Hamut'ay
Biannual Scientific Journal
Coordination of research and extension scientific-technological (CIECT-DUED).
University Direction of Distance Education-ALAS PERUANAS UNIVERSITY
http://revistas.uap.edu.pe/ojs/index.php/HAMUT/index
ISSN: 2313-7878 DOI: 10.21503/hamu.v5i2.1621 Vol. 5(2). July-december. Hamut'ay 2018. Lima-Peru

Evaluation strategy for the continuous improvement of courses of a Visual Arts program in virtual and distance modality: Case study

Estrategia de evaluación para el mejoramiento continuo de cursos de un programa de Artes Visuales en modalidad virtual y a distancia: Estudio de caso

Raúl Alejandro Martínez Espinosa[1]
https://orcid.org/0000-0003-1601-0361
Tatiana Martínez Santis[2]
https://orcid.org/0000-0002-7954-0709
Daniela Hernández Contreras[3]
https://orcid.org/0000-0002-7869-2575
Universidad Nacional, Abierta y a Distancia, Colombia

Received: 07-17-2018
Accepted: 11-28-2018

Citation

Martínez, R. A., Martínez, T. & Hernández, D. (2018) Estrategia de Evaluación para el mejoramiento continuo de cursos de un programa de Artes Visuales en modalidad virtual y a distancia: Estudio de Caso. [Evaluation strategy for the continuous improvement of courses of a Visual Arts program in virtual and distance modality: Case study]. Hamut´ay, 5 (2), 60-73. http://dx.doi.org/10.21503/hamu.v5i2.1621

Abstract

This research was developed with a qualitative methodological design, specifically a case study, with a focus group data collection technique in active students and teachers of the visual arts program of a public university in Colombia with virtual and distance modality. Its main objective was to develop a strategy of evaluation for the academic program in visual arts offered in virtual learning environments. In 2016, the visual arts program starts with an enrollment of 50 active students, for the following year the number increases to 278. The student population is heterogeneous, between 16 to 45 years old and socio-economic conditions with presence in 63 open and distance education centers in Colombia. The results are concentrated in three analytical categories: expectations regarding the program and its methodology, teacher support and new didactic and pedagogical resources. Its impact is reflected in the following findings: a. Establishment of an academic program as an object of study; b. Design of theoretical-methodological contents with relevant and innovative digital educational resources, which encourage autonomous and meaningful learning; c. Identification of

1 Plastic and visual artist. Publicist of the Jorge Tadeo Lozano University, Journalism Specialist Universidad de Los Andes and Master's degree in Visual and Plastic Arts from the National University of Colombia. National Leader of the Visual Arts program of the National Open and Distance University - UNAD. raul.martinez@unad.edu.co
2 Psychologist, Master's in Social Communication from Universidad del Norte, Colombia. Researcher, teacher of the Master in Alternative Development and Sustainable, and Research Leader of the School of Social Sciences, Arts and Humanities of the National Open and Distance University - UNAD. tatiana.martinez@unad.edu.co
3 Master's of Music with an emphasis in Musical Arrangements from El Bosque University, Colombia. Candidate to Degree in Education Specialist Superior to Distance. Teacher and Leader of the research nursery of the music program of the School of Social Sciences, Arts and Humanities of the National Open and Distance University UNAD. daniela.hernandez@unad.edu.co

expectations and needs of teachers and active students as part of the teaching and learning process of the arts, research methodologies and creation of work; d. Implementation of a methodological route for constant evaluation, establishing academic management practices within the program characterized by quality, decision-making based on research and oriented towards academic excellence.

Keywords: Arts, educational resources, evaluation, academic management, virtual learning environments.

Resumen

La presente investigación se desarrolló con un diseño metodológico de tipo cualitativo, específicamente estudio de caso, con técnica de recolección de datos grupo focal en estudiantes activos y docentes del programa de artes visuales de una universidad pública de Colombia con modalidad virtual y a distancia. Su objetivo principal fue desarrollar una estrategia de evaluación del programa académico en artes visuales ofertado en ambientes virtuales de aprendizaje. En el año 2016, inicia el programa de artes visuales con una matrícula de 50 estudiantes activos, para el siguiente año el número se incrementa a 278. La población de estudiantes, es heterogénea, entre los 16 a los 45 años y condiciones socio-económicas con presencia en 63 centros de educación abierta y a distancia en Colombia. Los resultados concentrados en tres categorías analíticas, siendo: expectativas frente al programa y su metodología, acompañamiento docente y nuevos recursos didácticos y pedagógicos. Su impacto se refleja en los siguientes hallazgos: a. Establecimiento de un programa académico como objeto de estudio; b. Diseño de contenidos teórico-metodológicos con recursos educativos digitales pertinentes e innovadores, que propician el aprendizaje autónomo y significativo; c. Identificación de expectativas y necesidades de docentes y estudiantes activos como parte del proceso de enseñanza y aprendizaje de las artes, metodologías de investigación y creación de obra; d. Implementación de una ruta metodologíca para la evaluación constante, estableciendo prácticas de gestión académica al interior del programa caracterizadas por la calidad, toma de decisiones basadas en investigación y orientadas a la excelencia académica.

Palabras Clave: Artes, recursos educativos, evaluación, gestión académica, entornos virtuales de aprendizaje.

Introduction

The training of artists in a virtual mode not only problematizes the art/technology relationship, but also addresses important aspects of life from different dimensions (emotional, cognitive, and expressive). In this sense, questioned in the scope of "aesthetic behavior" as stated in Barbosa (2017), it is relevant for the purposes of training and research in the Arts: "Like a tool that enables expression, that does not disassociate itself from life or from human effort, art calls upon human being to share emotions, sensations and ideas. Thanks to the collective impulse, in art two types of fulfillment within the experience are achieved: the unification of components of life, and the union of intersubjective experiences between groups human" (p.4).

Virtual mode favors access to training in crafts, with national and international coverage and a flexible structure for development of the pro-

posed content. The features proposed in this program which distinguish it from others are as follows: the virtualization of curricular content, active use of Information and Communication Technologies (ICT) in the teacher-student relationship, and research mediated through use of technologies for the formation of investigational research, using methodologies unique to the arts, such as the art of investigation/creation and qualitative or mixed research.

The teaching of the arts fosters a close relationship between the teacher and students through face-to-face interaction, however, thanks to ICT, is possible to maintain this relationship virtually. Because this is the first program of a virtual modality offered in Colombia, it is necessary to inquire into meaningful learning in theoretical-practical courses, since the courses in have traditionally been developed for the face-to-face environment.

The questions are; is it possible to learn how to draw virtually? Can artists be taught through a virtual mode? The answers to these questions cannot derive from a prejudiced or enthusiastic place, but through research. This is an exercise for the review of the significant learning of the students in the program. Using these ideas, we can propose the development of a tool for continuous improvement of the design and didactic components of online art programs, which teach drawing, photography, and basic design.

Developing evaluation strategies allows the constant identification of standards for success or failure of the pedagogical strategy and didactic implementation for the appropriation of theoretical-practical concepts of Visual Arts. For this, four phases were created: the methodological design, the subsequent application of evaluative techniques, analysis of results and finally the formulation of guidelines.

Virtual education arose as a solution that encompasses the needs of the population, granting access to education to people from contexts. Due to disability, mobility, space, and time, not everyone can access education in person. This mode of learning in virtual environments has evolved as permitted by information technologies. At this time the growth of online courses has been increasing and supplementing spaces where education and the spreading of knowledge was not possible, therefore, ICT provided various tools and possibilities for students to gain, process, and execute knowledge. The distance higher education environment is not only seeking the success use of technologies, but also educational tools offered within the course. How the Plan Nacional de Tecnologías de la Información y las Comunicaciones 2008-2019 del Ministerio de Educación (Information and Communication Technologies National plan 2008-2019 of the Education Ministry) shows it: The use of these technologies has changed the social customs and the ways in which people interact. ICTs have improved opportunities for large groups of the population traditionally excluded by increasing mobility within society. These technologies have additionally revolutionized learning, changing the way people learn and the role of pupils and teachers. It has also become clearer that the learning period may not be a time-limited process, but occurs throughout life. (Ministry of Communications, 2008, p. 65).

In connection with the above information, the importance of constant evaluation of the online courses is stressed, since distance education not only seeks to provide an opportunity to a population or provide easy access to knowledge, but also seeks to use certified high-quality educational learning.

> "The existence of media as an instrument of communication and exchange does not guarantee nor determine a methodology or a particular concrete learning since it requires the processes of construction and socialization where the media come to contribute but are not crucial to achieving learning outcomes. The simple presence of technologies does not guarantee optimal results, every proposed application demands the active, creative and critical participation of the agents involved, each one of whom are generators of messages and have the power to exchange knowledge and ideas with others to enrich their knowledge"(Avila & Bosco, 2001, p.34).

So what impacts and effectiveness does the learning process have in students who participate in

methodological Visual Arts courses offered by a public University with online and distance learning? What pedagogical tools should be taken into account for the continuous improvement in a virtual course high quality craft?

As Avila & Bosco (2001) assert, educative practice is not sufficient with the incorporation of ICT since in itself it does not educationally significant. Because of this insight, the use of technology and communication tools must be accompanied by a creative and innovative pedagogical model that allows constant transformation for meaningful learning. From this perspective, a high-quality education in which students learn in a positive and effective manner must be guaranteed.

Research explores methodological aspects of the teaching of Arts in virtual environments from the theoretical approach of certain theoretical-practical courses. Analytical categories explored are expectations about the program and its methodology, teacher accompaniment, and new didactic and pedagogical resources.

Its main objective is to develop an evaluation strategy for the continuous improvement of four methodological courses of the online Visual Arts program: drawing, photography and basic design.

Programs of Arts in Colombia: a view of the teaching-learning processes

The programs of Arts in Colombia

Currently, programs of Arts offered in Colombia are insufficient in relation to other professions and fields of knowledge. According to the SNIES-Ministry of national education (2013), there are 37 programs of Arts, which represent only 5% of the programs of higher education offered in Colombia, meaning that only 469 programs out of the 9,824 that exist correspond to this area of knowledge. Areas of economics, mainly business administration and engineering programs, make up more than half of the programs offered at the national level, holding 55% of the total (see Figure 1).

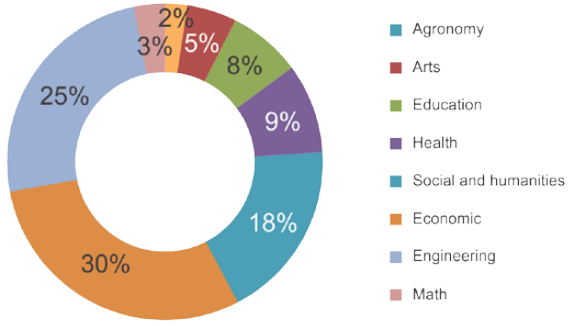

Figure 1
Registered, quality programs by subject. Analysis based on information from the SNIES, Ministry of national education (2013).

The area of the arts consists of seven basic core knowledges: plastic, visual and related arts, representative arts, history, design, music, advertising and related arts, and other unclassified disciplines. However, the range of Visual Arts is significantly smaller than the total number of programs available within the area. Within the arts programs, design and music are occupied by larger proportion of students and academic offerings. As stated above, only 5% of higher education programs offered at the national level are within the area of Arts; of these, 469 programs cover the seven basic nuclei outlined. Only 69 programs of the 469-cover plastic, visual, and related arts, the others correspond to the other programs that constitute the arts, representing 19.7% within the area and only 0.69% of the total number of programs offered in different areas of knowledge in Colombia (information gathered from the SNIES-Ministry of national education, 2013 and can be observed in table 1).

Table 1.
Number of programs offered by subject. MEN - SACES. Information from July 2013. * Does not include national university programs; includes only the SENA registered, qualified programs.

Area	Number of programs	%
Agronomy	243	2
Arts	469	5
Education	769	8
Health	939	9
Human and Social Sciences	1742	18
Economics	2936	30
Engineering	2413	25
Math	313	3
Strongly disagree	9824	100

Analysis based on information from the SNIES, Ministry of National Education, 2013.

Teaching the arts in virtual learning environments

The development and evolution of information technologies has created virtual spaces and environments in order to make education accessible to all. Likewise, we seek to create different areas within online higher education with new opportunities of knowledge (Avila & Bosco, 2001).

When we refer to the virtual learning environment, it is contextualized as the use of software or a platform, the purpose of which is to transmit information to build new knowledge. The virtual learning environment is characterized by the use of an intuitive visual interface, where modules are used for step-by-step information mediation. There are tools such as calendars, agendas, student management, evaluation, and tracking, allowing a real meaningful learning; In addition to these tools, there are people who enable such mediation; the administrator, the tutor, and the student. A virtual learning environment must allow communication between the teacher and the student to develop skills and mediate the educational process, as well as have the capacity to work with large and small groups without affecting the usability of prepared resources (Belloch, 2012; Zapata-Ros, 2015).

According to Avila & Bosco (2001) perceive learning environments as neither subscribed to formal education nor to a particular educational modality. On the contrary, they try to create spaces in which to recreate the conditions under which the individual gains new knowledge, new experiences, and new elements that generate processes of analysis, reflection and appropriation without mandatory on-site attendance. From this perspective, it is understood that distance education considers that people in areas, which do not have access to educational tools, also have a need for learning and specific knowledge of different subjects. This is where ICT plays a key role; in the generation of tools that afford the opportunity of a high-quality education through online and distance learning.

In Colombia, in online and distance learning has evolved in three stages. At first, student-teacher interaction was very limited and most correspondence was through mail. Then, ICT played an indispensable role by closing the space between the student and the tutor by means of remote learning and cyberspace, in order to further enable the exchange of information. The third part of this evolution occurred through technologies that offer continuous communication over networks which allow access to education anywhere at any time, allowing close student-teacher contact. Likewise, it is important that the pedagogical model is planned while taking into account advancements towards high-quality education process.

Many advantages within the virtual mode allow it to be a successful learning alternative for students. According to Mendoza & Galvis (1999, p. 34) there is a long list of advantages for both the tutor and students. Highlights among them are: 1, reduced sense of isolation; 2, increased flexibility, and 3, increased variety.

In this sense, it highlights that an educational system should constantly be evaluated and reflected upon. The use of ICT must encourage continuous improvement within the learning environment to promote high-quality education. For this purpose, there are enforcement instruments of qualitative and quantitative form that enable foster constructive criticism and improvement of online courses. Likewise, it demonstrates the importance of online higher education, where the objective is to provide an effective, relevant, and full knowledge.

Evaluation in virtual learning environments

In the virtual mode, it is essential to raise a number of guidelines in order to develop a quality education system. For the creation of a virtual learning environment, it is necessary to take into account the following elements: analysis, design, development, and evaluation. The dynamics of each of these tools lead to successful student learning. Instruments have been created that allow the continuous application of these elements in online courses, as well as reflection about changes and dynamics that must be configured in the courses to be evaluated. For this type of evaluation, it is important to select areas and subareas, define standards, and define indicators in order to

adopt a system of improvement within an online course. As Rubio (2005, 2003) says when referring to quality standards and indicators, to be included within a model they adopt the intrinsic characteristics of the course to be evaluated, like those that contributed to its organization and management; and in some ways, they can affect student perception. In addition, Rubio mentions that although the established indicators attempt to represent the entire context, even though they have tried to be representative of the whole of the context, it is convenient that each institution selects those most appropriate to their needs and their reality.

Methodological courses

The online and distance learning Visual Arts program of a public university in Colombia has a curricular design with core problems, which seeks to integrate in a coherent manner the environment, mediation, mediators, learning strategies, and evaluation proposal, which, thanks to methodological order, is composed of a set of procedures, strategies and pedagogic-didactic techniques. These strategies and techniques are viable through the resources and tools of the online learning environment, enabling the exercise of certain professional practices, trades, or occupations, the recognition of regional problems and feasible solutions, as well as the identification of new training requirements (PAP solidarity-UNAD, 2011, p.16).

Regarding classification, three types of courses are offered in the arts program: theoretical, methodological (theoretical/practical), and practical. The theoretical courses of the program respond to the declarative knowledge of knowledge, i.e., concepts, fundamentals and problems of knowledge and knowledge discipline. The methodological courses emphasize procedural, very relevant knowledge for the methodological strategy workshop and requires the application of knowledge to practice solving problems in which student must enhance the implementation of the theoretical contents (know-how). The practical courses (workshops) are those in which production and action may develop; they are structured from the processes of creation and research of each student after they have knowledge and expertise gained in the theoretical and practical courses. In coherence, the following were determined as methodological courses of the Visual Arts program: drawing, artistic photography, and basic drawing.

Context and scope of research mediated by technologies of information and communication for the evaluation of an academic program

According to Romero (2014) at the end of the 1960s, the emergence of Internet conceived societal transformations, now shaped by subjects and hyper-connected subjectivities; citizens of the world exist in delimited territories and have new requirements regarding technological consumption (p.28). For Garces, Ruiz & Martínez (2014, p.219) societies recognize the Internet's social impact. Transformations in dynamics, ways of interpreting realities, the individual's relationship to their self, others, and the environment, has put on the agenda the discussion today's university's commitment to meeting the challenge of top education in digital societies and culture. Within the impact of transformation, ICT has begun to play a fundamental role in the educational process as a contribution to the construction of knowledge, for the purpose of solving problems and fixing the situations of an environment or context.

According to UNESCO, the university's social responsibility and substantive functions are teaching, research, and extension. This has enabled the leap from traditional to distance education, while recognizing other models of teaching and learning and maintaining standards of quality, relevance, social inclusion, integration, internationalization, and mobility (Estrada, Fernández, & Zambrano, 2017). From teaching and extension expands the design and offer of training and MOOC courses (massive, online, open, and free courses). From research, new knowledge about virtual environments has been developed for the mediation of processes of University research. As mentioned previously, research is an important factor for the development of new knowledge products that may contribute to the different fields of action required; in this case, the explo-

ration topics within the Humanities which were previously unknown are now uncovered, due to technologies that contribute to research improvement, strengthening, and shed light on the practices of social sciences and humanities researchers (Romero, 2014, p. 20).

Nowadays, not only the research but also the education itself is constantly challenged to achieve significant learning and achieve an evolution of the transmission of information; It is there where technologies, virtualization, and the same distance education contribute to the construction of a social development through virtual spaces, which foster independent learning. Using the technologies to independently look for information leads to building individual knowledge, simultaneously mediated with collaborative learning for the development of skills in online environments. These spaces generate discussion and a search for transformation in forms of education, to reach an end point at the construction of knowledge. Here, technology is a necessity for the evolution of information (Navarro, 2017, p.38).

In this sense, it has been developed like in the evolution of these technologies that allowed the transmission and transformation of spaces, in this case, education, which is where ICT has generated parameters of evolution in education within virtual environments. Three important aspects are highlighted here, to be taken into account for the construction of virtual spaces where information will be given. First, communication is sought, and is where it is mentioned to transmit information about the subject determined. Second is cooperation, in which collaborative work is encouraged for the collective construction of knowledge. The third is sharing, which is where the mediator of processes furthers the stimulus to enhance initial learning. (Real, 2011, p.54).

Taking into account the above information highlights how research mediated technologies allow for the design of strategies to evaluate methodological courses in a program of Arts in virtual learning environments; in one hand, the focus of this text in the design of methodological courses and their pedagogical and didactic strategies as a field of study; on the other, Internet and ICT as a mediator of processes of collaborative research.

From the strategic component of research, the academic program of Visual Arts is structured from the formulation of research. The arts in the digital era, whose purpose is to develop different research parameters within the Arts for the approach of contemporary contexts, with the purpose of achieving comprehension of the use and treatment of the production of work in different social and cultural environments.

Considering these aspects, this study had as general objective: develop an evaluation strategy for the continuous improvement of four methodological courses of the Visual Arts program in virtual learning environments: drawing, Photography and basic design.

In addition, as specific objectives:

1. Formulate evaluative parameters for the continuous improvement of the courses to work.
2. Identify strategies for the improvement of the courses of the Visual Arts program with teachers and students.
3. Design of a tool for the continuous improvement of the courses within the program.

Materials and Methods

Participants

In the year 2016, the Visual Arts program began with 50 active students enrolled. The following year the number is increased to 278. The student population is heterogeneous, of different ages ranging from 16 to 45 years and socio-economic conditions since the University's teaching model is characterized by social inclusion and is present in 63 open and distance educational institutions across all regions of Colombia. Participants do not report any disability status. Research includes students from the arts program distributed over 63 municipalities of Colombia, as shown in table 2.

Table 2
Geographic location of the students.

Number of Students	Region	Number of Students	Region
135	Bogotá	1	La Dorada
16	Medellín	2	La Plata
8	Acacias	1	Málaga
5	Barrancabermeja	2	Ocaña
6	Barranquilla	12	Palmira
10	Bucaramanga	5	Pasto
8	Cali	4	Pitalito
3	Cartagena	1	Sahagún
1	Corozal	1	San José del Guaviare
3	Cúcuta	4	Santa Martha
1	Cumaral	1	Santander de Quilichao
6	Dosquebradas	2	Sogamoso
5	Duitama	1	Valle de Guamuez
10	Facatativá	1	Tumaco
5	Florencia	3	Valledupar
1	Garagoa	2	Yopal
2	Girardot	5	Zipaquirá
5	Ibagué		
		Total	278

Analysis based on information from the SNIES, Ministry of National Education, 2013.

The sampling was voluntary, according to the definition proposed by Hernandez, Fernandez & Baptista (2014, p.156) who define the voluntary sample as ". . . in volunteer sample the selection of participants depends on varied circumstances. This kind of sample can also be called auto-selected, since persons proposed themselves as participants in the study or responded to an invitation."

From the universal population described, we called for voluntary participation in the process of assessing courses, by sending invitation to students enrolled in methodological courses (theoretical/practical) and which yielded the following distribution of participants according to active academic registration period, which is shown in Table 3.

Table 3
Sample distribution.

Application period (16 weeks)	Sample (participants)
January - June 2016	39
January - June 2017	20
August - December 2017	29

In relation to teachers who direct the methodological (theoretical/practical) courses, the development of a focus group was proposed. Highlighted is the participation of four (4) teachers, young adults aged between 25 and 35 years of age, of whom three (3) feature a profile of master's in visual and plastic arts and the other one (1) has the profile of a specialist in photography. In addition, they have additional training in the specific field of teaching in virtual environments (AVA).

Instrument

Understanding the process of data collection as a systematic process that ensures, on one hand, the capture of the most determinant information about reality, and on the other, checks the validity of tentative observations from the various observation sources or the various sources to examine a reality (Bonilla-Castro & Rodriguez-Sehk, 2005, p. 141). In this sense, mainly two instruments were used to collect the data:

1. An online survey composed of 13 questions aimed at addressing the following categories of analysis:
   a. Expectations about the program and methodology
   b. Didactic material
   c. Teaching accompaniment
   d. New resources: communication strategy.

   The purpose of the instrument is concentrated on measuring the scope of learning of methodological courses of Visual Arts in virtual methodology. Students registered as being enrolled for the first time in the courses for drawing and artistic photography as part of the visual arts program were used in the implementation of the survey. The database

of the program of Visual Arts enrolled in the courses of drawing and artistic photography. Participation in the survey was voluntary and anonymous aspects were communicated in the online form's header and part of the informed consent.

The survey was validated through a pilot test in which adjustments were made on the analytical categories of: a. environment; b. teaching strategies and c. methodological approach of the courses.

2. Target Group: Since their exercise is built in a group meeting, it is guided by a collective conversation in which participants share their experiences, views, and perceptions on a specific topic. For their application, 100% of teacher's visual arts, teachers who had the role of methodological course director were summoned

   It was held in two sessions in order to inquire about materials and supplies, as well as perceptions and expectations in the design of courses, taking into account the activities of the course and the actions of the program to facilitate the realization of such activities. The target for each of their group sessions, with the participation of 5 teachers, concentrated developing the investigation of the following analytical categories: a. Course design: techno-pedagogy and discipline; b. Didactic and c. Teaching accompaniment. (See Table 4).

It is necessary to highlight that the two data collection techniques mentioned above have a central reference that, in the qualitative research, comes from the subjective interpretation proposed by Max Weber (Castillo-Guzmán, 2003), which does not prevent the objectivity of its results in terms of the validity of the significance, i.e. the ability to verify data in virtue of what are really results of a person's understanding, placing interpretations in the context of the "reality lived and the perspective of a more valid understanding of the social world"(Poutois & Desnet, 1992, p.68, quoted by Castillo-Guzmán, 2003).

Table 4
Instruments and scope.

Instrument Type	Scope
Question guide for the focal group	Approaching the experience of the student of arts in the virtual modality, allowed researchers to know firsthand the experience of an artist in training in the distance mode.
Online survey	Identification of the learning scope of methodological courses of visual arts in virtual methodology:: 1. Expectations regarding the program and methodology 2. Teaching materials 3. Teacher accompaniment 4. New resources: Communication strategy

Type and design of study

The research was developed from a qualitative methodological design, type case study, which, according to Hernandez, Fernandez & Baptista (2014) is characterized by:

1. Performed in natural areas of the participants or units of analysis.
2. The variables are not controlled or manipulated.
3. The meanings are taken from the participants themselves.
4. Data is not reduced to solely numeric values.

The procedure for the methodological development of the study allows the following structure phases indicated in Figure 2.

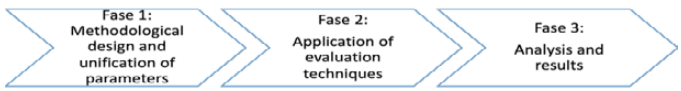

Figure 2. Phases of the study.

Through systematic development of each of the phases, three unified categories were developed. Their descriptor and code (Table 5) are established for the analysis of the consolidated results, which allowed the construction of the tools to evaluate methodological courses of the program.

Table 5
Categories, descriptor and code.

Category	Description	Code
Expectations regarding the program and methodology	t expresses the fulfillment or lack thereof of the expectations of the student about the methodological courses.	EFP
Teacher accompaniment	The favorability or not of the quality of the accompaniment made by the teachers of the methodological courses is expressed.	AD
New resources: Communication strategy	Participation or lack thereof of students is expressed in the communication strategy of the visual arts program - UNAD.	EC

Later, the qualitative analysis of the data from the coding is performed and categorized, which allows the establishment of recurrences and omissions and generates knowledge of the perceptions, expectations, and needs of students and teachers facing the teaching-learning process of the visual arts in an online and distance learning mode.

Results

The findings found in this research are focused on:

Expectations about the program and methodology

87% of new students consider that the methodology is adequate for learning in methodological courses of visual arts.

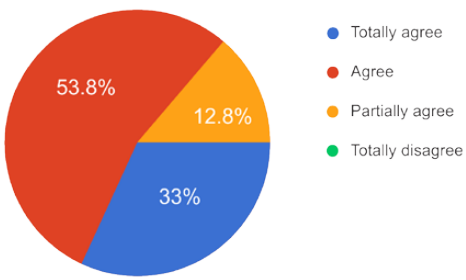

Figure 3. Expectations about the methodology of the courses.

The same way, expectations have been met at the time of enrollment into the program. Within this, category students state that one of the factors that most influences success in the courses is the response and appropriate accompaniment by the teacher. Another category is of didactic material, which seeks to support a better understanding of developing products for methodological courses. Taking into account the expectations within the first category, we find in the second category about teaching materials that students show that although the visual product is relevant, the quality of the audio does not enhance each learning resources for the course.

Accompanying teacher

41% of the students consider teachers generate an appropriate accompaniment for the development of methodological courses and that the course is addressed properly, allowing advancement in the development of visual arts skills. Likewise, they considered that the teaching materials and the development of courses has promoted significant learning in methodological courses of visual arts, where, through step-by-step explanation, the video allows the application of concepts which seek to reach the process of higher education.

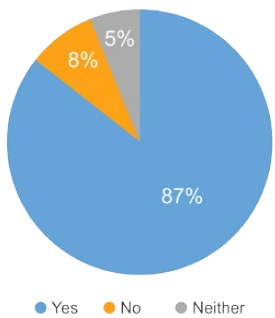

Figure 4. Comprehension of course content

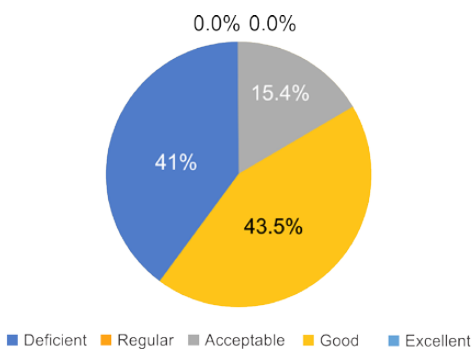

Figure 5. Quality of teacher accompaniment.

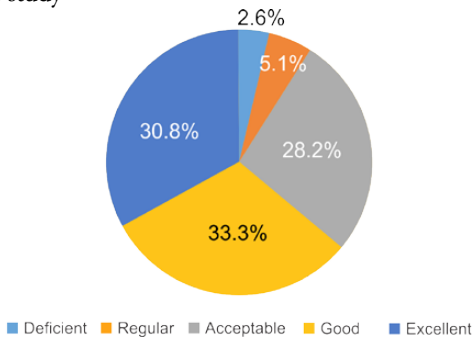

Figure 6. Comprehension of activities and content.

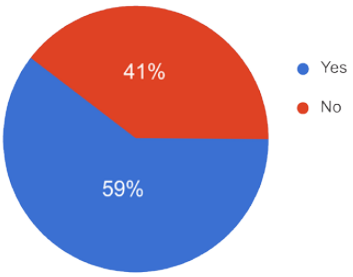

Figure 7. Participation in "Arts in Context"

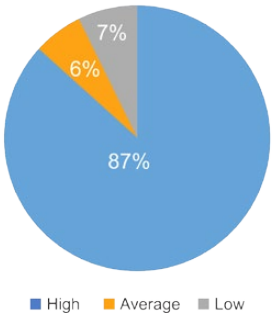

Figure 8. Relevance of the themes of Arts in Context

Figures 5 and 6 represent that 87% considered that the course contents of the methodological courses of visual arts are understandable and 30.8% considered the activities understandable. However, 28% of participating students expressed an acceptable understanding of activities in conjunction with 15.4% who indicate an acceptable quality of teaching accompaniment. The above reflects the need for rethinking structural aspects in the context of the design of courses and digital educational resources that facilitate clarity and innovation of contents of theoretical-methodological courses and teaching accompaniment, from its propitious spaces and mediations that allow the realization of said process.

New resources

Communication strategy: Figures 7 and 8 show that 87% of students perceived high thematic relevance in the space of academic life called "Arts in Context" in contrast with the 41% who reported no participation in the space. The program of Visual Arts from the mode should promote and raise awareness and understand the importance of these complementary resources for updating and academic university life that is not always on-site, but are developed through transmissions from web-conference rooms, since the virtual "Arts in Context" radio program production and open new spaces of circulation and dissemination of products derived from the theoretical-methodological courses such as journals of formative investigation, national academic character event, academic networks, research groups, and research hubs. In addition, to articulate from the curricular of the University Museum of digital arts—MUNAD—as a fundamental pillar for the entire process of dissemination of work.

As a result of the analysis, the team of teachers of the academic program designed the following tool to collect and identify of aspects to improve the design of the Visual Arts courses and educational resources in the virtual learning environment (Annex 1). Within this recollection form, a new category was included, which was based on the analysis of results that are available for general improvement of aspects of the program from their curricular design.

Consequently, from the academic program of the National Coordination have provided the updated space of academic life "Arts in context" as a communication strategy for science, technology, and innovation—CteI (annex 2). As well as the design and implementation of formative research magazine Back Projection and the national academic event MEDIÁTICA (Anexo 2) as a first meeting of digital arts in Colombia allowing the combination of joint efforts between 3 Columbian universities for the creation of the academic network AVI—art, virtuality, and research. These actions have allowed the results obtained from the research process for the evaluation of the program to result in strategic decisions for continuous improvement of the approach to high-quality standards, as well as the best digital educational resources considering their relevance and innovation.

Discussion and Conclusions

The teaching of the arts in virtual mode involves the development and implementation of a culture of evaluation and continuous improvement of pedagogical and didactic resources used by the students to develop different academic activities in the courses. The research allowed the formulation of evaluative parameters through the instruments applied to teachers and students of the visual arts program. It also allowed the consideration of the visual arts program in virtual mode to be an object of research, involving effectiveness and academic possibilities of the modality, which are reviewed in the light of the evidence of the instruments, results and analysis.

In this order of ideas, research constitutes an input for subsequent exercises of high quality and accreditation registered quality for the status of research and curriculum improvement.

Consistent with the above, the instruments and strategy that were formulated in this research have enabled the curriculum committee of the program to make strategic decisions of didactic, pedagogical or communicative order based on the information of the results and observations.

The impact of the interpretation of the results promotes micro-curriculum order (academic) actions that result in permanent adjustments for the continuous improvement of the program, allowing appropriation of methodologies, in particular, of courses like photography and drawing. Every time, the quality of teaching materials and teaching accompaniment is an essential criterion for compliance with the learning objectives of the courses in function.

Following the order of the above, authors such as Avila & Bosco, 2001; Belloch, 2002; Mendoza, 1999, conclude that the processes of teaching learning mediated, by the use of ICT simultaneously, provide access to educational content and teacher accompaniment, making the experience, perception and learning processes of the visual arts student become a fundamental axis for the formulation of research and improvement in curriculum design. It is then as posing constant exercises of inquiry about the needs and requirements of student within the virtual modality, and the development of the strategic actions of improvement cannot be delayed. The student experience is crucial for the design of future course content; the permanent review of the content and strategies ensures that the effectiveness of the actions on the course can be measured between periods.

As designated by UNESCO (2004; 2016) the relevance of the pedagogical, didactical, methodological and evaluative dimensions, within a transformative educational model lie in the understanding by fine-tuning the learning processes starting from the characteristics, needs and changes in the social, political and productive environment that permeates the participants. Also working on the strengthening of an educational culture that ensures the rights and fundamental duties from formation for the expertise to be, expertise, expertise to learn, and expertise to coexistence.

In parallel, research in collaboration allows the combination of efforts to develop high-impact educational, social, and academic research projects. As well as other scenarios that allow the development of strategies for the social appropriation of knowledge, academic and research networks, national and international co-authorship, and scientific events spaces conducive to the collaborative work. Likewise, research allows the identification of objects of study related to the academic program in itself, converting them to objects of study oriented to academic courses, pedagogical and didactic strategies and instruments to the significant contribution of contributions that allow a real pedagogical transformation and that will have an impact on the educational paradigms of virtual education. As Salinas (2012) says, the research agenda aims to achieve real impact in educational and institutional policies, knowledge of how learning occurs in these scenarios, and how that change occurs in educational practices.

To future investigators interested in this thematic line, approaching the teaching of the methodological theoretical-practical courses from the virtual modality, the establishment of methodologies that decant continuous improvement models applied

in other virtual and distance modality programs.

As recommendations for the future, it could influence that the challenges and bets of the academic and investigative scenarios will be: 1. academic life as a scenario in situ of the recognition and appropriation of the sense of institutional belonging and relevance in the academic program that develops. 2. Increase the production of digital educational resources through conferences, strategic B-learning face-to-face meetings strategie and virtual learning objects in order to facilitate spaces for the strengthening of the autonomy in the process of learning in virtual environments. 3. Establish educational strategies that promote the teacher-student interaction from the constant use of audiovisual educational resources. 4. Strengthening of the scenarios of academic and university life that the program has, specifically in actions for dissemination among the student community.

Every time, these scenarios provide the possibility of supplementing the knowledge provided from the methodological courses of the visual arts program and show, how to design methodological tools that enable the assessment of the appropriation of ICT as a mediator in processes of vocational training; promote the creation and consolidation of academic networks and research for collaborative work between institutions that deal with artistic practices with emphasis on the production, circulation and exhibition of digital arts in Colombia and Latin America.

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