



Reinventing for inclusion: Report of experience of the 'APAE IN SENAC' project in response to the challenges of social isolation

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ABSTRACT: This work is a report of the experience of the extension project 'APAE no SENAC: a contribution to an inclusive society', conducted by the SENAC Águas de São Pedro in "emergency remote" (ERE) mode, during a period when face-to-face meetings were not possible. For the development of the activities, the active gamification methodology was chosen as a strategy for stimulating cognitive skills, such as inductive reasoning, memorization, and attention. The activities took place throughout 2021, via meetings on the Zoom platform. It was found that gastronomy has considerable potential to promote social inclusion for people with intellectual difficulties. The importance of interdisciplinarity activities in university extension programs, and the use of active methodologies and gamification as a relevant strategy for constructing knowledge in education, were also observed.

Keywords: APAE; SENAC; Gamification; Gastronomy.

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INTRODUCTION

The repercussions of the spread of the SARS-COV 2 (coronavirus) caused impacts for the entire world, from March 2020. The World Health Organization (WHO) declared it to be a respiratory disease of varying severity, with capacity for widespread dissemination, which led the WHO to declare a situation of pandemic (World Health Organization, 2020, Freitas, Napimoga & Donalisio, 2020). Due to the high levels of contagion, and the high demands placed on the public health systems, social isolation policies, i.e., a lockdown, became the main strategy used to mitigate the effects of the virus (Tassara et al., 2021).

In this scenario, the Brazilian Ministry of Education issued ordinance no. 343, dated March 17, 2020, which recommended replacing face-to-face education with online classes. Thus, educational institutions, at virtually all levels of education, began to switch all their educational activities to the Emergency Remote Education (ERE) Model of distance learning (EAD), enabled by digital devices called Digital Information and Communication Technologies (DICT).

Emergency Remote Education is a modality that enables the educational activities to be continued, preventing stagnation in the teaching process and enabling a larger number of students to be reached (Coqueiro & Souza, 2021). Hartwig et al. (2019) highlight that active teaching-learning methodologies are used by educational organizations to innovate and expand creativity and motivation. In the context of social isolation, these types of approaches can be very effective for enhancing students' interests and learning (Arruda & Siqueira, 2021).

Due to the limitations caused by the social isolation policies, the extension project 'APAE in SENAC: a contribution to an inclusive society' had to adapt its activities accordingly. Having previously taught in mostly face-to-face mode, the project had to switch to a new model, embracing the emergency remote teaching modality.

Cabral (2002) views university extension projects as a key axis of a committed university environment that is committed to society, as it represents a link between research and the contents learned by the students and taught by the teachers, in a mutual process of exchange of knowledge, which strengthens the relationship between teaching and learning and contributes to the fabric of society (Marques, 2020).

In this type of activity, there is a kind of articulation between knowledge that derives from teaching and research, and the needs or demands of that locality, such that the social reality is transformed. It also represents an expansion of the student's academic life, because new knowledge and experiences help to

extend the practical theory learned in the classroom (Ufes, 2013, Silva, 2017).

The aforementioned project aims to promote activities of a mostly practical nature, focused on the gastronomic universe, and involving citizens who have some kind of physical or psychological limitation. The project also seeks to promote and disseminate an inclusive culture through gastronomy. The activities are carried out at the teaching kitchen of the Centro Universitário Senac, Águas de São Pedro campus - SP. During the classes, specific dishes are prepared by students of the project, together with volunteers and students of the Associação de Pais e Amigos dos Excepcionais (Association of Parents and Friends of Exceptional Children) (Associação de Pais e Amigos dos Excepcionais - APAE) in the city of São Pedro - SP, through a participative methodology.

The main goal of this report is to demonstrate the course of activities and methodological procedures that marked the adaptation from a face-to-face extension project proposal to the online model, via the Zoom platform. It is understood that the experience can contribute to the development of pedagogical activities, ideas and strategies in university extension projects.

RESEARCH PROBLEM AND RELEVANCE

As mentioned above, this report aims to demonstrate the course of activities and methodological procedures that marked the adaptation of the APAE project developed by scholars of the Centro Universitário Senac, Águas de São Pedro campus, together with students from the APAE, during the first semester of 2021, through the emergency remote modality. The project, in the context of remote education, sought to use the active gamification methodology as the main participative strategy to conduct the proposed activities during the meetings, which were held on the Zoom platform.

Higher education institutions (HEI) are noted for their capacity to generate and disseminate knowledge, especially if considered the impacts to the students. But a need is observed to extend the dissemination of that knowledge in other segments of the society. To this end, extension projects can help construct a collaborative and multicultural learning environment (Ivenicki, 2021).

In the same context, Germinai et al. (2022) highlight the possibility of using an extension project to promote actions designed to improve the physical and mental health of the local population, through the dissemination of knowledge. This initiative could also be directed to other areas, goals and people, in order to



promote other benefits for society.

Extension projects mostly consist of face-to-face meetings with the community. However, in the context of SARS-COV-2 pandemic, all activities initially had to be cancelled. By adapting to the new on-line environments, the activities of the extension project were also transformed, to fit the new format. Herte de Moraes et al. (2021) affirm that the adaptation process must consider and align the technical requirements with the project execution and the needs of the community.

Hassan et al. (2021) affirm that the on-line learning environment has suffered from high student drop-out rates, due to a lack of motivation caused by the neutral experience. As a possible solution, the authors propose the use of gamification to increase students' engagement.

Moran (2018) defines active teaching learning methodologies as strategies that focus on the effective participation of the students or individuals involved in the process, seeking to place them in the position of protagonists. In general, gamification is the use of resources such as games, sounds, competitions and predetermined objectives to promote a dynamic teaching process that teaches the content in an entertaining way (Piske & Kontz, 2020, Alexander, 2021). Taxa et al. (2018) highlight that gamification does not necessarily consist in creating a new game, but rather, it involves the application of logic to engage the learner in the construction of learning and problem solving.

According to Colpani and Homem (2016), gamification makes use of the games mechanics in several contexts, and depends on actions, behaviors and control mechanisms in order to build a convincing and engaging experience for the beneficiary.

This report of experience also aims to contribute to discussion on use of active methodologies in education, and the construction of teaching-learning alternatives for members of the APAE and other entities that teach cookery and promote social inclusion for people with disabilities (PWD).

DEVELOPMENT

Prior to the period of social isolation due to Covid-19, most of the activities were carried out twice a month, in the kitchen laboratories of the host institution. Bearing in mind the student's technical limitations, the ingredients and the dishes were planned in advance, and often, some of the steps in the preparation of the dish were carried out the day before the class. In the face-to-face modality, the project coordinators, students and volunteers all took part, together with the APAE students, and their teachers who accompanied them.

The procedure was as follows: i) deciding on the dishes or preparations to be made for the activities; ii) drawing up a food datasheet form, considering ingredients

specifications, weights, measures and cooking methods; iii) writing out a shopping list and a list of utensils required for the class.

On the day of the classes, the students were welcomed; they washed their hands, and were given disposable hair nets to meet food safety requirements. Once inside the kitchen laboratory, the APAE students were divided into small work groups (up to four students) and placed in different kitchen workstations. The Senac students explained the tasks, giving step-by-step demonstrations on how to execute the dish. Then, the students began to process the ingredients and cook the recipe.

Extension activities involving the gastronomic universe in favor of inclusion reinforces the integrative character and demonstrates the importance of food as a mode of intense sociability and inclusion in its multiple contexts (Montanari, 2008, Franzoni, 2016).

Thus, it is observed that the development of activities is an effective strategy for promoting the social inclusion of people with disabilities. In addition, the students responsible for the project at the Senac became agents of social transformation, developing the ability to articulate theory and practice in favor of social values (Silva et al., 2019).

But when face-to-face meetings were no longer possible due to the lockdown, it was considered whether it would be possible to continue the activities remotely. As the project in previous periods had proven to be important for developing socio-emotional components and technical skills for the students of both institutions, every effort was made to adapt the activities to the remote format.

Based on the assumption defended by Tassara et al. (2021), that the pandemic arouses not only the fear of becoming infected, but also sudden changes in lifestyle that strongly impact on individuals' mental health, it was hoped that continuing these activities would help to mitigate these factors in the lives of those involved, offering a space for digital socialization.

In order to accomplish the new goal of the project and its new dynamics, an on-line meeting platform was required, where the students of both institutions could gather. In partnership with the coordinators from the APAE São Pedro, the Zoom platform was chosen as the digital environment for the adapted activities. This platform has seen exponential growth during the pandemic, registering as many as 300 million users in a single day (Santos, 2020).

We sought to work on subjects of the gastronomic universe, such as cooking methods, utensils, popular recipes that were easy to execute, traditional food festivals, ingredients, etc. The activities to be conducted by the students and the teacher responsible were planned in advance, and the material was then



elaborated using the free version of the website Canva®, which enables the material to be set out in an interactive and visually attractive way.

The activities were conducted within a gamification logic, in a playful form of interaction, to address themes of gastronomy. Playful activities were used to stimulate the memory, inductive reasoning through guessing games, stimulation of perception and focus through the use of questions and answers, and dynamics of food design when arranging the dish, which aimed to bring together all the mechanisms mentioned.

According to Freitas et al. (2020), educational games enable greater interaction between those involved, through an intense participatory and continuing pedagogical process. Thus, two activities were grouped for each cognitive mechanism, as follows:

ACTIVITIES

The workshops 'Planting Flavor at Home' and 'History of the Brigadeiro' (a Brigadeiro, a traditional Brazilian sweet, is a fudge ball made from condensed milk):

The first workshop consisted of planting herbs, such as parsley, chives and coriander, in cans. Via the Zoom platform, the students made an on-line slide presentation of the herbs, and the planting techniques, adapted to the urban space. The Senac students demonstrated how to plant herbs, in a live online session, and the APAE students planted herbs in their own pots, at home, showing them to the camera. At the end of the activity, questions were asked about the planting process, to help reinforce the content taught.

The second workshop began with a brief theoretical presentation, followed by explanation of the how to execute the dish and the different types and ways of producing the brigadeiros. At the end, the APAE students were encouraged to recall parts of the processes initially addressed.

The workshop 'Learning about the Kitchen Pestle' started with a brief introduction on the history of this utensil, through an on-line slide presentation. In the subsequent stage, a seasoning made from garlic, herbs and salt was prepared in real time. In order to achieve the class goals, the pestle and the ingredients were purchased in advanced, and sent to the APAE students' homes.

The fourth activity entitled 'Introduction to Kitchen Utensils' aimed to stimulate inductive reasoning through guessing games. As the utensils were shown, the students explained the purpose of each one. Based on the clues given in the explanation, the students were asked to try and guess the names of each utensil. The workshop 'Identifying Vegetables' aimed to develop inductive reasoning. Various vegetables were shown in an on-line slide presentation, divided into

three levels of difficulty (easy, intermediate and difficult - from the most to the least common species). Based on the clues given in the presentation, the students were asked to name each vegetable. In this activity, there is an articulation between memory and reasoning, as the students had already come across several of the vegetables shown, whether alone or used in another dish. The mental exercise consisted of elaborating and recalling the names of each vegetable. Finally, the last two activities; 'Chef's Dish Assembling a Pizza' and 'Making a Hamburger' aimed to bring together all the content developed in the previous workshops. Through a slide show on Canvas®, all the steps used to create the dish were shown, including its name, the supplies needed, ingredients, utensils used, etc.

The activity was conducted so that the Senac students explained the entire process of assembling of the dishes, through a teaching strategy of stimulating the memory, and reasoning for the purposes of execution in gastronomy.

RESULTS

This is a descriptive study, in the form of a report of experience, focusing on the experience developed in the extension project, considering its adaptation to the remote learning model enabled by the use of TDICS and active teaching and learning methods. In view of the activities developed, it is noted that the construction of 'gastronomic thinking and doing' can be promoted in the context of pedagogical strategies associated with the logic of gamification, especially when it comes to the inclusion of people with disabilities.

It can be affirmed that it was feasible to adapt the 'APAE in SENAC' project to the emergency remote education model (ERE). One of the crucial reasons for this result may be the engagement of the students and teachers in formulating new proposals for action, so as not to exclude the beneficiaries from the extension project. Digital platforms also played an important role in the success of the project, as they enabled individuals in different locations to interact with each other (Soares, Santana & Comper, 2020).

In the virtual environment of the Zoom platform, the interest of the APAE students in the subject of cookery was notable. This was seen in their participation and engagement with the activities proposed by the extension students. It was also noted that in a situation of social isolation, virtual interaction proved to be quite efficient, not only for leisure purposes, but also for the construction of knowledge.

Table 1 shows the activities carried out during the virtual meetings, and the cognitive abilities associated with each one, for the students' development.

Table 1: classes and promoted skills Source: Elaborated by the author.

CLASS	Stimulated cognitive skills
PLANTING FLAVOR AT	Attention and memoriza-
HISTORY OF THE BRIGADEI- RO	Attention, memorization and inductive reasoning.
LEARNING ABOUT THE KITCHEN PESTLE	Attention, memorization and inductive reasoning.
INTRODUCTION TO KITCH- EN UTENSILS	Attention, memorization and inductive reasoning.
IDENTIFYING VEGETABLES	Inductive reasoning.
FOOD HYGIENE	Attention and inductive reasoning.
ASSEMBLING A PIZZA	Attention, memorization and inductive reasoning.
MAKING A BURGER	Attention, memorization and inductive reasoning.

Source: Elaborated by the author.

In general, it can be said that the proposed activities achieved their general objectives, such as interaction, inclusion and possibility of constructing knowledge from the culinary universe by stimulating the students' cognitive abilities. Through this experience, it was perceived and inferred that that gamification is an important and motivating teaching strategy for promoting the inclusion of people with intellectual limitations through gastronomy.

Therefore, it is understood that gamification enabled the consolidation and dissemination of gastronomic knowledge, and may be the object of new pedagogical proposals focused on projects, classes and audiences and new investigations of the theme under the wider topic of education and gastronomy.

Finally, it is also verified that the dissemination of knowledge of the University for the purpose of social intervention is an important milestone for the promotion and democratization of knowledge, social inclusion and transformation of the reality, making up the teaching, research and extension triad that guides the constitution of the University (Lorenzet & Andreola, 2020).

PRACTICAL IMPLICATIONS AND CONCLUSIONS

It is inferred that the adaptation proposed in the project successfully achieved its goal of enabling the activities of social inclusion through gastronomy to contin-

ue. Throughout the process, it was observed that the new proposal was well accepted by the APAE students, who reciprocated through their effective participation and engagement during the activities.

Some of the main problems identified were related to issue of poor connectivity, given that many of the APAE students were from "lower middle class" families and did not have the best technological equipment or a good internet connection. Thus, it was seen that only 6 or 7 of the APAE students took part in the activities, as opposed to around 15 students for the face-to-face classes.

The problem described above is also seen in various studies in the field of Education; due to social isolation, the Internet has become a crucial means of accessing knowledge. Thus, it is noted that there is a need for greater democratization of digital access that could culminate in a process of digital inclusion (Oliveira, 2021).

In addition to the issues related to connectivity, the available time on the free version of Zoom platform, i.e. forty minutes, also reduced the interaction time between extensionists and the APAE students.

Based on the experience described, various lessons were learned: the first is that gastronomy, as a cultural product and a field of knowledge, can be used for inclusive purposes, even in the digital environment. Of course, to achieve these results, the gastronomic knowledge needs to be articulated with other fields of knowledge, such as Education and gamification as a pedagogical strategy. This construction further reinforces the importance of interdisciplinary actions for the theoretical and methodological development of university extension programs (Del-Masso et al., 2017). Another lesson learned through this experience is the potential of digital platforms and virtual learning environments (VLE) in extension activities, enabling teaching-learning and university extension activities to be continued, despite the imposed lockdown (Soares, Santana & Comper, 2020). Finally, it is also highlighted that active teaching methodologies are becoming increasingly important for engaging students, aligned with digital resources that are gaining relevance in the construction of knowledge (Moran, 2018).

In view of the above, gamification is an effective strategy for the development of activities with people with disabilities, as it fully immerses the individual and the situation taught, increasing their interest and engagement to assimilate tasks (Colpani & Homem, 2016).

In the area of tourism and related areas, such as gastronomy and hospitality, this report of experience can contribute by sharing practices that exceed expectations, achieving a successful level of engagement. It is important to continue to investigate different approaches and resources, in order to increase students' learning. This project can also be replicated in other



higher education institutions. These conditions extend the range of the project and maximize the benefits for all the institutions involved.

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