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Artículos científicos

Valoración de la herramienta Google Drive durante el trabajo colaborativo universitario

Assessment of the Google Drive tool during university collaborative work

*Avaliação da ferramenta Google Drive durante o trabalho colaborativo da
universidade*

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Resumen

El objetivo de esta investigación, cuyo enfoque fue descriptivo y transversal, se enfocó en conocer la opinión de estudiantes universitarios sobre su experiencia al utilizar Google Drive para trabajar de manera colaborativa. El tema abordado con dicha estrategia colaborativa fue la elaboración del planteamiento del problema de una investigación, apartado constituido por la contextualización del tema, su justificación y las preguntas y objetivos de investigación. Los participantes fueron alumnos inscritos en las asignaturas Metodología y Práctica de la Investigación de la licenciatura en Negocios Internacionales (LINI) y Metodología de la Investigación de la carrera de Médico Cirujano Partero (MCP) del ciclo escolar 19-B (antes de la pandemia covid-19) en el Centro Universitario del Sur (CUSur). Los resultados demuestran que Google Drive resultó de gran ayuda para desarrollar cada una de las tareas indicadas. De hecho, los alumnos identificaron como atractivo su uso, pues al poder compartir y modificar documentos en la nube pudieron vencer las barreras de los horarios y de la presencia física.

Palabras clave: enseñanza-aprendizaje, herramientas digitales, trabajo colaborativo.

Abstract

Collaborative work is recognized as a teaching-learning strategy in which in a school environment it is identified by working in small or few teams with regard to the group in general. Among the main essential characteristics, it can be identified that each member must understand the objective clearly and efficiently through activities generated by a "community". In this study, the use of Google Drive will be shown, where students were able to build and edit Word documents from the place where they were without the requirement to be in the same room. With the objective of knowing the opinion about their experience when using Google Drive collaboratively, this descriptive-transectional research had a sample that was made up of 65 students from three groups of the "Research Methodology and Practice" course from the degree of International Business and "Research Methodology" course of the degree of Surgeon and Obstetrician of the University Center of the South of the University of Guadalajara. A digital questionnaire was applied during November and December of 2019, collecting the information to describe their appreciations and experiences. Taking as results that the majority of students (92%) consider that Google Drive collaborated to achieve the learning objective and 97% of students have been able to work

collaboratively using Google Drive. Among the main conclusions, it was noted that the free Google Drive offered advantages of synchronous collaboration among team members since communication among the majority of students improved during the assigned activities and became pragmatic for the fulfillment of school activities.

Keywords: teaching-learning, digital tools, collaborative work.

Resumo

O objetivo desta pesquisa, cuja abordagem foi descritiva e transversal, centrou-se em conhecer a opinião de estudantes universitários sobre a sua experiência ao utilizar o Google Drive para trabalhar de forma colaborativa. O tema abordado com esta estratégia colaborativa foi a elaboração de um enunciado do problema de pesquisa, uma seção composta pela contextualização do tema, sua justificativa e as questões e objetivos da pesquisa. Os participantes foram alunos matriculados nas disciplinas de Metodologia de Pesquisa e Prática do Curso de Negócios Internacionais (LINI) e Metodologia de Pesquisa do Cirurgião de Obstetrícia (MCP) da carreira do 19-B ano letivo (antes da pandemia de cobiça). -19) no Centro Universitario del Sur (CUSur). Os resultados mostram que o Google Drive foi de grande ajuda no desenvolvimento de cada uma das tarefas indicadas. De facto, os alunos identificaram a sua utilização como atractiva, uma vez que ao poder partilhar e modificar documentos na nuvem, conseguiram ultrapassar as barreiras dos horários e da presença física.

Palavras-chave: ensino-aprendizagem, ferramentas digitais, trabalho colaborativo.

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Introduction

Collaborative work is characterized by the fact that the products achieved are enriched by the contribution of all the members of a team, which in parallel contributes to strengthening the learning of each individual. Maldonado (2007) conceives it as follows:

Collaborative work, in an educational context, constitutes an interactive learning model that invites students to build together, which requires combining efforts, talents and competencies, through a series of transactions that allow them to achieve the goals established by consensus. More than a technique, collaborative work is considered a philosophy of interaction and a

personal way of working, which implies the management of aspects, such as respect for the individual contributions of group members. (p. 268).

In this didactic strategy, the accompaniment in the formation of the teams is a key task for the advisor or guide, since by interacting in the work sessions, the responsibilities of each team member can be promoted, which will promote values such as solidarity and cooperation, as well as critical thinking and respect for the opinions of others (Ríos, Chamba, Zumba and Pardo, 2019). In the words of Romero et al. (2019), “this model also induces students to be motivated by real-world situations, because very real environments can be developed, in such a way that people work that way” (p. 57). For Thomas (2014) it should be foreseen that the teams formed do not exceed 6 members so that they can interact properly and so that the groups do not become difficult to manage.

Tabla 1. Conceptualización de trabajo colaborativo

Autores	Conceptualizaciones
Guitert y Giménez (1997)	Proceso en el que cada individuo aprende más de lo que aprendería por sí solo, fruto de la interacción de los integrantes del equipo. El trabajo colaborativo se da cuando existe una reciprocidad entre un conjunto de individuos que saben diferenciar y contrastar sus puntos de vista de tal manera que llegan a generar un proceso de construcción de conocimiento.
Panitz y Panitz (1998)	Proceso de interacción cuya premisa básica es la construcción de consenso. Se comparte la autoridad y entre todos se acepta la responsabilidad de las acciones del grupo.
Gros (2000)	Proceso en el que las partes se comprometen a aprender algo. Lo que debe ser aprendido solo puede conseguirse si el trabajo del grupo es realizado en colaboración. Es el grupo el que decide cómo realizar la tarea, qué procedimientos adoptar, y cómo dividir el trabajo o tareas a realizar. La comunicación y la negociación son claves en este proceso.

Fuente: Revelo, Collazos y Jiménez (2017)

For the teaching-learning process, information and communication technologies have made possible a range of tools that allow collaborative work in person or remotely. For example, the use of chats (through WhatsApp, Facebook, etc.) facilitates decision-making

and permanent communication, fast, effective and in real time. Likewise, video call services allow the development of meetings between two or more interested parties and even the dissemination of documents and slides on the screen. In addition, blogs allow you to compare communications, progress, compilation of data or content on a certain topic.

In this context of multiple digital opportunities, Google is characterized by being a company specialized in electronic, computer and internet-linked products and services that facilitate the dissemination of information and communication. For Aruquipa, Chávez and Reyes (2016) “Google is a strategy that enriches and strengthens the learning process in students” (p. 26). Its main platforms are Chrome for desktop computers and laptops, and Android for mobile devices (cell phones and tablets). Among the various resources offered by this company, we can mention Google Drive, a service that was used in this study because it allows to store, share and edit documents in a group way. In this specific case, the participants were the students of the Research Methodology and Practice of the International Business degree (LINI) and the Research Methodology of the Midwifery Surgeon (MCP) from the Centro Universitario del Sur (CUSur).).

The CUSur is an institution of the Network of the University of Guadalajara (UdeG), and has a total of 8,623 students distributed in the 19 undergraduate programs and in the 9 postgraduate programs that are offered in said house of studies. This center is located in Ciudad Guzmán, municipal seat of Zapotlán El Grande, Jalisco (Mexico), a population that has 105,423 inhabitants (Institute of Statistical and Geographic Information of Jalisco [IIEG], 2019). It is considered the second city in the state due to its feasibility as a pole of industrial development. It is located 125 kilometers from Guadalajara (the second most important city in the country), 40 minutes from the City of Colima (capital of the state with the same name) and 90 minutes from Manzanillo (port of entry and exit of the markets of the basin from Pacific).

On the other hand, the purposes of the subjects taken by the students who participated in the present study are the following:

- Investigate and analyze the methodologies that have been predominantly applied in the generation and application of scientific knowledge in their professional field.
- Locate and analyze specialized literature around the proposed research area.
- Raise the problem of a professional area with the scientific background that supports it.

- Apply the most appropriate research method and design for the professional inquiry area.

To address the topics and subtopics, the instructional design has been developed as a teaching-learning strategy, following the ADDIE model (acronym for the terms analysis, design, development, implementation and evaluation), which is a theoretical scheme that serves to analyze and elaborate in detail each section of training activities or instructional design.

Figura 1. Trabajo colaborativo y uso de Google Drive



Fuente: Elaboración propia

The intention of the learning activities developed was for students to develop learning objects (LO), understood as “a digital entity that can be used, reused and referenced during technology-supported learning” (IEEE, 2011, mentioned in Rosetti, S., García, M. and Rojas, I., 2021, p. 4). In this regard, authors such as Longmire (2000) and Latorre (2008) mentioned in Callejas, Hernández and Pinzón (2011) propose that LOs must meet the following characteristics:

- Flexibility: The educational material can be used in multiple contexts due to its ease of updating, content management and search (the latter thanks to the use of metadata).
- Personalization: Possibility of changes in the sequences and other forms of contextualization of content, which allows a combination and recombination of OA tailored to the training needs of users.
- Modularity: Possibility of delivering them in modules, which enhances their distribution and recombination.
- Adaptability: They can adapt to different learning styles of students.

- Reuse: The object must have the capacity to be used in different educational contexts and purposes and adapt and can be combined within new training sequences.
- Durability: The objects must have a good validity of the information, without the need for new designs.

Now, the need to develop LOs through a face-to-face session complemented with online activities, offered the opportunity to work in collaborative environments with a constructivist approach (Reyero Sáez, 2019), which promoted cooperation among peers, self-learning and skills. communication skills. In this regard, Mora-Vicarioli and Hooper-Simpson (2016) recommend that in these cases tools such as the forum or group chat be used to promote negotiation between working groups.

Research objective

Collaborative work has found on the internet an ideal framework to facilitate its activities and the achievement of its purposes. In this regard, Esteve (cited by Barrios and Casadei, 2014) affirms that these tools help the development of skills and, above all, of attitudes based on a technological, critical, collaborative and creative literacy. For this reason, in this research, from the instructional design, the following is intended in a collaborative way:

- Find out what university students think about their experience using Google Drive to work collaboratively.

The topic addressed with this collaborative strategy was the elaboration of a research problem statement, a section consisting of the contextualization of the topic, its justification and the research questions and objectives. In this sense, the research question formulated was the following: does the use of Google Drive facilitate the creation and use of shared documents among university students in a collaborative work environment?

Participants

The sample consisted of 71 students enrolled in the subjects Research Methodology and Practice of the degree in International Business (LINI) and Research Methodology of the Career of Midwifery Surgeon (MCP) of the school year 19-B (before of the covid-19 pandemic) at the Centro Universitario del Sur (CUSur). These groups were taken for the convenience of the researcher, and 65 of the 71 questionnaires could be validated.

Methodology

The study had a descriptive and cross-sectional approach, its "procedure consists of locating in one or several variables a group of people or other living beings, objects, situations, contexts, phenomena, communities, etc., and providing their description" (Hernández , R., Fernández, C. and Baptista, P., 2014, p. 155). And in particular, teams of four or five members were formed, each of whom created a WhatsApp group, as well as a shared folder on Google Drive. Each member had administrator permissions to edit the documents to be worked on.

In order to know the opinion of the students about the activity carried out, a digital questionnaire was elaborated using the Google Forms tool, for which the investigations of Brescó and Verdú (2014) and Castellanos and Martínez (2013) were taken into account.). The final instrument was made up of 16 items written in a clear and simple way, and was answered anonymously and voluntarily.

Results

As mentioned, 65 of the questionnaires applied were valid. The main results are presented below. In general, it can be indicated that the participants were 51 women and 14 men (Figure 2).

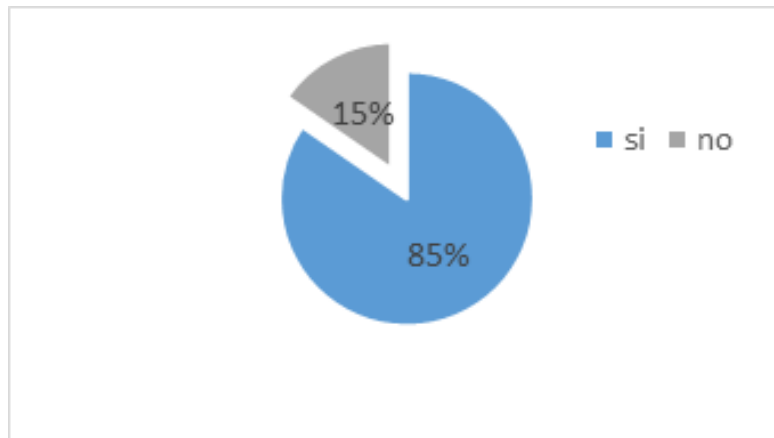
Figura 2. Género de los participantes



Fuente: Elaboración propia

Regarding the knowledge of Google Drive, only 10 participants indicated that they were unaware of the platform, while the rest had worked on it.

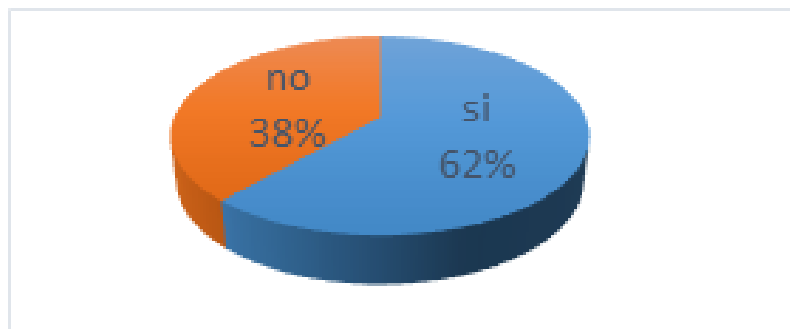
Figura 3. ¿Conocías Google Drive antes de cursar la materia (aunque no la usaras)?



Fuente: Elaboración propia

On the other hand, it was known that most of the students (40) had used the Google Drive tool in another subject.

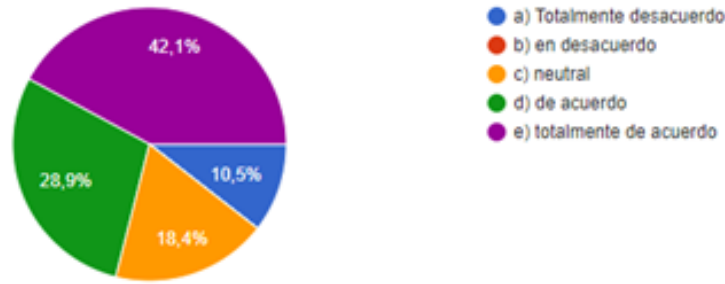
Figura 4. ¿Has utilizado Google Drive en otra materia?



Fuente: Elaboración propia

Likewise, it can be indicated that 71% of the participants found it easy to edit documents in Google Drive.

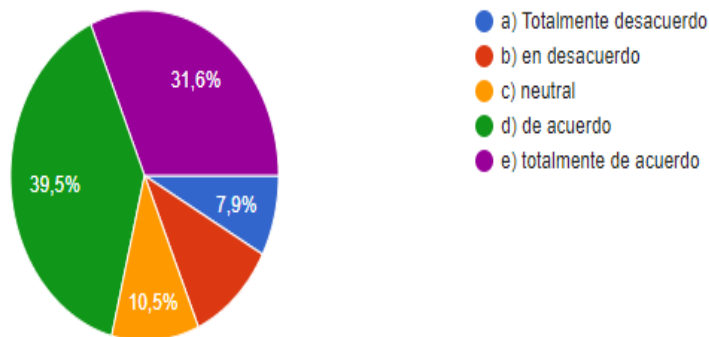
Figura 5. ¿Te resultó fácil aportar y modificar documentos de Google Drive?



Fuente: Elaboración propia

In addition, it can be indicated that 15.8% of the participants Google Drive did not make it easier for them to carry out the activities.

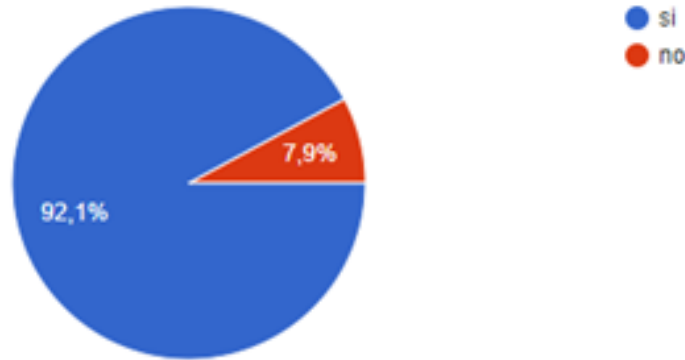
Figura 6. ¿Con Google Drive se te facilitó hacer las actividades indicadas?



Fuente: Elaboración propia

On the other hand, the majority of students (92.1%) consider that Google Drive contributed to the achievement of the learning objective.

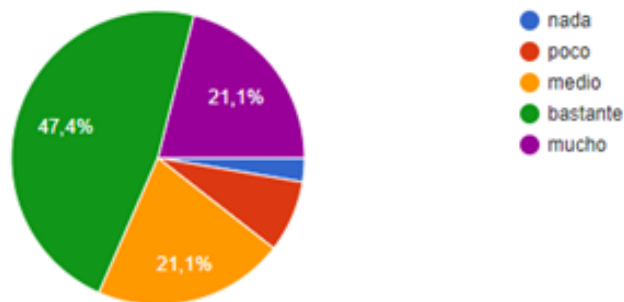
Figura 7. ¿Consideras que Google Drive colaboró para el logro del objetivo de aprendizaje?



Fuente: Elaboración propia

Likewise, almost 90% of the students considered that Google Drive helped to carry out the group work.

Figura 8. ¿Piensas que el uso de Google Drive te ayudó a realizar trabajos en grupo?



Fuente: Elaboración propia

It was also found that 63 students have been able to work collaboratively using Google Drive, while only two said otherwise.

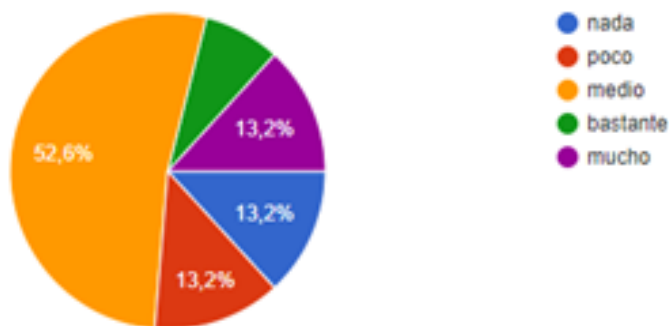
Figura 9. ¿Te ha resultado sencillo trabajar de manera colaborativa en Google Drive?



Fuente: Elaboración propia

In another vein, 21% of students consider that communication among their peers improved when using Google Drive, while 26.4% believe that little or nothing improved communication.

Figura 10. ¿Mejóro la comunicación con tus compañeros al usar Google Drive?



Fuente: Elaboración propia

Finally, 71% of the participants expressed that the main advantage of Google Drive is working with other people even if they are not meeting in person.

Figura 11. ¿Cuál de las siguientes ventajas de Google Drive señalarías como más importante?



Fuente: Elaboración propia

Discussion

Collaborative work has found in Google Drive and other digital tools a space that can enhance its objectives, by facilitating communication between group members, which can even be in real time; the exchange of documents (considering that they can also be archived and accessed), as well as the creation and editing of documents where all participants can contribute precisely to it, thus answering one of the research questions: the creation and document editing with the Google drive tool by teams of university students. Does it allow collaborative work?

The issue of instructional design is highlighted for the achievement of the proposed objectives, it must be very precise and following a proven methodology.

Taking into account that this study was carried out during 2019, it cannot be ignored that the COVID19 pandemic opened a range of possibilities for technological resources for interaction and interactivity in teaching processes- learning, the synchronic form of these processes, as well as the accelerated implementation of these resources, where the analysis of the practice of teaching, of the practice of learning, of the results of these processes, etc. questions for future research.

Conclusions

Google Drive was of great help to develop each of the indicated tasks. In fact, the students identified its use as attractive, since by being able to share and modify documents in the cloud, they were able to overcome the barriers of timetables and physical presence. This is particularly significant when participants live in communities far from the university. In short, this type of collaborative digital tools should be used to enhance teaching and learning processes.

However, it is also worth limiting some complications that may arise with teamwork, among which are cases where the communication and contributions of the members were recorded, which forces to resolve disagreements in a personalized way. Even so, the students' assessment of the tool was excellent for working collaboratively, since they could share documents and have a folder to collect the files of each of the members.

In short, collaborative work has found in Google Drive and other similar digital tools a space to enhance its objectives, as it facilitates communication between the members of a group in real time. In fact, with these free resources it is possible to promote not only a greater exchange of information, but also the creation and editing of documents, which may contain more solid ideas thanks to the participation of several people, each of whom will have their own point of view.

Future lines of research

Knowing the most appropriate strategies with which students can learn is a challenge that must be assumed with the support of new technologies. Therefore, more initiatives could be developed that promote synchronous and asynchronous virtual sessions, as well as mobile education and access and distribution of content in the cloud, among other topics of interest.

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