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Google Digital Tools for the Teaching-Learning Process in Schoolchildren of the Last Grade of Regular Basic Education of Pucallpa – Peru

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Abstract

Given the need to carry out actions that counteract the consequences of the pandemic generated by COVID-19, the educational institutions that provide training services at different levels and modalities were closed, including regular basic education; That is why this reality forced the implementation of education under the remote system, deriving the benefit of digital tools for the realization of the teaching-learning processes, one of these being those provided by Google. Thus, this article aims to explain the usefulness of Google tools for learning according to schoolchildren in the last grade of regular basic education of an educational institution in the city of Pucallpa in the jungle of Peru. For the purposes of this research, a qualitative approach and the hermeneutical method were followed, which allowed interpreting the responses of 40 school informants, in three subcategories: organization of school responsibilities, possibilities of interaction and use in curricular areas. It was concluded that the usefulness of Google tools for learning was null in terms of the organization of school homework, as it focuses on messaging through Gmail email accounts and the search and discovery of information. regarding the duties or tasks entrusted by teachers in the teaching-learning process.

Keywords: *Google tools, learning, regular basic education.*

1. Introduction

The use of technology for the development of learning processes, although it has been promoted for some time, is in the last two years in which it has gained greater emphasis, due to the health emergency that the world is experiencing with respect to the pandemic due to COVID-19; however, this situation has highlighted the important shortcomings that different countries have demonstrated with respect to the use of technology (Gómez-Arteta and Escobar-Mamani, 2021).

The level of connectivity to remote classes is a problem not overcome, despite the fact that at the beginning of the universal measures of social isolation this reality had already been observed, time has passed and it has not yet been solved properly and completely;

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there are many students who have not been able to access classes (Martelo, Franco and Oyola, 2020; Contreras-Colmenares and Garcés-Díaz, 2019).

Other factors that limit the training potential in virtual environments and, even more, with easily accessible tools, such as Google, are difficulty reading, visual fatigue, mental fatigue, deficiencies in concentration and the use of more than one device for the development of learning processes, in addition to limited teacher participation or guidance (Llanga-Vargas et al.).

For the United Nations (2020), a significant percentage of schoolchildren have been greatly affected in terms of their learning processes, since they have had serious connectivity difficulties, despite the ease of access to Google resources, an even greater problem, if it is to access specific platforms implemented by different training institutions; Rather, it is understood that the fact of incorporating freer or more open digital educational resources has been able to diminish this reality.

Obvious shortcomings in the use of more sophisticated digital tools, and even those that are easily accessible, have prevented a better application of these resources to education, while there were possibilities to use them. The deficiencies in teachers and students to use the internet educationally, the poor connectivity, the fact that, in the face of confinement, assuming connectivity as an escape route and the vulnerability to computer crimes to which students, teachers and parents were exposed were limitations that, in the future, must be overcome (García, 2021).

However, classes with the use of technological resources have been developed in places where it was possible through platforms and software, so it is inferred that the tools that the Google search engine provides and that allows learning different contents and procedures are being ignored; this situation prevents students from mastering the use of this tool and omitting valuable resources for learning (Tejedor et al., 2020).

The objective of this research was to explain the usefulness for learning of Google tools according to schoolchildren of the last grade of RBE in the city of Pucallpa-Peru.

2. Theoretical reference

Salgado (2022) specifies the benefits for working with digital tools, which have been tested during the process of social isolation motivated by the COVID-19 pandemic and from emergency remote education; Thus, reading comprehension was a skill that could be developed appropriately taking advantage of digital tools, finding that emotional and psychic support, flexibility of educational planning, teacher accompaniment, family accompaniment, teacher-parent communication, family training based on the competences pro accompaniment to the school and the updating of teaching in the achievement of competencies in an educational environment remote are essential factors for learning, to which is added the collaborative possibilities of these tools (Quiroga, Mazzitelli and Maturano, 2017).

De la Rosa (2021) states that it is positive to use applications in the education of students, as it is attractive and functional, although also, as Molinero and Chávez (2020) point out, versatile and very useful; Alejo (2021) contributes to this position, who argues that Google tools, specifically the Google classroom, is favorable for learning. However, the level of vulnerability is high for them, since many of their personal information and of different types are exposed; Moreover, the unreflective and more impulsive nature of those who are of student age leads to an increasing risk to which they are exposed. Problems regarding the use of technological and connectivity tools, based on socio-educational differences, both in students and teachers, have been the constant in different Latin American countries, including Argentina, as they refer to in their research Expósito and Marsollier (2020).

Vértiz-Osores, Pérez-Saavedra and Faustino-Sánchez (2019) argue that the use of ICTs allows an important development of the social skills of their students, as it is an innate motivation tool; in addition, they improve performance in key curricular areas, such as Mathematics, Communication and Social Sciences. As has been concluded in this research, the use of innovative digital resources or making, as researchers and teachers, that the resource is novel, is motivating and enables the optimization of student performance and the achievement of the three dimensions of a competence: attitudinal, procedural and conceptual, as well as in the area of English, as Ubilla concludes, Gómez and Sáez (2017); likewise, Chambilla (2019) found that the teaching strategies used 40% are dictation, 30% group work, 10% exhibitions, 10% questionnaires and 10% research papers, also that teachers mostly use somewhat obsolete strategies to reach the student, in none of these include the use of technological tools, nor the use of the internet and most of the resources they use are; books and booklets, sheets and presentations to a lesser extent. These advantages of using Google tools are also confirmed by León and Albán (2018), in this case, in the learning of writing in English, but it was also a finding of Gómez and Moreno (2018), in terms of teaching Geography.

Macía, Rodríguez and Armas (2017) in an experimental study concluded that the experience of implementing the proposal referred to showed an important motivation in students for the use of these tools to learn, considering practice as novel; In addition, it is necessary to overcome the initial idea found that digital skills only serve to search for information and that of curricular shortcomings, since no actions are proposed to learn geography that denote interest and use of computer tools. The importance of using geolocation tools in didactics is corroborated; in agreement with the results of this research Alavez (2017) considers the usefulness of Google resources for learning; In addition, Molina (2017) corroborates that, for example, the use of Google earth contributes substantially to the formation of cultural and environmental awareness; as well as Google sites, as stated by Ambròs and Ramos (2017).

It is understood from what is referred to by Cedeño-Escobar et al. (2020), that Google tools applied to education are defined as the set of technological and internet resources provided by Google in order to channel learning at all levels and educational forms, considering the focus of the purposes and the autonomy of the student for learning.

These authors explain that connectivism is the most recent approach to the use of technological tools, since it argues that it is possible to establish links aimed at obtaining different learning depending on the benefit of interactions between the structural components that allow learning, which can be generalized to the relationships that are established, with the same purpose, with the environment; In short, connectivism arises from the same person.

In addition, they can also be defined as the set of products provided by Google for training or education purposes, through various products (Saura, Díez-Gutiérrez and Rivera-Vargas, 2021; Gomez, 2020). It follows, then, that Google tools are resources that contribute favorably to the training processes of students of different educational levels, but also, given their accessibility, of anyone.

Likewise, Saura, Díez-Gutiérrez and Rivera-Vargas specify how necessary it is to incorporate digital tools into the regular training of students, that is, it must be a matter of curricular transversality criterion and customary application for student learning, but the advantage of Google tools is that they are provided freely and accessed very easily, in addition, connectivity to Google is greater than to any other search engine.

In addition, the orientation of this research according to the pedagogical accompaniment approach is convenient, since it is confirmed that the student, thanks to the permanent, reflective, motivating, participatory, contextualized, creative and exploratory monitoring manages to learn from the simplest to the most complex, for which the high and deep preparation of the teacher is required, so that it involves, also, to the family of the

schoolboy (Tarea, 2018). It is understood that, due to the novelty of the educational use of digital tools, the teacher must make the necessary efforts to update, starting with the use of easily accessible and easy-to-use resources, as is the case of Google, to go to the most difficult, but not impossible to use, such as platforms and software with their qualities.

3. Methodology

3.1. Approach

The methodology used for this research considers the use of the qualitative approach, because it has assumed the different realities of each of the informants, with respect to the subject of study, which results in the manifestation of a subjective reality from different perspectives; Likewise, hermeneutics was used as a working method, since the discourse provided by each informant was understood, in addition to intersubjectivities, including the implicit (Gómez, 2019).

3.2. Units of analysis

Information was collected from 40 informants, who are in the fifth and last grade of regular basic education at a secondary school in Ucayali, in the Peruvian jungle, and the inclusion criterion is being enrolled and following effective classes in the current school year.

3.3. Collection techniques

Information was obtained on the objective of this research, based on the utility category of Google tools for learning and the subcategories organization of school responsibilities, possibilities of interaction and use in curricular areas.

The application of the interview guides was carried out, with the prior authorization of the directors of the educational institution, through the use of Google meet, which meant an interaction in real time.

Considering what was expressed by Trujillo et al. (2019), the interview guide was unstructured, whose application to the total of the students was two days, since it was answered in 10 minutes and the time granted by the Institution had to be respected; It was structured in three segments, in relation to the determined subcategories. The wording of this instrument was clear, simple and with direct messages, so that the understanding is relevant and its development rapid and precise.

3.4. Analysis processing

The unstructured interviews were transcribed, and then grouped according to the nature of the answers, that is, the similarities; In addition, the subcategories proposed in the instrument guided the organization of the information collected, so it was organized into three groups: organization of school responsibilities, possibilities of interaction and use in curricular areas.

Next, an interpretative process was carried out based on the triangulation of the information obtained, the findings of previous studies and the preeminent theoretical approach.

The analysis and interpretation was focused on what was answered strictly by the informant students, the research team adhering to the deontological postulates of the research of the César Vallejo University, Peru.

4. Results

Regarding the answers that the students provided, it can be understood that these were addressed, as reiterated, in three aspects: the organization of school responsibilities, possibilities of interaction and use in the curricular areas, depending on the intentionality of the questions posed; Precisely the organization of the results is carried out according to the order of the reagents.

Question 1 Have you ever used Google resources to organize your school activities?

The vast majority of the 40 students who were interviewed report using Google as a tool to organize their activities; However, only one of them explains how he does it; this reality would realize that it is indeed used, but it also follows that Google is being used for different tasks, not necessarily that of organization; that is, they do not know this specific use. From these answers it can be inferred the need for teachers who, in the first place, must be adequately prepared for the use of Google tools, and thus can teach the use to students, so that they know how to discriminate the resource to be used, according to the need or requirement.

Question 2 Has the teacher guided or referred you to the use of Google resources to order the tasks assigned to you?

Although the answers are divided between those who affirm that the teacher has suggested the use of Google tools to order the tasks, those who say no and those who state that only some, none has explained precisely what is the nature of the actions that the teacher indicates, so it is possible to affirm that, Actually, students also refer to tasks such as searching for information or links via Meet, but not specifically to ordering tasks, a resource that, obviously, they do not know. The failure of the teacher in the use of Google tools is highlighted, since entrusting the work to be done bypassing or ignoring the accompaniment and guidance realizes that the responsibility for managing these resources is being transferred to the student and the evidence of an excess of confidence on the part of the teacher.

Question 3 Do you think it would be interesting to use these resources provided by Google to better order your school and daily activities?

The answers to this question show that, in fact, students do not know the function to which it refers; there is only one whose answer 'Yes, but at the moment I do not use it to search for information' states that he understands the question, but does not use the resource; a second student responds 'Yes, we would have to have better information and ordered', which also accounts for the understanding of the question, but not the use of the tool.

Regarding these first three questions, it is possible to infer that students almost absolutely do not use Google resources for the organization of their homework, they only use this tool to search for information and for classes via meet, and these, in terms of organization, is limited to waiting for the signal that the teacher refers.

Question 4 What facilities would you expect from an email?

Among those who have properly stated what they expect from this Google messaging tool, which is linked to Gmail since they have responded 'That you have all the facilities to carry out the classes', 'Information and identity security' or 'Know easily who sends you the information and easily find the people you are looking for', qualities such as ease of use, data security, speed and informativity can be consolidated; A significant minority of students do not use this resource or are unaware of it, as they have answered:

'Not much, there are times I don't have internet', 'I don't use it much, because I don't talk to anyone by that means, so I don't expect much' or 'I don't know'

These responses can be deduced that the uses of technology and communications used by students, including Google, are directed to play, social interaction or other aspects outside the educational and that tools such as messaging or others related to the use of Google accounts are not known by students, this is because they may use Instagram, Facebook or WhatsApp for their communications.

Question 5 Do you have an email in Gmail?

The vast majority of students have an email in Gmail, only a small number do not; this happens because teachers, in the context of the COVID-19 pandemic, have been developing classes through Google Meet, so it was imperative to obtain a Gmail account; However, it is not a statement that corroborates the use of this tool for greater purposes. This confirms the lack of knowledge of the resources that Google tools can provide to the student.

Question 6 Have you used the chat provided by Google? Why?

It is evident that even when they express that they have used the chat provided by Google through Gmail email accounts, in reality they have not done so, because when they answer 'Yes, they give us good answers', 'No, because I do not understand' or 'Yes, it helps me clarify my doubts about what I do not know' it is recognized that they do not use the chat; Only one student states that he uses it to communicate with all his classmates, but when analyzing the responses of others, it is concluded that he does not.

Regarding this second block of answers to the following three questions, it is understood that students do not use Google's communication interaction resources, except for classes; for this, each student has created a Gmail account in order to obtain access to the meet each time the link for classes is sent, that is, to this last activity is that the use of Google is limited.

Question 7 In which curriculum areas have you used Google resources?

Faced with this question, the answers refer that Google resources have been used in all curricular areas; however, the most prevalent are Communication, Mathematics and English; then Social Sciences, Education for Work and Science and Technology; Finally, all the others.

Question 8 What Google tools have you used in the development of your courses?

The vast majority have used Google for information search purposes and, before the remote class system, to use the meet; however, there are answers that refer to using YouTube and Blogger, in this sense it is notorious that for class purposes only YouTube could be used, but not the Blogger, because only one student refers to having done so, which contravenes the logic of using this resource; otherwise, it is understood that the Google has not been used for other purposes.

Question 9 Do you think it would be important to regularly implement the use of Google resources for classes?

The vast majority agree that Google is used in classes, because more information can be handled and this contributes to the improvement of learning; no one has stated any other reasons; Only three students say they would not want to, but referring that it is because of the lack of internet line.

Finally, with regard to the answers that students have provided to the last three questions, although they consider it important to use Google for learning, they have not worked so far, limiting themselves only to using these tools to find information for curricular areas, primarily, Communication, Mathematics, English, Social Sciences, Education for work and Science and technology; Very little or nothing for the others.

The study has shown that the use of Google resources for the purpose of organizing their duties for learning in the respondent schoolchildren is quite limited, since none uses this

digital tool for this purpose; however, the answer that it is only used for the search for information denotes ignorance of this goodness of Google, that is, the organizational, and when referring that Google is used for classes it is considered that it is the teacher who uses the organizer, so that he sends the corresponding links for the development of the teaching-learning processes.

An essential aspect is the teacher's contest, who has to update and teach the use of all the possibilities of the different technological resources, including Google, even more so, due to the ease of access and coverage it has.

Consequently, both Tejedor, Quiroga, Mazzitelli and Maturano, Vértiz-Osores, Pérez-Saavedra and Faustino-Sánchez and Ubilla, Gómez and Sáez give account, in their investigations of the benefits that Google provides in different educational aspects, including the organization; Likewise, Alejo agrees in this sense when referring that Google Classroom is a favorable tool for learning, considering that in this it is possible to plan an entire educational process.

Thus, the organizational part of the learning processes can be worked with Google with the calendar provided by Gmail, the data label, which allows ordering the information according to items or the drive, which makes it possible to organize the information obtained for inquiries, questionnaires or other products, according to work units or in relation to the criterion considered relevant.

As for the use of Google tools for interaction or communication, there is also evidence of ignorance that there is the possibility of working with the chat that is provided through Gmail, account that all students have due to classes, since almost absolutely the use has been manifested only for the purposes of access to the class.

Expósito and Marsollier and Cedeño-Escobar et al. argue that the use of technological resources, in the understanding that Google tools are one of them, enable a fluid, simple, novel, motivating learning, these statements being accurate, because if the student has only limited himself to developing his training process with very few technological applications, it is natural that he is interested in being allowed to use the full range of possibilities offered by the technology of communications and between them Google, but with due care, so that schoolchildren are not exposed to risks, as required by Expósito and Marsollier themselves.

Regarding classes in the different curricular areas, the massive use of the Google tool is evident, but only for the search for information and, again, for access to classes, which also reflects limitations in the management of this tool, both in students and teachers.

These findings differ from those of Macía, Rodríguez y Armas, Alavez, Molina, León and Albán and Ambròs y Ramos who did have successful experiences using technological resources and, specifically, Google in educational processes, since they attest to the usefulness, functionality, motivation, collaboration and good level of learning that is achieved with these resources.

It is not about becoming dependent on Google tools or other technological resources, but about properly channeling student learning, taking advantage of their readiness to innovate, learn and discover; It is natural that there are risks, due to the wide levels of access of any digital tool, but adequate and timely accompaniment can substantially reduce these dangers.

It is evident that greater learning achievements, not only in terms of the competences of the curricular areas, but also in the use of Google digital tools will be possible depending on the effective or concrete application of connectivity and pedagogical accompaniment approaches, given that it is necessary to consciously assume that the internet and its resources have gained unusual importance in the teaching-learning processes, which is expected to alternate with face-to-face education; Likewise, the monitoring of the teacher

and the alliances that he develops, as maintained by Rodríguez, Magallanes and Gutiérrez (2020), with the family to accompany the student in their learning will allow to focus and achieve the suitability of these tools for educational processes.

In summary, there is no use of, at least, most of the resources that Google has for teaching-learning, according to the reporting students, restricting its use to the search for information to fulfill homework or tasks and access to classes via meet.

5. Conclusions

The conclusions reached are, in the first order, that students do not use the resources provided by Google to organize their school responsibilities, even when the possibility of using calendars and agendas is provided, limiting their use to the search for information and access to classes.

Secondly, regarding interaction tools, students do not use Google for this purpose, except to receive access messages to classes scheduled by teachers, even though they can use the drive and chat, which is a very limited use, and may also be due to the widespread use of WhatsApp for school interaction.

Thirdly, regarding the use of Google tools for classes in the different curricular areas, students maintain that they do not use this resource, except for the search for information, especially in the set of areas that can be nominated as substantial; YouTube use is only reported by a student. It is understood that students, and with them teachers, are bypassing the teaching and learning possibilities offered by Google.

Through this research has been contributed with the knowledge of the reality regarding the use of technological tools by the students, that is, it is clear that Google is used, but the purposes are, within the framework of education, diverse and little conscious, so that studies can be developed that explore the levels of knowledge of students about Google tools and others who experience about the application of these tools in aspects such as academic performance, motivation or accessibility.

It is recommended, as a consequence of what was found in this research and in accordance with what was specified by Saura, Díez-Gutiérrez and Rivera-Vargas y Gómez, that it is of importance and urgency the curricular implementation of the use of technological tools, and specifically those provided by Google, so that the student develops an education consistent with the formative tendencies and can master the technology for precise purposes, in this case educational, so that you can achieve learning based on collaboration, the praxis of investigative skills, self-regulation and autonomy; an essential aspect is school-family coordination for the process to be successful, according to Rodríguez, Magallanes and Gutiérrez.

However, this research raises questions that can be answered in future studies, among them what is the best way to achieve total connectivity in Peruvian students? Should virtual education or the use of technological tools be assumed in greater proportion than traditional resources? How to restrict students' access to other resources – fun, leisure or leisure – so that they concentrate on academics at the times duly designated for this purpose? How to reduce procrastination -this at the level of possibility- as a feasible consequence of the use of technological tools?

Finally, it is important that for studies similar to the one that has been developed or of another nature, but linked to rescuing data from schoolchildren, coordination is sought with directors of educational institutions, but, in a more incisive, fluid and respectful way with teachers, parents and the students themselves, since a limitation that was presented in this study was the delay in relation to the authorization to carry out the interviews and the need to encourage informants to participate seriously and with opportunity.

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