedagogical experiences in times of pandemic have given the opportunity to elucidate new conceptions of education in the use of information and communication for the effective application of knowledge.

Hence, the use of confinement and technological skills were fundamental support for the teaching of statistics in various educational contexts, focused on mathematical reasoning and the deepening of levels of abstraction that this area of knowledge requires within the training of students teachers and the citizen in general. From this perspective, Project Based Learning was one of the pedagogical approaches developed in the poster activity in the subject of Statistics Applied to Education.

During the development of this experience, certain obstacles arose such as: internet connection failures, lack of technological resources and difficulty following instructions during the creation of the poster. To improve these

situations, it is suggested to carry out a diagnosis in an equitable and permanent manner, which would mean giving all students the same opportunity to provide evidence of their learning.

Likewise, each of them will be valued for timely comments with the purpose of continuing their process and strengthening their progress, which would lead to the recognition of a formative evaluation that promotes the student's educational trajectory, based on motivation for achievement and orientation, so that these pedagogical and evaluative processes contribute to the continuation of the training of future statistically literate teachers.

All of this means that the most important thing to highlight in this experience is that the students managed to carry out an investigation reported through the design of the poster, as evidence of their understanding of the use of Statistics.

This practice derived a methodology that gives meaning to this area of knowledge, since the students reflected in the poster a good part of what they learned in the subject in order to respond to situations related to educational processes during the academic period of study. At the same time, it favored the development of a critical attitude towards quantitative information present in globalized societies.

In short, the didactic approach of the statistical poster is considered in this experience as a strategic instrument that combines ingenuity, dedication and motivation, in meaningful learning for educators and at the same time a pedagogical tool for future trainers to develop Statistical literacy, as part of one of the objectives proposed in this systematization.

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Received in June 2023.

Approved in November 2023.