



Online education: educational innovation the Integrative Project Educational Experience during the COVID-19 pandemic using the Eminus and Zoom platforms (Universidad Veracruzana)

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Resumen – Se presenta la innovación educativa y los resultados de un nuevo ejercicio en la práctica docente de la Experiencia Educativa (EE) Proyecto Integrador, del Programa Educativo de Tecnologías Computacionales (Facultad de Estadística e Informática), aplicado en el periodo escolar febrero-julio 2020. La finalidad de esta innovación educativa es lograr el aprendizaje significativo de los estudiantes, a través de un entorno de educación en línea. Se resaltan y describen las estrategias innovadoras y actividades planeadas y organizadas, las habilidades y acciones que se implementaron para el cambio en la práctica de la función docente y del estudiante, que paso de ser presencial a un ambiente educativo en línea, integrando las plataformas Eminus y Zoom, para enfrentar la nueva realidad ocasionada por la pandemia del COVID-19. Los resultados fueron significativos; el 80% logró las competencias planeadas necesarias para acreditar la EE y reconociendo la trascendencia de la ética, tanto en su desempeño académico, como en el profesional.

Palabras clave – Innovación educativa, Enfoque por competencias, Aprendizaje basado en problemas, Aprendizaje en línea a través de Zoom, Aprendizaje en línea a través de Eminus.

Abstract – We present the educational innovation and the results of a new exercise in the teaching practice of the Educational Experience (EE) of the Integrative Project, which belongs to the Educational Program of Computer Technologies (Faculty of Statistics and Informatics, University of Veracruz), in the school period February-July 2020. The purpose of this educational innovation is to achieve significant learning of students through an online education environment. We describe the strategies, the planned and organized activities, and the implemented skills and actions to change the teaching practice and student function during the new reality caused by the COVID-19 pandemic. We integrated the Eminus and Zoom to change from face-to-face to an online education environment. The results were significant; eighty percent of the students achieved the planned competencies necessary to accredit the EE and recognized the importance of ethics in their academic and professional performances.

Keywords – Educational innovation, Competency approach, Problem-based learning, online learning environment, Zoom virtual learning, Eminus online learning.

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INTRODUCCIÓN

The United Nations Educational, Scientific and Cultural Organization (UNESCO) states that “Education is one of the fundamental rights of human beings, learning being one of the fundamental dimensions of its full exercise” (2016, p. 3). Following the purposes of education stipulated in Article 3 of the Constitution, the Ministry of Public Education (*Secretaría de Educación Pública, SEP*) stipulates that “It is fundamental for education to train students in the conviction and skills necessary to contribute to the construction of a more just and inclusive society, respectful of diversity, caring and responsible towards the general interest” (SEP, 2016, p.14).

The University of Veracruz (*Universidad Veracruzana, UV*) has always been committed to quality education and academic and administrative innovation. Teachers and facilitators seek students’ participatory and active learning in the academy, considering their previous knowledge and experiences from the discipline they are studying, other educational experiences (EEs), and everyday life. In this way, students may research, read, write, plan, and regulate their own learning. The challenge of doing something new, creative, and fun to achieve the planned educational competencies, i.e., to reach purposeful learning, allows students to integrate into the working world.

Within this framework and given the Covid-19 pandemic situation that forced the closure of the UV educational entities, all activities were almost immediately readjusted. The situation forced us to re-evaluate our proposals to ensure that the school term could end as planned and in harmony. This opportunity allowed us to consider new ways of teaching and

promote comprehensive reforms (harmonizing face-to-face and online education, among others).

The pandemic demanded a change of direction on teachers, who moved from face-to-face to online education teaching and learning in limited time. Immediate actions were implemented to solve this problem and finish the academic work in the best possible way. In response, we developed an innovative educational proposal characterized by emphasizing student-centered learning from an online perspective. To generate the proposal, we had to consider how to develop a series of skills and competencies in the technological environment that would strengthen students’ meaningful learning (UV, 2020), as well as the problems that could arise when moving from face-to-face activities to online activities, as proposed by Elacqua and Schady:

... given the rush (and thus lack of preparation) whereby these measures had to be implemented, there is no doubt that they imply less learning for the average student. ...In addition, distance education will increase inequality in learning because households of higher socioeconomic status are more likely to have access to quality internet and other inputs necessary for distance education to function properly (2020, p. s/n).

We are aware that a situation such as the one generated by the covid-19 pandemic took the university education system by surprise. This situation highlighted the need for contingency plans and new innovative strategies for the educational process despite suboptimal conditions. Teaching continued in parallel to the “healthy distance” and “stay at home” recommendations, showing that technology is an

excellent ally of both professors and students because it destroys the physical limits of classrooms and educational entities.

FOUNDATION OF THE PROPOSAL

We recognized the need to change the traditional face-to-face teaching practice for the exclusive use of technological platforms and tools to continue with the Educational Experience (EE) process. For this, we used the technology called Flexible Learning Environments Management System or Distributed Education System (Eminus) and the Zoom videoconferencing service to interact with students (videos and audio). It should be highlighted that although Eminus had been used in different UV entities, it had not been used in this specific EE. However, the UV promoted the use of the Zoom platform to finish the semester virtually.

The innovation that we designed and implemented in the online education project of the EE is sustained by the Axis II: Visibility and social impact of the Strategic Work Program 2017-2021 and the University Social Responsibility and social impact -RSU- (UV, 2017), since the contents and activities were oriented according to the online modality. In addition, we incorporated a Code of Ethics to promote awareness and responsibility among students, thereby strengthening the development of the Unit of Competence of the EE itself. The innovation intended for students to apply disciplinary knowledge, skills, and attitudes to make appropriate decisions that positively impact reality.

This institutional practice was developed by academics from the Faculty of Statistics and Informatics (*Facultad de Estadística e Informática, FEI*) and the Institute of Research and Higher Economic and Social Studies (*Instituto de Investigaciones y Estudios Superiores Económicos y Sociales, IIESES*). It summarizes the changes and results made to transform the teaching-learning process of the EE. The EE's philosophy and criteria aim to enhance students' skills as protagonists of their own learning and responsible for it. Students should be capable of critical, creative, and proactive analysis; be able to develop and conceive ideas that explain and transform reality from a complex perspective; not remain as passive spectators, but think, act, and respond in a relevant and ethical way to the needs of the users who require their services; and be able to adapt to the staggering changes that the pandemic has caused in all contexts, both academic and professional.

As an institutional-academic effort and based on the problems presented, we resorted to institutional information to face this challenge. We readjusted the contents, strategies, and activities according to the technological tools used for the first time. This readjustment posed a challenge because we had to stop face-to-face activities, which we were already familiar with, and quickly adapt to online activities. We appealed to interdisciplinary thinking to find the intersection between disciplines and thoughts, and we organized ideas quickly to link them to the practice of online education. Barriers were broken down, and we found the richness of the transversality of technology.

To design the innovative strategies and resources to be implemented, we encountered two main issues. First, although the students have taken research methodology courses since high school, they have not yet acquired the ability to fully develop all the research steps, which involve selecting an object of study, generating research questions, defining research objectives, justifying research, generating hypothesis and a theoretical framework, and obtaining results. Likewise, despite taking writing courses, they have difficulties writing in a clear, concise, simple, and congruent manner. Second, because the EE was originally designed as a face-to-face model, it had to be restructured to an online education model through the Eminus and Zoom platforms. This transition created new didactic planning and virtual teaching-learning environments, which demanded defining when, how, and where the educational process would be implemented to ensure that students achieved the theoretical, heuristic, and axiological competencies established in the curriculum.

ANALYSIS OF THE CONTEXT OF THE EE

The EE of the Integrative Project is part of the terminal area of the standard curriculum trajectory of the bachelor's degree in Computer Technologies¹, offered by the Faculty of Statistics and Informatics of the UV of the Xalapa region. This educational innovation is based on applied work carried out in the February-July 2020 academic period, key NRC 85292, period 202051, EXRE Code 3800, with the pertinent academic readjustments.

¹ As the philosophy of Deleuze & Guattari (2000) mentions, this curriculum is a rhizome, to the extent that the organization of the elements does not follow lines of hierarchical subordination. This is shown in the curricular map of Computational Technologies, constituted by diverse EEs

The group consisted of five students (40% women and 60% men) throughout the semester. All of them presented their final products according to the Unit of Competence, the objective of the EE, and theoretical, heuristic, and axiological knowledge. The flexibility of this EE's planning has as its theoretical basis on the Unit of Competence proposed in the Study Program; the Institutional Educational Model (MEI) philosophy and the competency-based approach; complexity thinking; the use of Information and Communication Technologies (ICT); the Problem-Based Learning (PBL) technique; Cooperative Learning; UV's Teacher's Guide; and Ethics applied as a transversal axis (UV, 2020).

The EE of the Integrative Project has a transversal nature. Although it is located within the Disciplinary Training Area, its competencies are closely related to other EE competencies, such as Reading and Writing through the Analysis of the Contemporary World, Critical and Creative Thinking Skills, Research Methodology, Final Degree Project (from the Terminal Training Area), and the selection of the Free Choice Training Area.

The EE has been assigned seven credits and is integrated by four knowledges: 1. *Definition of the line of research* related to Computational Technologies, with the corresponding registration of the research topic format in the Academy of Final Degree Experience (three activities, equivalent to 10% of the final grade); 2. *Preparation of the research problem*, consisting of 20% and 40% of advances, with the director's signature in the

that start from a base or root. Its structure is integrated in diverse areas, and it allows to observe that the EE has horizontal and vertical incidences to achieve the students' meaningful learning.

Final Degree Project protocol (six activities, equivalent to 30% and 30% respectively of the final grade); 3. *Structure of the integrative project* (one activity, equivalent to 10% of the final grade); 4. *Presentation of the paper* for its final assessment, with presentation slides² (one activity, equivalent to 20% of the final grade).

These knowledges and activities culminate with the delivery of the final products —evidence of the competencies development— in any software on the day of the ordinary exam³. These products are the Final Degree Project protocol and the corresponding presentation slide, and they constitute the requirements to accredit Integrative Project and subsequently start the Final Degree Experience course.

Therefore, by developing the EE (through Eminus and Zoom) to prepare the Final Degree Project research protocols, students proved their abilities to apply their disciplinary knowledge and complex thinking, choose a real problem of their surroundings and propose solutions. The EE allowed students to become aware of the sense and practical use of the degree they are pursuing.

DIDACTIC SEQUENCE

To implement the innovation, we registered the EE in Eminus and Zoom; we created modules that had equivalent characteristics to the theoretical knowledges of the Integrative Project. Likewise, we uploaded the activities and events to be developed according to the contents, along with the corresponding assessment. Using this system, we used a series of methodological

strategies (adjusted to the online education modality)⁴ for learning through the definition of topics, case studies, and current and real problems. This strategy would allow students to recognize, analyze, and expose their own ideas about the topics, providing new conceptions and thoughts about the context surrounding them from an ethical point of view. At the same time, it would allow them to structure their ideas regarding ethical research and use the knowledge learned in their discipline with respect, responsibility, and creativity. Finally, it would allow them to train and develop theoretical, heuristic, and axiological knowledges through different digital resources.

To ensure continuity between pre- and post-pandemic educational methodological strategies, we considered that using technology to promote new ways of learning was a pedagogical challenge. Much like Ferreiro (2016), we recognized that innovative strategies go beyond transferring a face-to-face scenario to an online or virtual one or adapting the contents and activities to the available platform. Innovative strategies require planning and designing learning environments— not arbitrarily— that emphasize meaningful training of the students through technological resources aligned to the unit of competence, the teaching-learning activities, and the assessment outlined in the EE program.

The methodological interventions were as follows: research, case studies, reading, scientific writing, paraphrasing, typographical cues, discursive cues, hypotheses, research questions, presentations with technological support, presentation software and

² Within this knowledge, students were originally expected to develop a poster for presentation at a FEI forum; this was canceled due to the changes caused by the pandemic.

³ The date of the ordinary exam was July 14, 2020. The date of the ordinary exam was July 14, 2020.

⁴ These included procedures and/or resources that promote the actions and activities planned in the EE program, aimed at ensuring that teaching-learning achieves the best results in the unit of competence and that significant learning is generated.

technological educational platforms and evaluation. For this, the compilation of strategies by Acosta et. al, 2020 was referred.

Another aspect considered was the skills required for the student to develop meaningful learning, which consists of manifesting manual and mental dexterity to perform a task or activity in the research process. Meaningful learning is an individual property and can only be demonstrated by performance (Portillo-Torres, 2017); in this case, it refers to the final products needed to accredit the EE. The skills proposed, closely related to the heuristic and axiological axis of the EE program, were creativity, innovation, critical thinking, problem-solving, personal and social responsibility, appropriation and practice of digital technologies, ethical management of information, communication, and collaboration., The students carried out ten activities to evaluate these aspects.

In conformity with the strategies, activities, and competencies to be developed during the school period, the specific innovation actions carried out by the facilitator, the student, and director of the research work were the following:

- Communication was achieved through the Eminus platform and by email. The files to be consulted for the Final Degree Project protocol were uploaded into the repository. The presentation and explanation of the activities were advanced 20% or 40%, and presentation slides of the Final Degree Project protocol. Communication was permanent (emails and Eminus messages) to remind students to read the information selected for their work and consult the citation guide of sources and references of the American

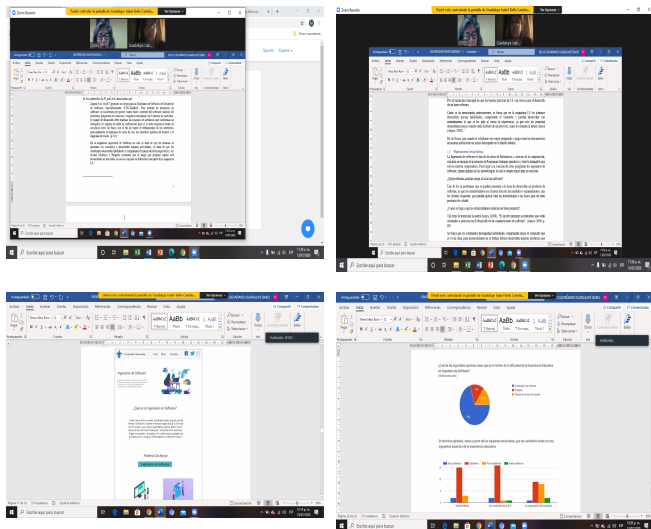
Psychological Association (APA) Sixth edition, to write textual and paraphrased quotations and sources of information and give the corresponding authorship to the papers consulted.

- Students were informed about the balance of activities and products delivered. They received four balance sheets, which concentrated the progress and partial products of each student. The facilitator detected writing and authorship issues; hence, a Code of Ethics was prepared and sent to the students for detailed examination. Then the facilitator formulated a 6-question Google Form questionnaire to be answered by the students after reflecting on the code. Its purpose was to ensure the students' understanding of the document and to evaluate that they understood the emphasis and importance of academic honesty and ethics. The student's job was to write and correct the paper in coordination with his/her work director, who provided feedback regarding the discipline, designed instruments, and presented conclusions and recommendations. This procedure guaranteed that students identified their mistakes and corrected them timely, ensuring significant progress in developing the educational experience and strengthening theoretical, heuristic, and axiological knowledge.
- Meetings were carried out online in Zoom (Figure 1). Documents were shared, and the last changes were made in the final paper. Unfortunately, the last review could not be carried out in all cases due to issues with time

and connectivity, both of the facilitator⁵ and the students.

Figure 1

Example of Zoom Meeting



- The delivery and final assessment of the Final Degree Project protocol and presentation slides were performed on the day of the exam, July 14, 2020. The students' interventions allowed them to argue their work and offer elements and advances to solve the problem under investigation. All students delivered their products, and the facilitator assessed them with the criteria and strategies specified in the EE program to achieve the performance and, therefore, the Unit of Competency.

All student performance indicators were recorded in a spreadsheet and processed according to the evaluation criteria by the facilitator, who performed the corresponding weighting. This procedure was discussed with the students at the moment of the program delivery in the beginning of the course. Thus,

students knew the assessment strategies for their performance that translated into a final grade. Credits were assigned as follows: registration form with the director's signature =10%; 20% progress of the Final Degree Project protocol with the director's signature =30%; 40% progress of the Final Degree Project protocol with the director's signature =40%; presentation slides (20% and 40%) =20%.

This weighting method has the advantage of being impartial and transparent; each student has the possibility of clearly assessing their limitations, achievements, and performance in each of the points to be credited. We believe that this innovative strategy motivates students and encourages them to continue their efforts. Students also become aware that accrediting the EE is not a complicated task if they comply and take responsibility for their learning.

Through this EE, students also learn the importance of learning and implementing their knowledge in any academic or work-related job with quality and efficiency, which will facilitate their future professional practice. Moreover, this practice emphasized the importance of respecting copyrights as part of ethical behavior. The importance of solving problems specific to their discipline was also stressed while motivating students to develop their research for the Final Degree Project. For this, the facilitator guided the learning in terms of author citations, information sources, structure, writing, and consistency, while the director of the Final Degree Project guided the learning in terms of disciplinary content.

⁵ The Facilitator had connectivity problems (intermittent connection), so he borrowed internet from a

neighbor and changed companies due to the bad internet service.

Both the facilitator and the director of the Final Degree Project stimulated reasoning processes, favoring “the development of heuristics, as techniques of inquiry and discovery necessary for problem-solving” (UV, 2020, p. s/n). In this way, we present the following working definitions:

- Heuristic principles: suggestions for finding the ideal solution to the research problem selected by the students. Along with their project director, students propose several ideas to solve the research problem, in this case, related to the topic of computational technologies. For example, if the student wants to develop an application, he/she elaborates the modeling that corresponds to the chosen development methodology.
- Heuristic rules: the means to solve the problem that contribute to correct decision-making. These rules must be based on methodologies that allow investigating the theoretical part and the applications to be developed.
- Heuristic strategies: those that allow the organization of the compiled materials or resources (portfolio of articles and documents) and contribute to the search for the problem’s solution.

A. Learning support materials:

To support the teaching-learning process, the facilitator developed the following support materials:

- a) Registration form. The format includes general data of the chosen topic for the Final Degree

Project protocol and serves for the registration in the Final Degree Project ⁶.

- b) Final Degree Project protocol. It contains the structure that the student must observe in the final delivery⁷.
- c) Examples of infinitive verbs. This material was created because we detected that most students lack practice using verbs, which is important for their performance. It helps students use verbs correctly and define the objectives for their Final Degree Project protocol.
- d) APA Standards, sixth edition. This guide instructs students on how to cite, which will be convenient when they write their protocol. It gives citation examples that tend to facilitate learning.
- e) Integral Project Code of Ethics. This code was included because, throughout the semester, we observed that students copied and pasted what was said by other authors without acknowledging them. This issue occurred even though the students took the Research Methodology EE, where they were instructed to quote correctly. The code emphasized the importance of two aspects: knowing how to cite in official documents and honesty and ethics in the academical environment. To ensure full comprehension of the text, the students answered a questionnaire in Google Forms that covered the topics of this code.
- f) Chronogram. Students received a chronogram format, where they established the deadlines

⁶ Developed with the members of the Academy of Final Degree Experience.

⁷ Prepared jointly by the Academy coordinator and the teacher.

for each activity after consulting with the director of their Final Degree Project.

- g) General format of the protocol. It specifies the editorial standards for the Final Degree Project protocol, including details about the font, size, spacing, margins, and cover page.
- h) Methodological strategies. This document shows many strategies that students normally use for their schoolwork, so they become aware of all. It clearly presents the strategies used during the course.
- i) Activities to develop. All the activities related to the development of their work are presented in a precise manner.
- j) Skills. It aims to raise awareness of their own skills and the need to practice them constantly throughout their lives. All skills necessary for the optimal achievement of their work are presented.

B. Communication strategies

The facilitator's presence in the online environment is vital; it reassures the students that, although he/she is not there in person, he/she is available during class hours and supports them in their learning and development of competencies of the contents proposed in Eminus. The facilitator's companionship eases the student's mind during each activity. In this sense, the following actions were carried out to enable communication between the facilitator and the student:

- a) Students were encouraged to make the same effort as in face-to-face classes, given the importance of understanding "the implications of managing oneself in the virtual environment, knowing where to find and get what one needs, reading and writing messages, reading and

studying the learning material, performing activities and exercises, passing evaluation tests" (Borges, 2005, p. 3).

- b) Thirty-six messages were sent by both Eminus and email to communicate the instructions for each activity, describing them step by step and in chronological order, along with the delivery dates (in an effort to maintain flexibility, the dates were modified several times).
- c) The facilitator permanently provided feedback on the students' papers regarding grammatical wording, consistency, clarity, author citations, and bibliography. The facilitator did not intervene in the disciplinary content of the topic; instead, he/she suggested that such feedback should be consulted with their protocol director. The purpose of the feedback was to provide students with their accomplishments, weaknesses, and missing features to improve their performance in the following activities. We believe that the student who lacks clear, timely, and adequate indications and answers to their inquiries does not have sufficient guidance from the facilitator, creating uncertainty, apathy, and frustration.
- d) As mentioned above, as soon as students began Activity 3, the facilitator sent them the balance of activities to encourage them to achieve the accreditation of the EE, identify any problems and remind them that the only way to pass this EE is through the ordinary examination (the Student Statute states that there are no extraordinary exams for this EE) (UV, 2020).
- e) During each individual feedback session, the facilitator recognized and congratulated

students who fully complied with the guidelines. Those who almost complied were encouraged to improve, and those who obtained lower scores and were unable to achieve the expected performance received an individual message.

RESULTS

The academic work carried out in the present innovative educational project, not only focused on strategies involving the use of technology through Eminus and Zoom, Power Point presentations and emails, but also implied an additional effort for the facilitator and the students. According to Borges (2005, p. 3), “the lack of knowledge, strategies, and skills regarding online learning and communication is one of the most important obstacles for online training.”

For the facilitator, it was essential to rethink strategies, materials, and resources different from those used in face-to-face mode. The facilitator was required to define new forms of communication and motivation (in and out of class hours), feedback mechanisms, and permanent distance follow-up to guarantee the achievement of the students’ competencies. Other significant factors for facilitators included the timely, persistent, and permanent follow-up with students through email and Eminus messaging, as well as interacting through Zoom and flexibility of the evidence delivery schedule where difficulties were detected.

For the students, it also meant new ways of being, doing, and coexisting in order to attend to the orientations, read and understand the instructions, follow them, and have the discipline to timely comply with all the activities and evidence of performance (requested products) indicated in the online EE

program. At the same time, they were required to attend to other teachers’ requests during the school period.

Other support systems were also required for this quality innovation in the teaching-learning process and, specifically, for supporting the development of student competencies under pandemic circumstances. Real-time technical support was required from those who administered the Eminus technological platform. Facilitators and students needed and the search for connectivity options in the personal spaces (homes).

We are aware that one of the most complex and challenging processes in a competency-based model is assessing student performance. This is because the learning evidence of competencies must reflect the fulfillment of the competency unit, the performance of the activities and skills in each content, and the attitudinal disposition to achieve the EE. In addition, the assessment must include the results of the follow-up of the competencies achievement reflected in the final product: the protocol of the Final Degree Project with 40% progress and signed by their protocol director, which will be useful when they continue to the Final Degree Experience course. For students, this is already a challenge in itself; it involves navigating through the research process and all the strategies for obtaining their degree. Taking this virtual EE was, if not a total novelty, a challenge of discipline and concentration for some students, who might also have a natural fear of using the unknown Eminus platform.

In the first communication, students were informed that the course would be developed virtually. They were asked if they had any previous experience in virtual platforms; of the total of the five students enrolled at the beginning, 100% stated that they had

experience in virtuality, but it was the first time taking an EE in Eminus.

Since May 2020, all students constantly participated in the Eminus platform and Zoom; some also communicated personally through email. All students showed responsible behavior, and, after reading the Code of Ethics, they were careful of the quotes and information sources in their paper, acknowledging authorship properly. We interpret this behavior as respectful of the stipulated guidelines.

The five students were promoted. Four of them fulfilled the evaluation criteria of sufficiency, pertinence, and consistency; one had weaknesses in the three criteria but was still promoted with a 60% grade. This outcome undoubtedly reflects that the applied methodology yielded promising results (80%).

In addition, although one student could perfectly work at his own pace, other students had some inconveniences. Two students reported problems with the internet connection (either intermittent or absent); another had economic issues: due to the reduction of his father's salary, he had to work to contribute to the household economy, which affected his time management; another student reported other issues (not specified) that impeded the timely delivery of the work, although he said that he was going to do everything possible to finish. Therefore, we had to be flexible in the EE development so students could finish the semester. The facilitator also faced connectivity and computer faults, whereby he had to acquire new equipment and change the Internet service company.

The final products presented were closely related to their discipline, with application in other disciplines and supporting their own faculty. The titles of

the papers were as follows: Continuity in groupware systems (Thesis); Design of educational material to support the learning process of the educational experience in Software Engineering (Practical-Educational); Software tool for speech-to-speech recognition, as a strategy to improve the pronunciation of basic vocabulary of the English language (Thesis); Development of a Web System for the support of the coordination of the Final Degree Project experience (Practical-Technical); Artificial Intelligence as support for young people with depression (Thesis).

Based on the material provided and prepared for this EE, we stress that students showed their reading and comprehension skills in their papers. They correctly elaborated citations for the bibliography or sources of information (80%). For us, the facilitators, it is encouraging to see that students respond to this approach; their work reflects ethical conduct that permeates into their academic, personal, and professional lives.

Regarding the Google Forms questionnaire, in which the students were asked their opinion about the importance of ethics in their research work, some answers stand out:

- With honest behavior while executing the work, we generate trust
- Respect the rights of the author and the laws
- Knowing that ethics and morals allow us to advance correctly both in school and professional life, which help us to have a healthy and peaceful environment
- Designing my research using the Code of Ethics guarantees that my work was carried out

responsibly and that my results are reliable without any manipulation

- Doing my research work in compliance with the Code of Ethics allows my faculty to receive an honorable quality work that can be used both theoretically and practically
- Improving my ethical approach makes me understand the importance of previous work on which I build my own and thus give the corresponding credit and respect to those who were and worked before me, and so on...

In addition, it is pertinent to highlight the new role assumed by the students in the face of the challenge produced by the rapid change from face-to-face to online education. Students demonstrated to be capable of autonomous learning, able to manage their own time, and prepared to develop the theoretical, heuristic, and axiological competencies and knowledge successfully, especially because they faced their initial training in this course with a different strategy.

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