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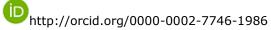
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WhatsApp as an academic platform for Higher Education in Cuba

WhatsApp como espacio académico de la Educación Superior en Cuba

WhatsApp como espaço acadêmico de educação superior em Cuba

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ABSTRACT

The WhatsApp Messenger application for smart phones has been recognizing in the education as a way to improve teaching-learning processes. However, some authors, taking into account that its study is not completely examined, consider that it will be the object of several researches of educational sciences. In Cuba its uses with educational aims was increasing because of the COVID-19 pandemic, hence it was necessary to research emerging experiences. The present paper has the objective to expose research results as of studying WhatsApp groups in the Faculty of the Social Sciences and Humanities at University of Pinar del Río "Hermanos Saíz Montes de Oca". The research was developed from a qualitative methodological approach and a phenomenological design. It was used research techniques as: words and ideas association and interviews, along with researchers' logs and literature review for to understand study object and results discussion. The qualitative analyzes of data show four dimensions: functional, affective, content and values. The main result revealed that functional category was prevalent between students and professors followed the affective and values categories. The participants concur that use of application was extended to scientific and academic area. In the main conclusion was established that WhatsApp groups are socio-cultural spaces close to its collective management for to be in parallel communicated and define process form participation and interdependence.

Keywords: mobile learning; Higher Education; teaching-learning processes.

RESUMEN

La aplicación para móviles WhatsApp Messenger viene ganando reconocimiento en la educación como facilitadora del proceso de enseñanza-aprendizaje. No obstante, algunos autores consideran que su estudio no está totalmente abordado, por lo que será objeto de diversas investigaciones para las ciencias de la educación. En Cuba, su uso con fines educativos se ha incrementado con la pandemia de COVID-19, de ahí que resulta necesaria la investigación de experiencias emergentes. El presente artículo tiene el objetivo de exponer los resultados investigativos obtenidos del estudio de los grupos de WhatsApp de la Facultad de Ciencias Sociales y Humanidades, de la

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Universidad de Pinar del Río "Hermanos Saíz Montes de Oca". La investigación se desarrolló desde el enfoque metodológico cualitativo y su diseño es de tipo fenomenológico. Se emplearon las técnicas de asociación de palabras e ideas y la entrevista, junto a las bitácoras de las investigadoras y la revisión de la literatura para la comprensión del objeto de estudio y la discusión de los resultados. El tratamiento cualitativo de los datos develó cuatro dimensiones para el análisis: funcional, afectiva, contenido y valores. Como principal resultado se evidenció el predominio de la categoría funcional en la percepción de estudiantes y profesores, seguido de la categoría afectiva y los valores. Existe coincidencia de que el uso de la aplicación se amplió hacia la esfera académica y científica. Como principal conclusión se determinó que los grupos de WhatsApp son espacios socioculturales donde se gestiona lo colectivo para estar comunicados en paralelo y definir procesos, desde la participación y la interdependencia.

Palabras clave: aprendizaje móvil; Educación Superior; enseñanza-aprendizaje.

RESUMEN
O aplicativo móvel WhatsApp Messenger vem ganhando destaque na educação como facilitador do processo ensino-aprendizagem. No entanto, alguns autores consideram que seu estudo não está totalmente abordado, por isso será objeto de várias investigações para as ciências da educação. Em Cuba, seu uso para fins educacionais aumentou com a pandemia COVID-19, daí a necessidade de pesquisar experiências emergentes. Este artigo tem como objetivo apresentar os resultados da pesquisa obtidos a partir do estudo dos grupos WhatsApp da Faculdade de Ciências Sociais e Humanas da Universidade de Pinar del Río "Hermanos Saíz Montes de Oca". A pesquisa foi desenvolvida a partir de uma abordagem metodológica qualitativa e seu desenho é fenomenológico. Foram utilizadas as técnicas de associação de palavras e ideias e a entrevista, juntamente com os registros dos pesquisadores e a revisão da literatura para compreensão do objeto de estudo e discussão dos resultados. O tratamento qualitativo dos dados revelou quatro dimensões para a análise: funcional, afetiva, conteúdo e valores. O principal resultado foi a predominância da categoria funcional na percepção de alunos e professores, seguida da categoria afetiva e valores. Por coincidência, o uso do aplicativo foi estendido ao âmbito acadêmico e científico. Como principal conclusão, determinou-se que os grupos de WhatsApp são espaços socioculturais onde o coletivo é gerenciado para se comunicar em paralelo e definir processos, com base na participação e na interdependência.

Palavras-chave: aprendizagem móvel; Educação superior; ensino-aprendizagem.

INTRODUCTION

WhatsApp Messenger (WA), is a messaging application for *smart phones,* which is gaining more recognition every day in the educational context. The United Nations Educational, Scientific and Cultural Organization (UNESCO, 2013) has considered and studied these characteristics and potentialities offered by mobile technologies to improve access, equity and quality of education, thanks to the fact that they are very easy to transport and relatively inexpensive, so they have greatly expanded the possibilities and feasibility of the personalized apprenticeship.

Currently, mobile learning (*m-learning*) is assumed by educational

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institutions, consequently the development of the Technologies of Information and Communications (ICT), allowing the introduction of mobile devices environments learning, as a strategy to support the teaching process (Ramos *et al.*, 2010). In this framework, the pedagogical value of WA is recognized for the relationships between teachers, students and their families, since it functions as a means of communication, sending support materials, tests, educational images, information on curricular and extracurricular topics (Gómez del Castillo, 2017).

In Cuba, unlike other countries, the use of WA for educational purposes has been limited. However, since September 2019 the socioeconomic situation by which the country crossed, caused by the shortage of oil, and then in March 2020, the pandemic of COVID-19, promoted with emphasis use in Higher Education to maintain the exchange between students and teachers ; hence it is considered necessary to investigate emerging experiences.

In the Cuban case, there is agreement with international researchers, who specify that WA as an object of study is not fully addressed and that its individual and group uses will motivate various investigations for educational sciences (Fuentes Gutiérrez *et al.*, 2017; Suarez, 2018). From these assumptions, the present work has as objective to present the research results of the study groups WA created at the Faculty of Social Sciences and Humanities (FCSH) of the University of Pinar de Rio "Hermanos Saiz Montes de Oca"; which has made it possible to identify this application as a significant academic and sociocultural space for the teaching-learning process.

The *WhatsApp* in Higher Education

In higher education, WA has had various applications, among which its use in communication skills stands out (Andújar & Cruz, 2017; Fuentes Gutiérrez *et al.*, 2017; Gómez del Castillo, 2017; Noscué *et al.*, 2019), their support for teacher tutoring and collaborative activity (Suárez, 2018 ; Vilches & Reche, 2019). Its incorporation into the teaching-learning process has often been the result of the initiative of teachers, together with the personal or group interests of the students (Gómez del Castillo, 2017).

Similarly, WA has been considered an attractive resource for simultaneous communication between young people, which influences the dynamics of interpersonal
and intergroup relationships (Fuentes Gutiérrez *et al.*, 2017), as a virtual and communicative tool (Gómez del Castillo, 2017), which also allows collaborative work between teachers (Monguillot *et al.*, 2017).

In the literature, it is recognized that WA groups have a functional value, in relation to the content they share. In the same way, they enhance the affective relationships between teachers and students, with a significant axiological component, where not only different levels of participation in the group are acquired, but also of responsibility with respect to it. Ultimately, an amalgam of roles arises to which different intergroup functions are attributed, producing important synergies (Fuentes Gutiérrez *et al.*, 2017).

Among young university students, WA becomes a socio connective network that encourages the strengthening of social networks around friendship and family (Noscué *et al.*, 2019). Among its advantages are: the social factor, since it creates community and gives a sense of belonging to the group, it unites it and allows sharing cultural aspects ; favors cooperation, improves the relationship between teachers and students, in a more personalized way, so it also personalizes learning and motivates

students to learn, to maintain a positive attitude towards the educational use of the application, promoting participation, including to those who are more withdrawn or shy and expanding the creative possibilities for students (Suárez, 2018).

Using WA groups has created new symbols for communication (El Castillo Gómez, 2017), broadening the cultural universe of participants and their virtual communities (group of friends, class group, among others). In Higher Education it is a medium of the teaching-learning process, with a sociocultural function, which affects the preservation, development and promotion of universal and academic culture.

MATERIALS AND METHODS

The research was carried out in the environment of the WA groups, created in the Faculty of Social Sciences and Humanities of the University of Pinar del Río "Hermanos Saíz Montes de Oca", from the cessation of face-to-face teaching activities during COVID-19. The participation of the researchers in these WA groups motivated an interest in exploring the experience of their participants, considering their functions, content, relationships and emerging values; Hence, the approach to the research problem was assumed from the methodological - qualitative approach, valid for its "potential to capture the complexity and nuances of social relations" (Fuentes Gutiérrez *et al.* , 2017).

The research design is phenomenological, a determination that is justified because it studies the vital experience of the group, describes the lived meanings and gives primacy to the immediate subjective experience. Try to understand how people experience the social reality that they build in virtual interaction. The study was developed from six phases, considering the theory-practice link (Hernández *et al.* , 2010):

- The first phase was associated with the initial immersion of the researchers in the environment of the WA groups where the research idea arose, and a review of the literature was carried out, for the construction of a frame of reference that would allow the conception of the theoretical-methodological design.

- The second phase was dedicated to defining the problem statement, the participants and the sample.

- The third phase focused on the analysis and determination of the methodological techniques and tools for data collection, as well as the indicators that would confer the methodological rigor to the research process.

- The fourth phase allowed the collection and systematic analysis of the data, the contrasting and triangulation of the results obtained by the researchers.

- The fifth phase was oriented to the interpretation of the results, based on the theoretical discussion of the contributions obtained in previous investigations, and that constituted a frame of reference for this study.

- The sixth phase motivated reflection on the previous phases and the preparation of the results report.

The qualitative treatment of the data was carried out with the help of the *QDA Miner* program. The organization and interpretation of the findings was carried out taking into account the theoretical references of the research, which allowed the segmentation of the units of analysis into the following categories:

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- Functional: COMPLIANCE of the objectives for which they were created WA groups.

- Contents: PRESENCE of universal and academic culture in the virtual environment WA.

- Affective: relationships peer and mixed (students, teachers and administrators), support networks, sense of belonging to the University, the faculty and the career.

- Axiological: ethical, moral and civic values that are shared in groups WA.

Problem Statement

The study is exploratory and left the following research question: ¿ what is the experience of students and teachers on the WA as an academic space?

Participants and sample

The WA groups consisted of 149 participants, based on specific tasks:

- FCSH Student Group (137 members): 133 students; the Dean and Vice Dean of Extracurricular Activities in coordinating roles; two professors psychology, perma nent observer dynamics of the group, at the request of the administration. This environment was created to convey guidance of the Ministry of Higher Education (MES), the University and the faculty, on the conduct of the teaching process - education in conditions of physical distance.

- Sociocultural Management Department Group (16 members): professors of the Sociocultural Management for Development (GSC) career. It was created to follow up on the tele work process, with guidance for advising students and tutoring those for completion of studies, and for curricular adjustments in the three study

modalities: day course, through meetings and distance learning.

A sample of 34 volunteer participants, who responded to the researchers' request, was used to explore their experiences about the WA as an academic space, of them, 30 students and four teachers. The limited participation was conditioned by the difficulties with the internet connection and mobile data, due to its high economic cost.

Data collection

In this stage, the elaboration of the immersion logs in the environment and those of analysis that each researcher, for the description of the context and systematic recording of the reflections, constituted fundamental tools. Once the sample was identified, the technique of association of words and ideas was applied (Mireles, 2014), due to its possibilities to appeal to evaluations that individuals emit abruptly and suddenly, about a certain object, easily accessing the figurative nucleus representation. By slogan it was presented: "Express, with a word or idea, what is the first thing that comes to mind when you interact with your academic group from WA". Subsequently, other qualitative techniques were used, such as the interview and content analysis, of the records of dialogues and interactions mediated by the application.

The following topics were addressed in the interview:

1. Fulfillment of the objectives of the WA group.

2. Contribution of the WA group to the teaching-learning process.

3. Contents that are shared in the WA group.

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4. Contribution of the WA group to the personal growth of its participants.

5. Connection that allows the WA group with the University and the faculty.

6. Values that are shared in the WA group.

7. Limitations on the use of WA for academic purposes.

8. Relevance of the application for the Higher Education.

For the collection of the data of the association of words and ideas and the interviews, private accounts were used, in order to preserve the individual character of the instruments, guaranteeing reliability and preventing group biases in the responses. The objectives of the investigation were announced on the collective platforms, appealing to honesty and thanking the collaboration.

Methodological rigor

Although the researchers already participated in the WA groups, with the administrative and teaching roles, respectively, immersion in the environment, from the role of the qualitative researcher, required the identification of the indicators that conferred validity, reliability and objectivity, to the investigative process. The literature review allowed the adoption of the following criteria (Hernández *et al.* , 2010):

- Unit (internal): elaboration of logbooks each researcher to contrast its findings on work sessions and identify the percent of common aspects for the conception of the design, literature review, analysis of results and final report.

- Rep: permanence and stability of the researchers in the WA group, allowing the development of the research process

from cross checks work sessions and triangulation methodology.

- Applicability: valuation of the usefulness of the methodological issues in research designed for other similar studies, particularly in the context of the Cuban Higher Education, The explanation in the final report of the procedure, for the analysis by other researchers.

- Confirmation: detection of literature related to the logic of research, analysis and determination of the main theoretical contributions to the understanding of the object of study and discussion of results.

- Representativeness of voices: inclusion, both students and teachers to participate in research without the use of indicators or exclusionary criteria.

RESULTS

The technique of association of words and ideas allowed access to the figurative nucleus that the studied population has of the WA (100 % c asses). The recognition of the functional category with 66, 0 % of expressions prevails, followed by emotional category with 34.3 % of expressions and, to a lesser value, the axiological category with 28.4 % of expressions (see table 1).

The qualitative analysis allowed to identify that the students give meaning to the WA as a way of information, knowledge and updating; to a lesser extent, interaction and communication, a result that speaks of the role that each one assigns himself within the virtual group and of the expectations they have of it: some seek news about the continuity of the teaching-educational process (information or teaching guidance), while others participate in the

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dialogue, contributing questions, suggestions, sharing information and establishing camaraderie relationships, which mitigate physical distancing.

For its part, the anchoring of ideas of teachers is related to the possibility of direct interaction for the organization of the educational process, which allows the functionality of the department in conditions of physical distancing and accounts for the leading role that each teacher plays for the achievement of objectives and goals. Arguments such as: "with instant and interactive touch", "efficient interaction", "open dialogue" and "labor organization" stand out.

Table 1- Results of the association of words and ideas

	Count	% Codes	Cases	% Cases	Nb Words	% Words
WA						
● Funcional	20	55,6%	1	100,0%	202	66,0%
● Contenido						
● Afectiva	14	38,9%	1	100,0%	105	34,3%
● Axiológica	2	5,6%	1	100,0%	87	28,4%

Source: e own elaboration, from the program *QDA Miner*

In the interview, the functionality of the WA group is the most representative question , as shown in table 2 (79.9 % expressions), for his contribution was recognized continuity of the process of teaching and learning for physical distancing, through work with study guides, sending bibliography, orientation of teaching tasks, consultations and clarification of doubts, and methodological work. Regarding these considerations, the students recognized that the main function of the groups is to establish direct communication and exchange among their members; while, in teachers, expressions that point to quick connection with the group prevail, in the transmission of information.

The other more representative issue (and which can also be seen in table 2) points to the relationships established in groups WA, reaffirming its affective (41, 5 %

expression). For the participants, before physical distancing, its use was aimed at emotional communication with family and friends; however, his employment was extended to the academic sphere (labor and scientific at the discretion of the professors). This space is defined as plural and democratic, which favors flexibility as an important personological resource. On the other hand, it means its incidence in the connection of its members, with the University and the Faculty, specifically.

All respondents recognize the application as a tool for distance learning and education , especially for its possibilities for group dialogue, where the opinions of the participants are displayed and it offers the opportunity for voice messages, use of graphic and audiovisual resources, that motivate students, while invigorating and personalizing the interaction, benefits that lead most to prefer its use, once the phase of health distancing has concluded, as a complement, and not as a replacement for face-to-face education.

Regarding the content that is socialized in the WA application, as shown in table 2, 17.1 % of the expressions refer to the promotion of academic and universal culture;, however, students take into account the socio - cultural work done from the digital bulletin, which it also share texts of world literature. The interviewees give the following order to the share content:

1. Guidelines and regulations for the continuity of the teaching - educational process.

2. Teaching materials and greetings and personal exchanges.

3. Photos of members, books, initiatives responsible for cultural consumption.

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4. News and messages of psychosocial support.

Axiological category has a numeric value of 14, 4 % of expressions (see table 2). However, the qualitative analysis offers positive results, since cooperation prevails as a value for all the interviewees, which shows signs of teamwork and, therefore, that the final result is reached from the integration of individual contributions of each member. Solidarity follows in prevalence and, with a low response frequency, humanism, honesty; professional responsibility, commitment, autonomy and creativity appear.

Table 2- Results of the interview

	Count	% Codes	Cases	% Cases	Nb Words	% Words
WA						
• Funcional	24	48,0%	1	100,0%	1919	79,6%
• Contenido	6	12,0%	1	100,0%	412	17,1%
• Afectiva	15	30,0%	1	100,0%	1000	41,5%
• Axiológica	5	10,0%	1	100,0%	347	14,4%

Source: own elaboration, from the program *QDA Miner*

In general, the interviewees consider the imprint of the academic group on the personal growth of the students, by developing skills for information processing and synthesis, and the ability to restructure the field of action, adapting to non-traditional dynamics of the education.

As for limitations it highlights, for all the difficulties with technology and connectivity, while recognizing, by a student, the economic problems accessing the WA, an open connection is not possible in the current Cuban context, so the use of the application is by intervals and with planned schedules. Not all teachers and students have access, a restriction that undermines equal opportunities for members of the university community and, furthermore, against the maximum use of the application's potential for interaction and immediacy.

The WA is conceived, primarily as a space that meets the objectives for what it was created (81, 9 %), as it provides the possibility of establishing joint relations between students, faculty and administration of the faculty (37, 6 %). In smaller scale, it is recognized as an environment sharing of values (20, 5 %) and content that mediate the digital communication (15, 7 %) (table 3).

Table 3- Triangulation of results

	Count	% Codes	Cases	% Cases	Nb Words	% Words
WA						
• Funcional	43	51,2%	2	100,0%	2226	81,9%
• Contenido	6	7,1%	1	50,0%	428	15,7%
• Afectiva	27	32,1%	2	100,0%	1021	37,6%
• Axiológica	8	9,5%	2	100,0%	556	20,5%

Source: own elaboration, from the program *QDA Miner*

DISCUSSION

The results show that, as in other international studies, WA is causing an important change in the academic field of Cuban Higher Education, where *m-learning* has become a significant resource for learning, generating a new focus on pedagogical conceptions (Gómez del Castillo, 2017). Students and Cuban teachers recognize the functionality of groups *WhatsApp,* from its potential for the organization and monitoring of academic activity (Fuentes Gutiérrez *et al.*, 2017). In spite of the positive results, the research had an economic constraint, which constituted a threat to more secure participation both teachers and students (Andújar & Cruz, 2017).

WA, from the affective point of view, is reaffirmed as an application that favors group cohesion and with other people, where not only academic content is shared, but others emerge from friendship, recreational and leisure interests (Fuentes Gutiérrez *et al.*,

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2017; Suárez, 2018). This teaching-learning medium represents the materialization and management of the group and the collective, in different environments from traditional university spaces, facilitating communication between students and teachers, and the definition of collaborative tasks, projects and sociocultural activities (Noscué *et al.* , 2019; Suárez, 2018; Vilches & Reche, 2019).

In the WA groups under study, the initiative of the teachers prevails. However, this has not been a limitation for collaborative learning between equals (student-student, teacher-teacher) and mixed (students, teachers and academic administration), the construction of knowledge, the promotion of values such as cooperation, humanism, honesty, commitment, autonomy and creativity. Likewise, the participation of students and teachers in the distribution and control of responsibilities has been favored, as well as the effective management of time and non-contact activities (Vilches, 2019).

The participation of the students is valued as positive, as they learn to organize themselves, participate in the social network and the culture of sharing, autonomously. For the teachers, something similar has happened from the pedagogical point of view; hence, the idea is reinforced that teaching supported by learning networks is a great potential that must be recognized as a strategy for methodological change towards forms of meaningful learning (Marín *et al.,* 2014).

The WA groups studied are configured as socio-cultural spaces with content basically composed of guidelines, regulations for the continuity of the teaching-learning process, teaching materials, news, greetings and personal exchanges, photos of the members, books and initiatives for consumption Responsible cultural and psychosocial support messages.

The research concludes that WA groups are dialogic communities, which allow a democratizing practice of universal and academic culture; a means of rebuilding the social fabric, an ethical commitment that drives teachers towards innovation. They are the way to a focused education on learning and not only in teachers, students or in collaborative and solidarian learning, in building collaborative networks and co-responsible (Márquez & Valenzuela, 2017).

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Conflict of interest:

Authors declare not to have any conflicts of interest.

Authors´ Contribution:

Dianelkys Martínez Rodríguez: Conception of the idea, general advice on the topic addressed, literature search and review, translation of terms or information obtained, preparation of instruments, application of instruments, compilation of information resulting from the applied instruments, statistical analysis, preparation of tables, graphics and images, database preparation, writing of the original (first version), review and final version of the article, correction of the article, review of the applied bibliographic standard.

Geidy Díaz Crespo: literature search and review, translation of terms or information obtained, preparation of instruments, writing of the original (first version), review and final version of the article.

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