

Analysis of WhatsApp as a communicational tool for participative management in pedagogical spaces

Análise do WhatsApp como instrumento comunicacional para a gestão participativa em espaços pedagógicos

Análisis de WhatsApp como instrumento comunicacional para la dirección participativa en los espacios pedagógicos

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Ronison Oliveira da Silva

ORCID: <https://orcid.org/0000-0003-0709-4081>

Instituto Federal de Educação, Ciência e Tecnologia do Amazonas, Brazil

E-mail: ronison.msc@gmail.com

Paulo Ubiratã Ferreira Martins

ORCID: <https://orcid.org/0000-0001-9190-6876>

Instituto Federal de Educação, Ciência e Tecnologia do Amazonas, Brazil

E-mail: paulubirata@gmail.com

Daniel Nascimento-e-Silva

ORCID: <https://orcid.org/0000-0001-9770-575X>

Instituto Federal de Educação, Ciência e Tecnologia do Amazonas, Brazil

E-mail: danielnss@gmail.com

Abstract

This study aims to assess whether WhatsApp as a pedagogical space can be considered an instrument of participatory management, according to an educational institution's experience in the northern region. It is qualitative work. We researched five subjects who use this application as a pedagogical space to detect their perception of their effectiveness in using this instrument for this purpose. The results showed that this communicational tool could contribute to implementing participatory management in professional and technological education institutions.

Keywords: Participation; WhatsApp; Pedagogical Space.

Resumo

O presente estudo tem por objetivo avaliar se o uso do *WhatsApp* como espaço pedagógico pode ser considerado um instrumento de gestão participativa, segundo a experiência de uma instituição de ensino da região norte. É um trabalho do tipo qualitativo, no qual foram pesquisados cinco sujeitos que utilizam este aplicativo como espaço pedagógico com o intuito de detectar junto a estes indivíduos a percepção deles quanto à sua eficácia no uso deste instrumento utilizado para este fim. Os resultados mostraram que essa ferramenta comunicacional pode contribuir com a implantação da gestão participativa nas instituições de educação profissional e tecnológica.

Palavras-chave: Participação; WhatsApp; Espaço Pedagógico.

Resumen

Este estudio tiene como objetivo evaluar si el uso de WhatsApp como espacio pedagógico puede ser considerado un instrumento de gestión participativa, según la experiencia de una institución educativa de la región norte. Se trata de un trabajo cualitativo, en el que se investigaron cinco sujetos que utilizan esta aplicación como espacio pedagógico con el fin de detectar con estos individuos su percepción de su efectividad en el uso de este instrumento utilizado para tal fin. Los resultados mostraron que esta herramienta comunicacional puede contribuir a la implementación de la gestión participativa en las instituciones de educación profesional y tecnológica.

Palabras clave: Participación; WhatsApp; Espacio pedagógico.

1. Introduction

The internet strongly influences the current social situation in humanity's daily life (Kriezyu, 2019). It means that that instrument has its use extended for educational and pedagogical purposes. One of these tools is WhatsApp, which has been considered in specialized studies as a learning space for educational purposes (Chimezie, 2020; Paczowski & Passos, 2019; Tulgar, 2018). It is appropriate to say that the pedagogical spaces are composed of people who need to communicate to create connections and, through this dialogue, work together for the functioning of these spaces, since for there to be communication, two or more people must interact between si (Nascimento-e-Silva et al., 2019). This interaction makes it possible to share knowledge and information to build understanding in pedagogical spaces.

This study aims to analyze whether the Whats App technological tool can be considered a participatory management tool. To this end, we conducted semi-structured interviews with five subjects who use WhatsApp as a pedagogical space. We sought to ascertain whether all respondents in this space have the necessary autonomy to deliberate, execute, and assume responsibility for their actions (Lousão, 2009; Malta, 2015).

Two aspects justified this investigation. Firstly, it concerns the re-signification of communication technologies in the knowledge society (Kriezyu, 2019). It emphasizes that in addition to making the communication process between people more dynamic, these technologies can increase student participation when applied in teaching and learning processes. Secondly, the factor that encouraged the study's realization is related to understanding the functioning dynamics of the pedagogical spaces (Nascimento-e-Silva et al., 2019). It inferred that for a space to be considered participatory, its members must have the power of decision, execution, and assuming the consequences of these actions (Lousão, 2009; Malta, 2015).

2. Methodology

For the study's general objective to be achieved, from applying the theoretical architecture designed and presented in the following section, the methodological strategy summarized here was operationalized. This strategy required one of the researchers to be part of the studied pedagogical space to have an internal view of that environment. It is worth clarifying that none of the five respondents who kindly collaborated with the present study make up the authors who sign this textual construction authorship.

2.1 Study Characteristics

The methodology used in this study was of the qualitative type, operationalized from the participant observation technique (Correia, 2009; Dodgson, 2019). The analysis unit was the individuals, taken in isolation (individual unit), to understand each of them's personal perception about the phenomenon under investigation. The analysis level was the group. This analysis level explains the communicational phenomenon in the pedagogical space under study. The analysis perspective was synchronic, characterized by the current moment as if it were a photograph of the phenomenon investigated (Nascimento-e-Silva et al., 2013; Silva et

al., 2019). The search for the answers to the questions that structure the present study with the research participants took place in June 2018.

2.2 Participating Subjects

One of the fundamental characteristics of Whatsapp groups is their small, reduced size. There are groups with many members, but they are rare. In groups with pedagogical purposes, predominates small dimensions, with up to five individuals. In this sense, individuals who were part of a WhatsApp group were chosen, whose goal was to discuss issues related to a particular discipline of the Master's course in Professional and Technological Education. The Virtual Environment is, therefore, a pedagogical space since there were people there to learn specific contents of the discipline with each other (Nascimento-e-Silva et al., 2019). The subjects and this pedagogical space present all the conditions to understand the communicational phenomenon.

2.3 Datta Collection Instrument

We collected the data with a field protocol, which contained the study script: a) the subjects communicated, b) the communicational effectiveness, and c) the lessons learned. Research protocols consist of scripts that, when planned and materialized by the researcher, increase the results' reliability during the scientific process (Silva et al., 2020). The mapping of the communicated subjects had the purpose of understanding the connection between what he did and what was not part of the pedagogical space's pursuit, pointing out their deviations. Communicational effectiveness sought to find out if WhatsApp was effectively configured as a conducive space for learning. The learning obtained meant a form of inventory made from the pedagogical space participants under analysis.

2.4 Datta Collection Strategy

One of the researchers was a member of the WhatsApp group under analysis. Following the data collection period foreseen in the protocol, we collected the data during an uninterrupted week. We recorded all subjects, day by day, trying to know, after several moments of discussion and exchange of information, if each issue had been successful in its

intention of clarification and learning. The communicational tool itself, called WhatsApp, was used to collect data from this study's participants.

2.5 Study design

As the study sought to learn about communication in pedagogical spaces, it approaches or distances itself from a management model considered participatory. The study's strategy was as follows: a) choice of a pedagogical space that would allow the full monitoring of all communications made there during a specific time, b) entry of the researcher into the pedagogical space to function as one of the group members, c) active participation and data collection so that the researcher does not exert influence on communication and how pedagogical space was managed and d) analysis and interpretation of data, following the theoretical framework designed a priori. Thus, we proceeded with the participant observation of that pedagogical space (Dodgson, 2019).

2.6 Data Analysis and Interpretation of Results

After being collected, the data were typed into a word processor and organized by type of participant. Then the participants' answers were integrated by type of question. All the answers for each specific type of problem appeared in a single table. They allowed researchers to identify similarities and differences between the responses obtained, generated from the technique's use of content analysis (Kyngäs, 2019). Then, we compared each partial result with the theoretical architecture described in the next chapter to generate partial conclusions. From the partial findings, we developed the general conclusion of the study.

2.7 Study limitations

The present study has a limitation, which, despite existing, does not nullify the findings arising from its realization. It considers that the small number of participants who kindly agreed to participate in this research is a limitation concerning the expansion of results to more general contexts as happens in inductive studies (Ribas & Olivo, 2016). However, despite this limitation, this does not prevent other applied studies from being carried out with a larger universe of respondents, especially in the pandemic scenario caused by the Covid-19 pandemic (Gama Neto, 2020). In addition to reinforcing state of the art regarding the use of

WhatsApp as a learning tool also demonstrates how this technological resource combines with teaching routines, making the learning process more effective and consistent with the demands from the knowledge society (Kriezyu, 2019).

3. Participation

Participation is a type of governance, which is, in turn, a form of management (Kudo, Pereira & Silva, 2016). In this case, governance is a type of administration whose command line is shared among the other participants (Dixit, 2009). We can call participatory management, where everyone has the deliberative and executive power (Brito, Siveres & Cunha, 2019). These decisions need to be put into practice so that they can have the desired effect. Thus, participation is a specific process in two stages: one of deliberation, where it is defined what and how it will be done, followed by another, which executes what was deliberated. Thus, in the authors' view, participating in governance exercise is familiar with the organization's other members.

There is an understanding that participation is an action, which has a social bias (Malta, 2015). It suggests that one or more people make participate for the benefit of a collective good. In this perspective, participation is a process where the participants are responsible for coordinating their steps. These decisions are of the type where we intend to arrive and how to reach (planning). It means what (goals) and how (performance), and compare performance with what was planned (control) are some of the responsibilities directly linked to the exercise of participatory management (Brito, Siveres & Cunha, 2019). As it is a social action, the expected result of carrying out the stages of this process must be a situation that meets the participants' interests and whose benefit also extends to other members of society.

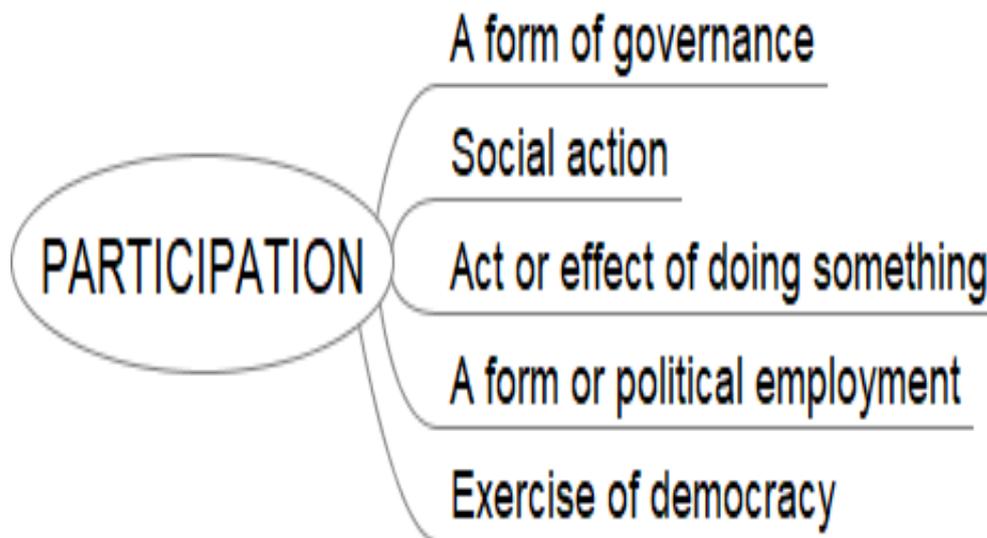
Participation can be understood in its literal sense: the action or the effect of being part (Fernandes, 2015). The action is a decision followed by its practical application. When an individual joins other people and starts to deliberate and act with a specific purpose, he is actively participating in that context, generating benefits. The effects are the results of the actions, which are also called impact.

In this way, the participant can impact the environment in which he operates (Andrade, 2016). For example, a group of math teachers got together and decided to give tutoring classes to children in a community. This target audience will benefit greatly from this action. Similarly, these professionals will also feel impacted by exercising the profession in

an altruistic way. We can see that the effects of participation can reach both those who produce the action and the audience for which it was intended.

From another point of view, Lousão (2009) conceptualizes participation as a form of political employment. It is inferred that politics is a form of government, where one of the requirements is negotiation capacity (Pérez-Yus et al., 2020). Thus, the individual can ensure that the interests of the group he operates are served through his power of influence and dialogue. In this way, the participant can operationalize his / her interpersonal skills to influence other people and thereby obtain deliberations favorable to the cause he/she supports. Goulart, Terci & Otero (2015) suggested participation as an exercise in democracy. This participation occurs when society members decide to mobilize in specific groups and expose their positions regarding a particular interest topic. Thus, participation democratically takes place, with citizens expressing themselves and actively participating in political decisions. Figure 1 summarizes the main conceptual aspects concerning the phenomenon.

Figure 1: Conceptual aspects of participation.



Source: Data obtained by the authors.

For this study, participation is an action composed of decision and execution by the organization's members, including the results of that action. In this way, participation has a decision stage and an execution stage, which are performed by the organization's members. The consequences of these actions can impact both the participants themselves and their operating environment.

The scientific literature presents the following types of participation: consultation, deciding together, acting together, and supporting the community's interests (Ribeiro, 2018). The first two types (providing information and consultation) refer to a level of partial and indirect participation, as the participant acts as an informant, being consulted by third parties on a specific topic or problem. In the following types (joint decision, working together, and supporting community interests), the participant's direct involvement, as he is exercising his governance (power to act and decide) in partnership with other group members or organization. This participation can be represented, for example, in formulating strategies and structuring projects. These types are deliberative because when exercising them, participants have deliberative and executive autonomy.

In another perspective, it considers that the types of participation are directly linked to the holding of political power. Thus, the following types of participation are on an ascending scale: non-participation, tokenism, and citizen power (Carvalho & Rodrigues, 2018). The lowest level of this scale is that of non-participation. In other words, the participants do not have the autonomy to deliberate and act on any matter, although they are the main ones impacted by higher levels' decisions. On the other hand, tokenism is the medial level of participation, where citizens are consulted about existing problems (Ribeiro, 2018). This level is where the participant can express his community's demands, which is a channel of communication and information between him and the holders of political power. It is a type of consultative participation, as citizens do not exercise a decision-making role. Citizens' power corresponds to the decision and activity level, with the participants having full deliberative autonomy. In this type of participation, citizens can self-regulate without relying on the approval of a higher body. And they can also establish partnerships in the search for solutions to their demands. So, the greater the level of control of political power, the greater the level of participation.

There are three types of existing participation in a more objective view, which use the same rating scale based on the scale whose types are: low, medium, and high (Nichols, 2018). The lowest level of participation is called presence, with little involvement of the participant. The participant adopts a static posture, without expressing interest or willingness to integrate and act in favor of what is proposed to him; that is, he is present, but without active participation. The medium level is called activation.

This configuration above does not consider a consultation as average participation, but the individual's direct action favors a cause (Nichols, 2018). There is a more significant agreement on the participant's part to join the cause presented to him, but still without the

permission to exercise any decision making. The highest type at this juncture is called participation. It is a deliberative type, where the participant starts to contribute with his / her power of choice with the defended cause. This participation can be direct or indirect. Direct in support of decision making. Indirect in the use of the power of choice in electoral processes.

According to the literature, therefore, the types of participation are non-participatory, consultative, and deliberative. In the first type, the level of participation is considered low. It can occur due to the participant's little interest or the lack of deliberative power. On the other hand, the consultative type acts as an informant, being consulted by an external group and issuing its opinion on a given subject. Thus, their participation is limited to assisting the decision-making process with their ideas and information. And the deliberative occurs when the participant exercises his power of decision, discussing and following the practice of what was decided by him and the other organization members. And it seems that tools like WhatsApp can help the participatory process in pedagogical spaces.

4. WhatsApp

WhatsApp is an application of a multifunctional nature. By using this tool, its users can perform interactions, either with another subject or through participation in groups (García-Domingo, Gutiérrez & López, 2018). Under the umbrella of interaction, WhatsApp is used both for personal communication purposes and commercial and educational use. In all these possibilities, the logic of the application is to make the dialogue between two or more individuals more dynamic, which provides more incredible speed in exchanging information and in the execution of negotiations depending on the use of this technological innovation by its users.

From a more informational perspective, WhatsApp is a tool whose use allows the sending of text messages, audios, links that direct the user to web pages and photos. The dialogues happen through the exchange of letters, accompanied by emojis that are drawings that have a symbolism pertinent to their appearance (Bouhnik & Deshen, 2014; Kahar & Labil, 2020). WhatsApp's popularization is explained by the strong influence exercised by the internet in society's daily life (Kriezyu, 2019). Also, the use on a large scale has caused calling on smartphones to be, gradually, replaced by sending messages in the WhatsApp application, which justifies adopting this tool in several fields of activity, including educational (Tulgar, 2018).

The use of WhatsApp in the scope of “technological education” has had a high magnitude in recent times due to the pandemic context of Covid-19 (Gama Neto, 2020). It is appropriate to say that multifunctional applications, such as WhatsApp, stimulate knowledge production in learning communities (Alshammari, Parkes & Adlington, 2017). It is a trend that is becoming increasingly latent due to the communicational effectiveness and the fact that technology is increasingly linked to human affairs (Nascimento-e-Silva, 2020). Thus, WhatsApp in education represents a relevant tool for teaching activities to be more congruent with the demands of the knowledge society (Kriezyu, 2019).

WhatsApp is an informal way of learning (Cavus & Ibrahim, 2009). The mention of informality may suggest that this tool's use happens in an uncoordinated way and without rules. On the other hand, it is opportune to report the benefits that the inclusion of WhatsApp in the school environment can generate for school institutions. It ranges from sharing information in groups of teachers, pedagogues, and other education professionals involved in the teaching and learning processes to access content relevant to each subject's performance in their respective functions.

WhatsApp can raise students' level of motivation and increase students' interest in the issues disseminated and improve the effectiveness in understanding the themes addressed by the teacher. Also, the incorporation of WhatsApp in the teaching and learning processes can make the subjects' internalization simpler due to the speed with which the information is shared (Zarei, Fathi & Kaur, 2020). It is correct to say that technological solutions such as WhatsApp and other applications work as a complement to the teacher's role, who must adequately mediate knowledge production. This mediation to be successful has as a predominant factor both the mastery of the themes that integrate each discipline taught and the skill in using educational technologies (Cabral, 2020).

Interestingly, in the scientific literature, the use of WhatsApp in education is seen in two different ways. The first is more traditional and understands that technological tools such as WhatsApp can set student distraction precedents (Tindell & Bohlander, 2012). The other prism on this subject is that the integration of WhatsApp in the interface between teacher and students and making this process more dynamic can raise students' level of involvement with the issues dealt with in the classroom (Rambe & Bere, 2013). Thus, in addition to the verbal way, WhatsApp is an additional means of communication between the instructor and his students and peers (Alghazo & Nash, 2017).

Through WhatsApp, teachers can create groups representing social means of interaction (Fischer, 2013; Widmer & Larsen, 2016). In addition to being a simple handling

tool, WhatsApp provides other benefits for its users, such as a) easy access; b) efficiency; c) low cost, and; d) understandable language. Such factors corroborate that WhatsApp is used effectively by young people and adults (Church & Oliveira, 2013; Gon & Rawekar, 2017).

For the present study, WhatsApp is a communicational tool. Its use is at first for communicational purposes. However, its field of application is expanded to other areas of activity, emphasizing the educational field. So, WhatsApp is an additional resource that facilitates the communication flow between the teacher and his students. Besides, this low-cost and easy-to-use tool, when combined in teaching and learning routines, can make students more interested in the themes worked in the disciplines, which increases the level of mental internalization of the contents worked in the classroom.

5. Analysis and discussion of results

This study generated answers to the following guiding questions: a) what subjects are communicated on WhatsApp as a pedagogical space? b) Is WhatsApp an adequate educational space? And c) what learning is obtained in WhatsApp as a pedagogical space? The results obtained are below.

5.1 Subjects communicated on WhatsApp as a pedagogical space

Table 1 shows the results obtained for the question that sought to identify which subjects were most shared through WhatsApp as a pedagogical space. Note the variety of topics, representing the different interests of information and communication on the participants' part. Here, it is worth mentioning that the virtual environment approaches, in terms of communicational wealth, with the physical environments in this particular one, where the information focused on the learning content is mixed with details of other natures. In the classroom, for example, this is configured as parallel conversations.

The two subjects communicated more or less close to the learning purpose for which the environment created were Research Methodology and Interview Methods, originating, respectively, from participant 2 and participant 5. The others are all distant and different from each other. However, no matter how different the subjects dealt with in that space, they are all within the scope of the broad spectrum of Professional and Technological Education, which implies that the issues dealt effectively in different ways with their mission, which was the reason for your creation.

Table 1: Subjects most communicated via WhatsApp.

| | |
|---------------|---|
| Participant 1 | Texts indicated by teachers Questions about jobs requested by teachers |
| Participant 2 | Internship as an educational act Research Methodology |
| Participant 3 | Parents meeting Disapproval |
| Participant 4 | Pedagogical approaches and their relationship with learning Pedagogical approaches and their relationship with learning spaces |
| Participant 5 | Platform Brazil Interview methods |

Source: Data obtained by the authors.

These results indicate that the WhatsApp application is a technological tool of great relevance to increase its members' learning (Chimezie, 2002; Tulgar, 2018). This space allows different interests of information and learning to be shared. Although these subjects are not of everyone's interest, there are almost always some available to share their knowledge or information, which significantly increases the probability of obtaining the sought-after learning.

5.2 Communicational effectiveness of WhatsApp

Table 2 shows the results for the question that sought to identify the respondents' experience regarding WhatsApp's communicational effectiveness concerning the most communicated subjects. From the participants' responses, we noted that all obtained the expected return about the shared issues. Thus, WhatsApp's use as a pedagogical space proved to be effective by enabling the construction of knowledge and learning for all respondents.

Respondent 1, for example, obtained feedback on the subjects he communicated. The other respondents stated in their responses to the effectiveness of this pedagogical space concerning learning. These results reinforce the empirical finding that WhatsApp is a valuable pedagogical space. It can provide the sought-after understanding of topics related to

Professional and Technological Education through the knowledge and information shared in a dialogical way in this virtual environment.

Table 2: Effectiveness of communication via WhatsApp.

| | |
|---------------|---|
| Participant 1 | Obtained feedback on each of the subjects |
| Participant 2 | Learned the subjects related to your research project |
| Participant 3 | Learned about each of the subjects communicated |
| Participant 4 | Learned about the two subjects he communicated |
| Participant 5 | Obtained learning in both subjects |

Source: Data obtained by the authors.

The lessons learned via WhatsApp highlight the contribution that technological instruments can provide concerning learning (Chimezie, 2020; Tulgar, 2018). The sharing of information and the effectiveness of the responses obtained in the groups' interactions characterize this pedagogical space's learning process as dynamic and agile, providing quick access and internalization of knowledge, which expands the range of expertise of its members. This characteristic dynamism gives this pedagogical space its effectiveness since both the communication of subjects and the rapid return configure their point in learning concerns.

WhatsApp is a participatory space because all respondents responded positively to all three requirements necessary for management to be considered participatory (Brito, Siveres & Cunha, 2019). Respondents decide the subjects they want to learn, perform the questions with the other members of the group and, as a consequence, receive feedback from all the topics covered (Fernandes, 2015; Malta, 2015).

In the pedagogical space under analysis, all participants had the opportunity to present questions. Also, they decided about the most recommendable action course to execute it. They helped carry out the selected actions, even though they were not the victor in the debates, besides taking responsibility for operationalization. Therefore, this environment allowed the participants to effectively carry out all types of actions expected from a truly democratic environment in the pursuit of achieving the group's objectives.

5.3 Learnings obtained via WhatsApp

Table 3 shows the lessons learned by each of the participants on the subjects communicated. The diversity of issues assimilated by the research participants leads that WhatsApp as a pedagogical space encompassed many aspects related to the field of Professional and Technological Education. Although there is no similarity in the answers found, the respondents affirm that they obtained the expected learning about the communicated subjects.

Table 3: Learnings obtained via WhatsApp.

| | |
|---------------|--|
| Participant 1 | Information sharing The indicated texts helped to understand the subjects better Questions answered help to do better jobs |
| Participant 2 | An internship is an educational activity with specific characteristics Learn more about the Focus Group methodology |
| Participant 3 | Local environment variables interfere with failure WhatsApp is a valid tool for the learning process |
| Participant 4 | Learning occurs if viewed from other angles significantly Got a holistic perception of how learning occurs |
| Participant 5 | Learned to do all the stages of registering your research on the Brazil platform Learned the most appropriate ways to get respondents to participate in your research |

Source: Data obtained by the authors.

The more or less similar answers are respondents 2 and 5, who said they had learned about subjects related to their respective research projects. The other responses covered other topics related to Professional and Technological Education, such as, for example, information sharing (Respondent 1), Failure (Respondent 3), and Learning Aspects (Respondent 4). It suggests that WhatsApp can serve as an investigative research tool, which allows the

construction of more elaborated knowledge from different perspectives than other members of the shared pedagogical space.

These results demonstrate that WhatsApp proves to be quite fruitful for its members about obtaining learning (Tulgar, 2018). From the interaction of members in this space, knowledge can be quickly constructed and communicated through its interface, allowing collaborative relationships (Fischer, 2013; Widmer & Larsen, 2016). The diversity of learned subjects identified in the collected responses demonstrates the learning possibilities that this technological instrument can provide to its members.

WhatsApp has the configuration of an environment of interactionist relationships. It is possible to share knowledge in a dialogical way with the other elements of the group and, based on this construction, achieve a broader understanding of the issues communicated. It corroborates the studies by Widmer and Larsen (2016), which indicates that WhatsApp is a social medium. These relationships provide group members with an aspect of cooperation since everyone shares information in this space, and through this constant exchange of knowledge, they expand their range of expertise. It suggests this technological tool's potential in the democratic process since it allows the necessary information to be shared so that knowledge is built collectively and effectively.

The results contained in table 2 specify the level of participation perceived in the pedagogical space under analysis. All respondents had the power to decide, execute, and assume the externalities regarding this verified stage. There is a predominance of the deliberative level among the participants. They can choose the subjects they need to learn and execute when they ask about the topics of interest. These actions are held accountable in the form of feedback. They result from the dialogical aspects of communication on WhatsApp as a pedagogical space. This deliberative power is congruent with the sense of participation perceived in the studies that constitute the theoretical underpinning of the present textual construction (Malta, 2015; Fernandes, 2015; Kudo, Fernandes & Silva, 20106; Lousão, 2009).

These discoveries are significant because, from the point of view of participatory management, all members become influential leaders. Depending on the need, each one can assume the leadership position. Therefore, there is no need for a permanent leader to assist and guide the other members and their efforts towards the group's objectives. WhatsApp, as a pedagogical space, allows the type of situational leadership to be applied. That is, where the situation makes the necessary leader emerge to lead and assist the group towards the objective sought by all (Fahmi, 2020).

5.4 WhatsApp as a participatory management tool

Table 4 presents the findings regarding WhatsApp's participants' view. It is a pedagogical space where the participatory management model predominates. It shows that participant 2 is the only one whose answer fully meets the participation requirements: decision, execution, and assuming responsibilities. Participant 1 considers only two aspects of WhatsApp as participatory management: deciding and executing, therefore, is partial participation and cannot be considered as integral. Participant 3 even feels the possibility of involvement but highlights the difficulty in managing conflicts arising from divergent opinions within the same group. Participant 4 highlights the breadth of view of the issues addressed in this pedagogical space, while participant 5 says that WhatsApp is an environment where everyone has freedom of opinion and expression; therefore, it is considered participatory.

Table 4: WhatsApp as a participatory management tool.

| | |
|---------------|---|
| Participant 1 | Allows you to decide and execute |
| Participant 2 | Allows you to decide, execute and assume responsibilities |
| Participant 3 | Enables participation but is challenging to manage |
| Participant 4 | It becomes a joint interaction of different conceptions |
| Participant 5 | Everyone can give an opinion and inform |

Source: Data obtained by the authors.

These results seem to indicate that WhatsApp cannot be considered an instrument of participatory management. It would not always allow its members to actively act in the deliberative and practical processes and be responsible for the possible effects resulting from these processes according to the principles of participation seen in this study (Kudo, Pereira & Silva, 2016; Lousão, 2009; Malta, 2015). Only one participant answered the complete concept of what participation is. The others highlighted other aspects that do not fully respond to the requirements regarding involvement.

WhatsApp is a technological tool that allows the connection between people and the formation of social groups that share the same interests and preferences. However, to be considered participatory, all pedagogical space members must have the power of decision,

execution, and accountability of the actions taken. From the participants' perspective, what they think about participation and participatory management, WhatsApp does not allow full participation.

6. Conclusion

This study showed that WhatsApp could be considered a pedagogical space that allows participatory management. Participation is a phenomenon composed of decision and execution of the decision by the organization members, which includes accountability of the members for the results of the decision and implementation. In this way, participation has a decision stage and an execution stage, which are performed by the organization's members. These deliberations, followed by the actions carried out, impact both the organization's participants and their operating environment.

The communication process of WhatsApp as a pedagogical space was considered participatory. However, some of its members differed explicitly concerning accountability. It means that it would be a little malleable from this pedagogical space, unlike physical pedagogical spaces. These few members believe that this environment's governance could be compromised because there would be a minority that would only passively observe what would happen in the group.

However, WhatsApp's dialogical aspect, with its members' simultaneous interaction, makes the communication process present in this pedagogical space to be effective. There was the assimilation of new knowledge through learning. This technological instrument proved to be a learning enhancer through the emission and response to the subjects communicated in it. Therefore, it is an adequate space where different types of the public can exercise the phenomenon of participation, presenting questions to be appreciated, learning to deliberate about them, committing themselves to the execution of what was reflected. As necessary, taking responsibility for the actions performed and the results achieved, individually and in groups. For future studies, a comparison between WhatsApp and other communication tools in the management of learning in technological educations is suggested.

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Percentage of contribution of each author in the manuscript

Ronison Oliveira da Silva – 33,34%

Paulo Ubiratã – 33,33%

Daniel Nascimento-e-Silva – 33,33%