LEARNING OPPORTUNITIES WITH AUGMENTATIVE AND ALTERNATIVE COMMUNICATION SUPPORTS IN TIMES OF COVID-19

OPORTUNIDADES DE APRENDIZAGEM COM APOIO DA COMUNICAÇÃO AUMENTATIVA E ALTERNATIVA EM TEMPOS DE COVID-19

OPORTUNIDADES DE APRENDIZAJE CON APOYO DE COMUNICACIÓN AUMENTATIVA Y ALTERNATIVA EN TIEMPOS DE COVID-19

Renata BONOTTO [1]
Ygor CORRÊA [2]
Eduardo CARDOSO [3]
Daianne Serafim MARTINS [4]

ABSTRACT: This study analyzes the content of posts involving Augmentative and Alternative Communication (AAC) on Instagram by ComunicaTEA_pais page to identify what materials are being created and made available to support the learning of students with complex communication needs (CCN) during the closing of schools due to the pandemic caused by the new coronavirus. Based on the Content Analysis technique, this exploratory qualitative research analyzed 94 posts. Five categories stood out, namely: guidelines on Covid-19; formal educational activities; non-formal educational activities; guidance on the use of AAC and technological resources. The contents of the posts reveal the contribution of the page in providing information to mitigate inequalities by promoting access to resources to support communication. There is a dynamic process of educational and psychosocial support for the community of people with CCN and their support network in face of changes in the school routine of students with disabilities and CCN.

KEYWORDS: Augmentative and alternative communication. COVID-19. Accessible educational materials. Complex communication needs.

RESUMO: Este estudo analisa os conteúdos de postagens envolvendo Comunicação Aumentativa e Alternativa (CAA) na página ComunicaTEA_pais no Instagram, para identificar que materiais estão sendo criados e disponibilizados para apoiar a aprendizagem de estudantes com necessidades complexas de comunicação (NCC) durante o fechamento das escolas devido à pandemia pelo novo coronavírus. A partir da técnica de Análise de Conteúdo, esta pesquisa qualitativa exploratória analisou 94 postagens. Cinco categorias se destacaram,

a saber: orientações sobre a Covid-19; atividades educativas formais; atividade educativas não formais; orientações sobre o uso de CAA e recursos tecnológicos. Os conteúdos das postagens revelam a contribuição da página para difundir informações e atenuar desigualdades ao promover acesso a recursos de apoio à comunicação. Constata-se um processo dinâmico de apoio educacional e psicossocial para a comunidade de pessoas com NCC e sua rede de apoio frente às mudanças na rotina escolar de alunos com deficiência e NCC.

PALAVRAS-CHAVE: *Comunicação aumentativa e alternativa. COVID-19. Materiais educacionais acessíveis. Necessidades complexas de comunicação.*

RESUMEN: *Este estudio analiza el contenido de las publicaciones que involucran la Comunicación Aumentativa y Alternativa (CAA) en la página ComunicaTEA_pais en Instagram para identificar qué materiales se están creando y poniendo a disposición para apoyar el aprendizaje de los estudiantes con necesidas de complejas de comunicación (NCC) durante el cierre de las escuelas debido a la pandemia causada por el nuevo coronavirus. Basado en la técnica de Análisis de Contenido, esta investigación exploratoria cualitativa analizó 94 publicaciones. Se destacaron cinco categorías, a saber: directrices sobre Covid-19; actividades educativas formales; actividades educativas no formales; orientación sobre el uso de CAA y recursos tecnológicos. El contenido de las publicaciones revela la contribución de la página para difundir información y mitigar las desigualdades al promover el acceso a recursos para apoyar la comunicación. Se percibe un proceso dinámico de apoyo educativo y psicosocial para la comunidad de personas con NCC y su red de apoyo ante los cambios en la rutina escolar de los estudiantes con discapacidades y NCC.*

PALABRAS CLAVE: *Comunicación aumentativa y alternativa. COVID-19. Materiales educativos accesibles. Necesidades complejas de comunicación.*

Introduction

This study investigates the posts made on the Instagram social network page entitled ComunicaTEA_pais[5], during the period of school closings in Brazil, due to the Covid-19 pandemic[6], to identify which materials are being created and made available to support the learning of students with complex communication needs (CCN). CCNs result from developmental disorders or acquired conditions that impact speech and communication. The ComunicaTEA_pais page is dedicated to spreading knowledge about Augmentative and Alternative Communication[7] (AAC) and accessible support materials for people with complex

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[5] ComunicaTEA_pais is an initiative of parents of children with CCN aimed at spreading knowledge about AAC.
[6] "COVID-19 is caused by the etiologic agent named SARS-CoV-2, which first appeared in China in November 2019 and has spread across the country and the world" (CASTAMAN; RODRIGUES, 2020, p. 03).
[7] There are other names to reference to the field in Brazil such as Extended and Alternative Communication and Supplementary and Alternative Communication. We opted for the name Augmentative and Alternative Communication due to its greater proximity to the term adopted by the international community in English.

communication needs (CCN) and their support network. During the Covid-19 pandemic, the page has stood out in welcoming families, teachers, professionals and students with CCN, at the time of social distance, which officially began on March 17, 2020 in Brazil. When considering that the Brazilian State is a signatory to the International Convention on the Rights of Persons with Disabilities (CRPD) (ONU, 2007), the right to education is formally guaranteed by laws and policies in the country for people with disabilities (PwD) (MEC, 2016). At this time, however, efforts have been made to prevent the PwD from being erased (PRATES, 2020a) and the deepening the violation of their rights even more in the face of the COVID-19 pandemic. This is a qualitative research of an exploratory nature (SAMPIERI; COLLADO; LUCIO, 2013), which investigated the content of the posts made on the ComunicaTEA_pais page on Instagram during the period from 10 of March to 31 of May, 2020, accounting for a total of 174 posts. Thus, as previously explained, the purpose of the research is to identify which materials are being made available to support the learning of students with CCN in this moment of isolation and Emergency Remote Teaching (WILLIAMSON; EYNON; POTTER, 2020).

Education of students with disabilities in Covid-19 times

From the announcement of the world pandemic by COVID-19 by the World Health Organization (WHO) (CASTAMAN; RODRIGUES, 2020), as well as in other countries, in Brazil, the pandemic demanded the establishment of strategies of social distance indefinitely[8] (VILLAS BÔAS; UNBEHAUM, 2020). The closure of educational institutions occurred through the decree of Ordinances No. 343, 17 of March, 2020 (BRASIL, 2020a) and no. 544, of 16 June, 2020 (BRASIL, 2020b) and Provisional Measure no. 934, of 1 April, 2020 (BRASIL, 2020c), which defined the substitution of the face-to-face classes modality with the Emergency Remote Teaching (ERT) modality (WILLIAMSON; EYNON; POTTER, 2020), possibly, until the month of December 2020 (SANTOS, 2020).

According to UNESCO (2020), with the closure of schools and universities, in the world, approximately 1.2 billion students are left without classes due to the effects of the Covid-19 pandemic and, consequently, initially neglected by their institutions, so that the educational processes started to occur in the home teaching modality (ZHAO, 2020). The contemporary educational scenario was already operating, to a certain extent, in the logic of Bring Your Own Device (BYOD), that is, the student takes his device to school. From COVID-19, however, the

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[8] Até a data da submissão deste artigo a quarentena estava em vigor, ou seja, início do mês de julho de 2020.

Bring Your Own School Home (BYOSH) logic comes into effect, having seen the shift of educational activities to the home environment (WILLIAMSON; EYNON; POTTER, 2020). According to Williamson, Eynon and Potter (2020), ERE has caused major changes for all actors involved in the educational scene, whether they are teachers (content production, classes, assessment), students (carrying out activities) or families (assistance in carrying out activities). According to Moreira and Schlemmer (2020), in ERE, online classes are endowed with the same constitution as in-person classes, evidencing a mistaken transposition from the face-to-face format to the online one with the mediation of digital technological resources, such as desktop computers, notebooks, tablets and smartphones connected to the web over the Internet. Thus, given the scenario of social isolation, educational institutions and education professionals attributed great power to the use of Digital Technologies.

The guidance of the Brazilian government on the continuity of the educational process via ERE, once again showed an abyss between the distinction of social classes in Brazil, since many schools in the Basic Education network, municipal and state, as well as educational institutions Higher education do not have the infrastructure conditions to follow up the online classes (NÓVOA, 2020). Digital Interactive Technologies (GARCIA *et al.*, 2011, p. 82), in the midst of chaos, obtained greater employment because they enable the mediation of several activities via ERE. On the other hand, they demanded that teachers have to reframe their teaching and learning practices in the context of the pandemic. Thus, the didactic-pedagogical processes in the online version, even if temporarily, have required teachers to rethink how students can learn and be assessed remotely.

Castaman and Rodrigues (2020, p. 3) emphasize that social distance from the educational scenario has been an aggravating factor, with regard to education, namely due to the fact that it has "aggravated evasion and increased inequality, as well as the discomfort of having to assume the teaching and learning process as a condition of autonomy, empowerment and self-determination"[9]. In view of this scenario, it is also necessary to problematize the consequences for the education of students with disabilities who, historically, have already experienced several barriers, and whose right to education is further weakened in times of crisis (WORLD BANK, 2019).

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[9] "agravando inclusive a evasão e o aumento da desigualdade, assim como o desconforto de ter que assumir o processo de ensino e aprendizagem como condição de autonomia, de empoderamento e de autodeterminação"

Education for people with disabilities

Education is a universal right and, in recent decades, the understanding of the need to guarantee the right to education for people with disabilities has been constantly reiterated at the international and national levels. Internationally, one of the most important documents today is the International Convention on the Rights of Persons with Disabilities (CIDPD) (ONU, 2007), which was promulgated in Brazil by Legislative Decree No. 186 and Decree No. 6,949 of 25 August, 2009.

One of the premises of the CIDPD in its article 1 is "to promote, protect and ensure the full and equitable exercise of all human rights and fundamental freedoms by all persons with disabilities and to promote respect for their inherent dignity"[10] (ONU, 2007, n/p). In addition to the Education theme, which is dealt with in Article 24, it is important to consider Article 9, on Accessibility, when the need for measures to ensure equal access to the physical environment, transport, information and communications, including information and communication systems and technologies, as this is the only way it will be possible for people with disabilities to live independently and participate fully in all aspects of life (BRASIL, 2009). In addition to the CIDPD, infraconstitutional laws and other legal frameworks reaffirm the right to education for students with disabilities, among the most recent ones, the Brazilian Inclusion Law (BRASIL, 2015) and the National Education Plan (BRASIL, 2014), which sets goals concerning the education of people with disabilities.

Efforts have been made to prevent the erasure of people with disabilities (PRATES, 2020a) and the violation of their rights, especially in the face of the COVID-19 pandemic, which imposes social distance and, therefore, has the potential to deepen processes of segregation and exclusion since people with disabilities appear as subjects of risk groups for contamination by the COVID-19 virus (PRATES, 2020b). Specifically, in a survey on the Ministry of Education site[11] it was not identified any guidelines, actions or guiding documents in favor of the education of students with disabilities and complex communication needs until then. However, for the realization of the right to education it is important to identify and eliminate barriers to learning, communication as well as the provision of reasonable accommodation[12], that is, individualized support measures. The adaptations and individualized

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[10] "promover, proteger e assegurar o exercício pleno e equitativo de todos os direitos humanos e liberdades fundamentais por todas as pessoas com deficiência e promover o respeito pela sua dignidade inerente"

[11] Monitoring the updating of information on the MEC website until 30 June, 2020.

[12] "The necessary and appropriate modifications and adjustments... when required in each case, in order to ensure that people with disabilities can enjoy or exercise, on equal opportunities with others, all human rights and fundamental freedoms" (ONU, 2007).

support measures refer to technology and AAC as basic in the educational processes, in particular, for students with disabilities with CCN.

Augmentative and Alternative Communication (AAC)

Technology plays a crucial role in promoting autonomy and barrier-free social participation for people with disabilities. AAC, being a sub-area of Assistive Technology, aligns itself with the objectives of promoting autonomy and participation while collaborating to eliminate communication barriers and barriers to accessing information (ONU, 2007; BONOTTO, 2016) for people experiencing conditions that impact speech, either restricting or preventing it temporarily or permanently (BUEKELMAN; LIGHT, 2020). When thinking about the education of people with disabilities, Vigotski (2011) highlights the possibilities for cultural development where the path of natural development encounters obstacles. The path of cultural development concerns knowledge that is socially constituted and organized in order to intervene and modify through "artificial strategies" the environment in which we live (VIGOTSKI, 2011). It is postulated here that AAC can act as an access strategy to the communication framework (BONOTTO, 2016).

The field of Augmentative and Alternative Communication (AAC) concerns the design, development, production and distribution of assistance and support. According to ASHA (2004), AAC consists of an integrated set of symbols, resources, techniques and strategies. Symbols are representational units, which may involve gestures, images or sounds, which represent words or messages. The resources can be printed, physical or electronic materials, involving the use of devices, such as cell phones, tablets and computers (ASHA, 2004). A widely used AAC resource format is communication boards, which are grids of rows and columns where each frame can contain an image (symbol) and text, that is, the resource contains symbols that enable the construction of messages to mediate the communication. Techniques and strategies concern how resources are accessed and messages can be transmitted more quickly and efficiently in the communication process.

Beukelman and Light (2020) highlight that the central purpose of intervention with the AAC is not to find a technological solution to communication problems, but to enable individuals to efficiently and effectively engage in a wide range of interactions and participate in activities of their choice, thus exercising self-determination. More specifically, these communicative interactions allow (1) to communicate needs and wants; (2) transfer information; (3) socially approaching to establish, maintain or develop social engagement to

build relationships; (4) practicing social etiquette and, (5) providing organization through internal dialogue (BEUKELMAN; LIGHT, 2020).

The benefits of AAC are well established in the literature, AAC (1) improves communication, (2) supports language development, (3) increases participation, (4) supports understanding and (5) reduces frustration and behavior problems. Since communication is essential for the mediation of learning and development, in order to realize the right to education for students with disabilities with complex communication needs, AAC provides the person with the possibility of autonomy and to access opportunities on an equal basis with their peers (BEUKELMAN; LIGHT, 2020).

Method

This is a qualitative research[13] (SAMPIERI; COLLADO; LUCIO, 2013) of an exploratory nature, given the little knowledge about the role of social networks in the establishment of coping strategies of Covid-19 in the period of social distance due to the pandemic and its impacts on education.

The guiding research problem of this study was the identification of the types of content of the posts made available by the ComunicaTEA_pais page to support students with CCN, at this time of ERT. The choice of the ComunicaTEA_pais page was made for convenience because it is the page on the topic on Instagram with the most regularity in posts, the largest number of subscribers (currently, more than 10,000) and the greatest diversity of materials. According to the information obtained in the profile, the page ComunicaTEA_pais is a group formed by parents of children on the autism spectrum with CCN being an initiative linked to the ComunicaTEA study group[14]. The period of registration of the posts was from 10 March to 31 May, 2020. This time frame is justified by coinciding with the moment of the pandemic and the decree of paralysis of the on-site teaching offer and establishes the ERT, which until the completion of this study, it had not come to an end.

For the treatment of data, the Content Analysis (CA) technique proposed by Bardin (2011) was adopted to the content in image, text and video of the corpus, covering three stages,

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[13] Research based on publicly available materials on the social network, not constituting research with human beings and, therefore, not requiring approval by an ethics committee for its execution (KOZINETS, 2014).

[14] ComunicaTEA has the support of the group of the Social Cognition Ambulatory Dr. Marcos T. Mercadante (TEAMM) of the Department of Psychiatry of the Federal University of São Paulo (UNIFESP). The objective of ComunicaTEA is "to promote studies and dissemination of Augmentative and Alternative Communication in Brazil". Its trajectory begins in April 2019 with the participation of an event and subsequent establishment of a study group linked to TEAMM on AAC, with monthly face-to-face meetings starting in August 2019, adding in addition to families, professionals such as psychologists, occupational therapists, speech therapists, educators, etc.

namely, (a) pre-analysis, (b) exploration of the material and (c) treatment of the results. According to Bardin (2011), the pre-analysis stage comprises the "floating" reading, from which the choice of documents, the formulation of hypotheses, the referencing and the elaboration of indexes and indicators occur, therefore, the preparation of materials to be submitted for analysis. The material exploration stage comprises the analysis itself - it is the time for the systematic application of decisions. In this step, there is the coding that emerges from the analysis combined with the classification and categorization of the data; and, also, it is the moment that leads to the perception of homogeneity, pertinence, objectivity, fidelity and productivity of data on the one hand and the exclusion of non-relevant data. Finally, the last step is the treatment of results, where significant and valid data are highlighted (BARDIN, 2011).

Results and discussion

The analysis process of the research corpus took place through the stages of pre-analysis, exploration of the material and treatment of the results, which were deployed to integrate five phases that make up the Content Analysis technique (BARDIN, 2011). Through the "floating" reading (BARDIN, 2011), the first contact was made with the content of 174 posts on the ComunicaTEA_pais page made between 10 of March and 31 of May, 2020. Some hypotheses were formulated about the possible educational contributions about the varied range of topics in the posts, namely, book suggestions, tips on various materials, recipes, activities and events related to the AAC. In this way, the disposal of posts that did not offer a more directly visible educational contribution, such as book tips on AAC, the dissemination of events and the phrases of experts, that is, the instances in which there was reference to the field of AAC, but not necessarily the applied use of it.

The pre-analysis stage corresponded to Phase 1, Data Preparation, for analysis of posts made within the defined time scope, that is, between 10 March and 31 May, 2020. Of the 32 posts made on the page in March, 10 met the scope of this study; of the 67 posts in April, 38; and of the 75 posts in May, 46. Thus, for data analysis, 94 posts from the ComunicaTEA_pais page were considered. The posts were recorded in a spreadsheet in chronological order of publication, theme, description and media used. Each post received the code (P) followed by a number corresponding to the order of registration, such as, for example, P01 - Post 01, so that all the codes elaborated were registered in an Excel spreadsheet, also containing date (day/month/year), theme and format (text, image or video).

The material exploration stage corresponded to Phase 2 - Material exploration; Phase 3 - Coding; and Phase 4 Categorization. In Phase 2, Exploration of the material, the posts, previously ordered, were tabulated again, in order to proceed with coding. At that time, the posts were aggregated by type and similarity (materials related to COVID-19, plays, games, routine organizers, music, adapted stories, etc.). The forms of presentation of the post materials themselves also favored this grouping, for example, Material Tip - Games, Material Tip - Recipes, Material Tip. In Phase 3, Coding, codes were created in order to operationalize the process of categorizing the topic of the posts. Subsequently, a critical reading of the content of the posts was carried out and codes were created that express the purpose in AAC of the theme of each post, making a total of 13 codes.

In Phase 4, Categorization, this stage aims to unite, that is, the formation of sets of codes by incidence and similarity, an action that allows to group data and consolidate a meaning for such information. After all posts were coded and categorized, it was necessary to map the codes that had the highest incidence and similarity in relation to the types of topics in the posts. From this phase, five large groups of posts emerged: posts about COVID-19, posts with non-formal educational activities, posts with formal educational activities, posts with guidelines on the use of AAA and Technological Resources. Finally, step 3 of treatment of the results corresponds to Phase 5, the Content Analysis itself (BARDIN, 2011). In this phase, the codes with the highest incidence and similarity were subjected to four additional procedures, through Content Analysis (BARDIN, 2011), these being: a) detailed reading; b) reflective analysis, by the researchers, about the theme and purpose of each post; c) identification and creation of groups of convergence categories, for the purpose of consolidating meaning; and d) creation of categories of meanings. Five categories emerged from the incidences and similarity between the content present in the posts: COVID-19, guidance on the use of AAC, non-formal educational activities, formal educational activities and technological resources.

Those posts that contained materials that could favor access to the school curriculum, such as reading in adapted books and content in Portuguese, mathematics, humanities and natural sciences, were categorized as formal educational activities. Activities with the potential to favor the organization of family dynamics and the productive use of time for parents and children during the social distance period, such as recipes, music, routines, games and games were categorized as non-formal educational activities.

Table 1 summarizes the result of the data generated in phases 2, 3 and 4 in order of similarity and incidence of the corresponding categories and codes: (a) Non-Formal Educational Activity (46 posts) with 4 codes - plays and games, recipes, daily routines and

music; (b) Guidance on the use of AAC (16 posts) with 2 codes - communicative mediation and behavioral organizers; (c) Formal Educational Activity (15 posts) with two codes - academic content and reading (d) COVID-19 (10 posts) with three codes - information to avoid contagion, AAC boards on the state of health and characterization of COVID -19; and, finally, (e) Technological Resources (06 posts) with 2 codes - general applications and AAC applications. It is noteworthy that the five posts under the code Applications in general contained indications of 4 to 5 applications that resembled the definitions of the categories Formal educational activity and Non-formal educational activity, however, because they were gathered at random, it was decided to consider them with a separate category because the unit of analysis was posting.

Table 1 – Synthesis of data collected in order of similarity and incidence of the corresponding categories and codes

Category	Number of Issues	Codes		Number of Issues
Non-formal Educational Activity	46	AENF-JB	Games and plays	15
		AENF-R	Recipes	13
		AENF-RD	Daily routines	11
		AENF-M	Music	08
Guidance on the use of CAA	16	OR-MC	Communicative mediation	12
		OR-OC	Behavioral organizers	04
Formal Educational Activity	15	AEF-CA	Academic content	09
		AEF-L	Reading	06
Covid-19	10	CV-CEC	Guidance to avoid contagion	05
		CV-PES	AAC boards on health status	03
		CV-CC	Characterization of Covid-19	02
Technological Resources	06	RT-APG	General apps	05
		RT-APCAA	AAC Apps	01

Source: Devised by the authors

The Non-Formal Educational Activity category was the one with the highest incidence of codes and number of posts (46/94) and included AAC resources involving Games and Plays, Recipes, Daily Routines and Music. Figure 1 shows an application example with the most recurring code: Games and Plays.

Figure 1 – Example of the Games and Plays category[15].
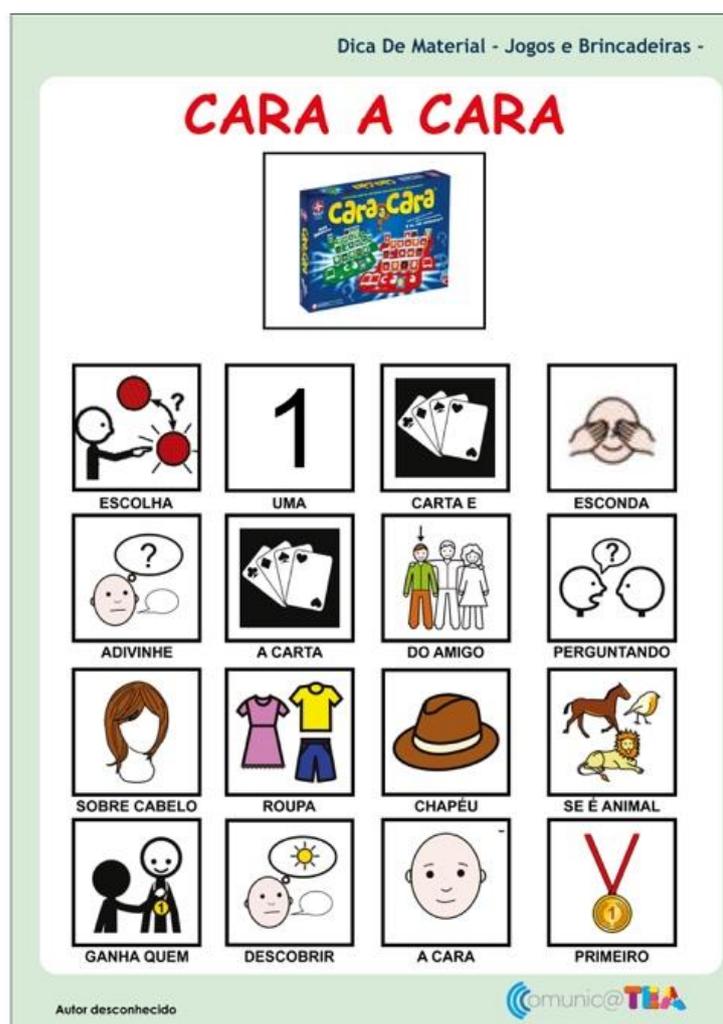
(Image Description) Vertical image of the ComunicaTEA_pais page. On a white background 17 symbols, one at the top being larger and 16 just below and divided into 4 rows and 4 columns. Above the first symbol, in red, the text: FACE TO FACE. Below each symbol is a black word. Around a light green border with dark blue text at the top: Material Tip: games and plays. And, in the lower right corner, the logo of Comunica_TEA (End of Description).
Source: ComunicaTEA_pais (2020)

This AAC resource is organized as written text and the support of graphic symbols about the process to participate in the game Face to Face. Based on Beukelman and Light (2020), it appears that the AAC in this situation favors the understanding of the steps or actions involved in the chaining of the game. From this resource, a student with CCN and their communication partners can better coordinate their actions to interact while playing. The communicative interaction promoted by the game and supported by the AAC resource favors not only the development of the bond and the relationship, but also the internal dialogue because, the user

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[15] We read on the image going from the first line of fours squares from left to right: Choose; One; Card and; Hide; Guess; the Card; of your Friend; Asking; About Hair; Clothing; Hat; If it is an animal; Wins who; Discover; the Face; First.

can visually resort to the resource to remember what needs to be done at each step. Thus, this resource supports understanding, increases participation and, according to the skills of each user, it can also support language development.

The second category with the highest incidence, Guidelines on the use of AAC, turned to content aimed at instrumentalizing communication partners about the use of AAC. It is known that efficient communication requires the joint construction of messages and meanings (BEUKELMAN; LIGHT, 2020), therefore, communication partners, whether parents, family members, and everyone who maintains interactions with students with CCN also need support as for the use of AAC, even more so at that time, when family relationships intensify due to the longer time spent at home and also due to the different interactional dynamics mediated by the media in Emergency Remote Teaching. In fact, the more guidance and support the partners receive, the better the prospects for quality in the interactions promoted by all types of activity, educational or not. Figure 2 is an example of a post with an emphasis on communicative mediation, that is, related to the development of a productive interaction between AAC users and communication partners.

Figure 2 – Example of the category Guidelines on the use of AAC[16]
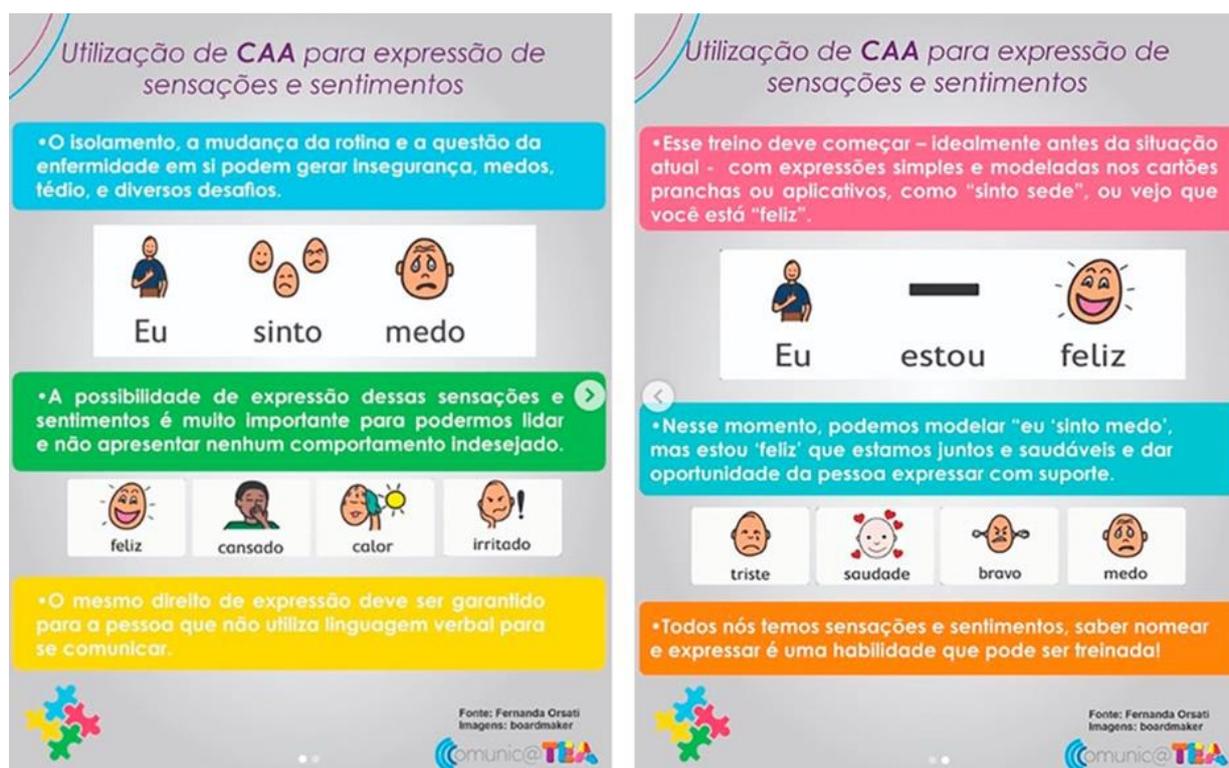
(Image Description) Figure composed of 2 vertical images from the page ComunicaTEA_pais. On a light gray background, white rectangles with symbols and words below each symbol. Before and after each white rectangle, a colored rectangle with white text. At the top of each image the title in purple: Use of AAC to express sensations and feelings. And, in the lower right corner, the logo of Comunica_TEA (End of Description).
Source: ComunicaTEA_pais (2020)

Figure 2 offers content to raise awareness and guide communication partners regarding the emotional management of AAC users, considering this moment of concern and uncertainty due to Covid-19, it is an important guidance and resource to be applied to reduce the frustration and behavior problems.

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[16] We read on the image: Left Square from top to bottom: Use of AAC to express sensations and feelings; Isolation, change of routine and the issue of illness itself can generate insecurity, fears, boredom, and several challenges; I - feel - fear; The possibility of expressing these sensations and feelings is very important for us to be able to cope and not show any unwanted behavior; happy - tired - heat - angry; The same right of expression must be guaranteed for the person who does not use verbal language to communicate / Right Square from top to bottom: Use of AAC to express sensations and feelings; This training should start - ideally before the current situation - with simple and modeled expressions on the board or application cards, such as "I am afraid", or I see that you are "happy"; I - am - happy; At that moment, we can model "I 'am afraid', but I am 'happy' that we are together and healthy" and give the person the opportunity to express themselves with support; sad - longing - angry - fear; We all have sensations and feelings, knowing how to name and express is a skill that can be trained!

The Formal Educational Activity category encompassed AAC resources with an emphasis on academic content (Portuguese, mathematics, humanities and natural sciences) and reading (Figure 3).

Figure 3 – Example of the Formal Educational Activity category[17]
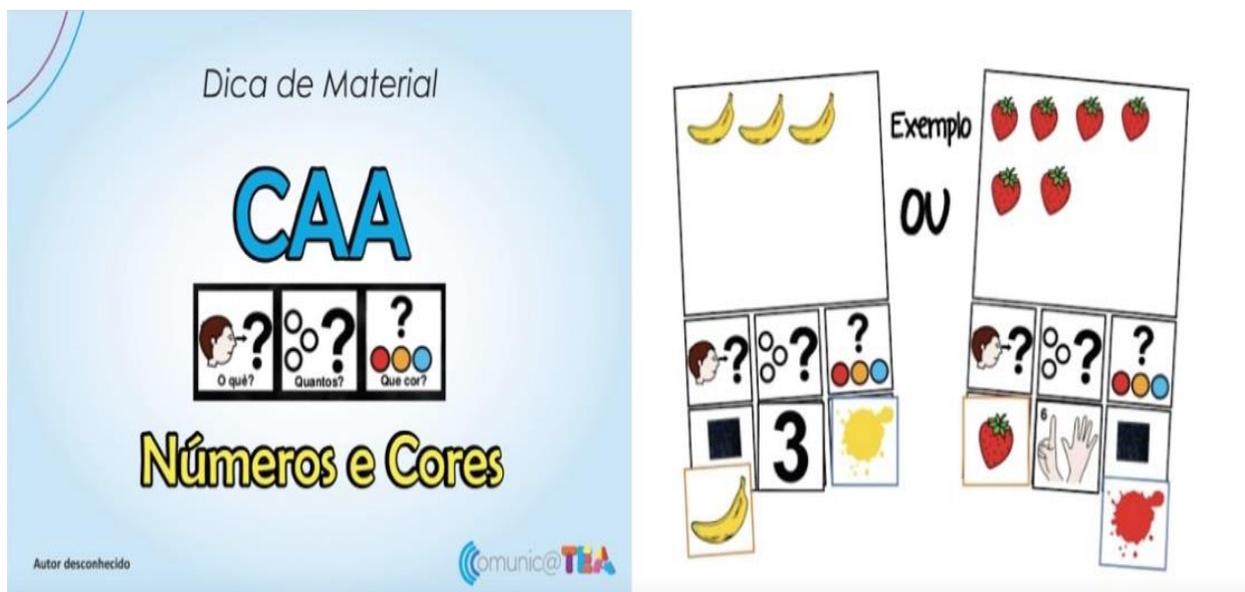
(Image Description) Figure composed of 2 horizontal images from the page ComunicaTEA_pais. The first, on a light blue background, black text at the top: material tip, and in the center, 3 squares of white background with a symbol and a word in each. Above them, in blue and very large CAA. And below them, in yellow: numbers and colors. And, in the lower right corner, the logo of Comunica_TEA (End of Description).
Source: ComunicaTEA_pais (2020)

This illustrative example shows how AAC can be integrated with learning support activities. In this case, the AAC facilitates the understanding of the information, the response of the AAC user with the use of concrete symbols, that is, images that look like what they represent and, therefore, increase participation. In this situation, in addition to learning concepts related to mathematics (numbers and quantification), AAC resources can certainly assist in the development of communication - the communicative ability to answer questions - and, of language, with the vocabulary of foods and colors in this instance.

To exemplify a COVID-19 category content, figure 4 is presented. This post contains a set of AAC resources, (1) explains what COVID-19 is and offers information on how to avoid contagion, (2) features text supported by symbols and (3) a board of choices for the users can

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[17] We read on the image: Left Square from top to bottom: Material tip; AAC; What? How many? Which color?; Numbers and colors. Right square the words in the middle: Example; or.

define their activities in this period of social distance. These materials are certainly very relevant and have applicability for a variety of interactions in this moment of social isolation.

Figure 4 – COVID-19 Category example[18]
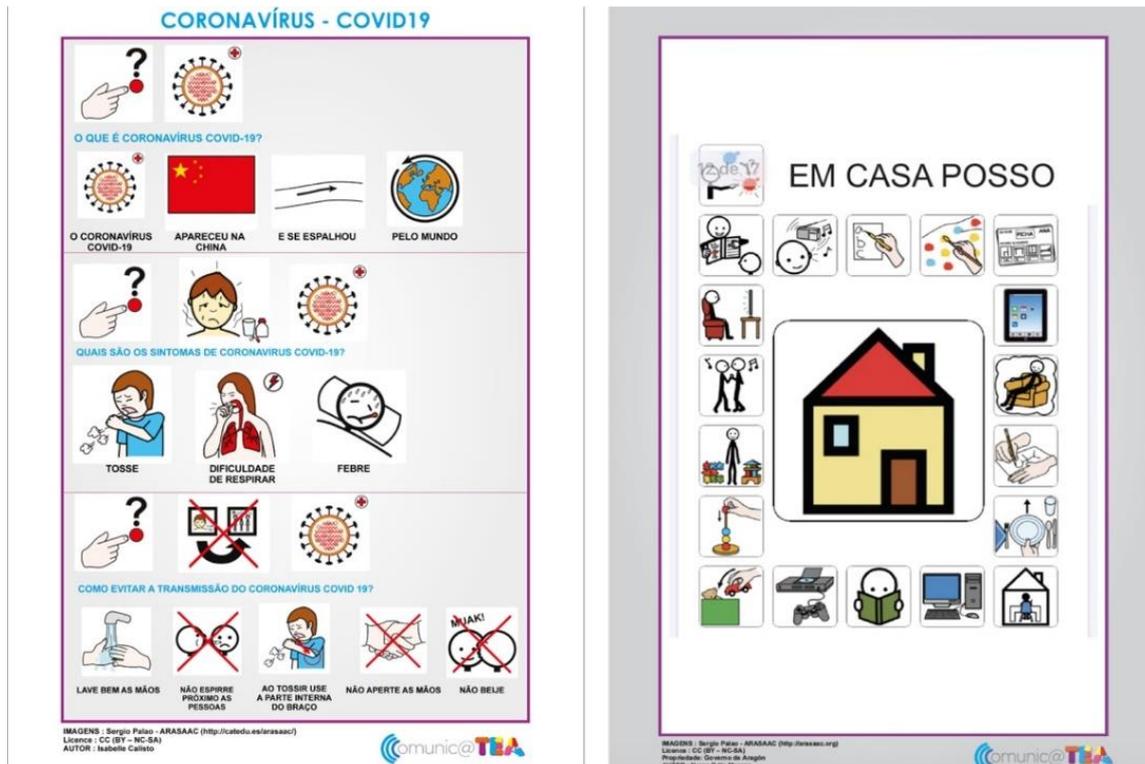
(Image description) Figure composed of two vertical images from the ComunicaTEA_pais page. In the first, on the left, at the top the title in light blue: Coronavirus - COVID19. On a light gray background with a thin purple border, 6 lines with white squares with 1 symbol in each square. On each line, below the symbols a line of light blue text. And, in the lower right corner, the Comunica_TEA logo. In the second image, on the right, on a white background 18 symbols in white squares outline a large house symbol in the center of the image. At the top, in black: at home I can. Around the image a thin purple border followed by a large light gray border. And, in the lower right corner, the logo of Comunica_TEA (End of Description).
Source: ComunicaTEA_pais (2020)

Offering these resources with the support of AAC symbols favors more productive dynamics within the family and supports the communication of parents with children with CCN. Through these it is possible to communicate needs and wants; pass on information about Covid-19, on ways of prevention and care, supporting understanding and favoring the organization through internal dialogue, involving actions that unite students and families in

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[18] We read on the image: Left square from top to bottom from left to right – CORONAVIUS – COVID-19; What is COVID-19?; The coronavirus COVID-19; Appeared in Chine; and spread out; through the world; What are the symptoms of coronavirus COVID-19? Cough; Difficult in breathing; fever; How to avoid coronavirus COVID-19 transmission? Wash well your hands; Do not cough near people; When coughing use the inner arm to block; Do not shake hands; Do not kiss. / Right Square – At home I can.

order to allow communication and integration of students with disabilities to be consolidated at home with assistance from AAC. The resources present an explanation about the interruption of classroom classes, which is extremely relevant, as the lack of this type of guidance and visual support may reflect on the inappropriate behavior of children and adolescents with CCN when they do not understand what is happening and the associated reasons to social distance. For reasons of space and relevance, no figure is presented for the Technological Resources category. In this category, posts were identified indicating apps in general and AAC apps. It is considered that such indications establish an opening for other resources that can support activities in the period of social distance, fulfilling different purposes.

Students with CCN who are away from school activities at that time and their families lack support and organization to continue their children's global development processes. The materials on the ComunicaTEA_pais page favor this audience to understand more and express themselves in a wide range of activities and situations, which contributes to their inclusion and social participation and the development of self-determination.

Final considerations

Many AAC users, especially those in elementary school, are at a time of language construction and expansion of communicative skills. The availability of resources, activities, guidelines and materials in general involving the use of AAC can support this process. AAC mediates communication in the limitation or absence of speech, therefore, the activities proposed on the page ComunicaTEA_pais provide opportunities for learning and development through materials to understand the environment, stimulate autonomy, make choices, engage in games, play and a diversity of other activities. These activities can elicit rich, relevant and meaningful interactions for students with CCN and their communication partners, as they have the potential to support from the simplest aspects of daily life and leisure activities to occupy time productively to activities related to school content.

The ComunicaTEA_pais page, despite its short existence, provides a wide and varied range of materials inherent to the AAC area in Portuguese. The post archives are available for free access through a link available on the page. In this moment of social isolation and ERT, the reach of these contents cannot be sufficiently estimated. Likewise, as it is an open content, it is more easily accessed by education and health professionals who, in turn, can become multipliers for so many other beneficiaries.

Students with CCN who are away from school activities at that time and their families lack support and organization to continue their children's global development processes. AAC resources serve this audience so that they can understand more and express themselves in a wide range of activities and situations, which contributes to their inclusion and social participation and the development of self-determination.

As future work, it is intended to seek other sources of material, both national and international, for further deepening and analysis of the content made available to students with CCN according to these different sources of offer.

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