

## Webquest and blog as educational strategies in school health



*Webquest e blog como estratégias educativas em saúde escolar*

*Webquest y blog como estrategias educativas en salud escolar*

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### ABSTRACT

**Objective:** To describe health education strategy on healthy eating using WebQuest and blog with elementary school students from a public school.

**Method:** To report the health education activity carried out in 2014 with fourteen students from the 8th year of public school. The “Healthy Food Blog” was developed by the students using the WebQuest methodology guided by the nurse during four periods of the science discipline.

**Results:** In three work groups, the students performed the WebQuest made available on the website with the introduction, task, process and resource stages. The blog was written in a free website in response to WebQuest questions. The students’ evaluation highlighted the positives, difficulties and recommendations for future activities.

**Conclusion:** This technology makes the search for knowledge participatory and active, besides being a space for integration of health professionals in the school environment.

**Keywords:** Nursing. Blogging. Health education. School health.

### RESUMO

**Objetivo:** Descrever ação de educação em saúde sobre alimentação saudável utilizando como estratégia a WebQuest e o blog com estudantes do ensino fundamental de uma escola pública.

**Método:** Relato da atividade de educação em saúde, realizada em 2014 com quatorze estudantes do 8º ano de escola pública. O “Blog da Alimentação Saudável” foi desenvolvido pelos estudantes utilizando a metodologia da WebQuest, orientados pela enfermeira durante quatro períodos da disciplina de ciências.

**Resultados:** Em três grupos de trabalho os estudantes realizaram a WebQuest disponibilizada em site com as etapas introdução, tarefa, processos e recursos. O blog foi elaborado em site gratuito em resposta às questões da WebQuest. A avaliação dos estudantes destacou os aspectos positivos, as dificuldades e as recomendações para futuras atividades.

**Conclusão:** Essa tecnologia torna a busca pelo conhecimento participativa e ativa, além de ser um espaço de integração dos profissionais da saúde no ambiente escolar.

**Palavras-chave:** Enfermagem. Blogging. Educação em saúde. Saúde escolar.

### RESUMEN

**Objetivo:** describir la acción de educación en salud en la alimentación saludable, mediante una estrategia de búsqueda en la red y de un blog con estudiantes de primaria en una escuela pública.

**Método:** actividades de educación en salud realizadas en 2014 con catorce estudiantes de una escuela pública de 8º grado. “El Blog de la Alimentación Saludable” fue desarrollado por los estudiantes, utilizando la metodología de la WebQuest, guiado por la enfermera durante cuatro períodos de la disciplina de la ciencia.

**Resultados:** en los tres grupos de trabajo los estudiantes llevaron a cabo la Webquest disponible en el sitio web a través de los siguientes pasos: introducción, tareas, procesos y recursos. Se creó el blog en un sitio web gratuito en respuesta a las preguntas WebQuest. En la evaluación de los estudiantes se destacaron los aspectos positivos, las dificultades y las recomendaciones para actividades futuras.

**Conclusión:** esta tecnología convierte a la búsqueda del conocimiento en algo participativo y activo, además de ser uno de los espacios de integración de los profesionales de la salud en el entorno escolar.

**Palabras clave:** Enfermería. Blogging. Educación en salud. Salud escolar.

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## ■ INTRODUCTION

The school environment is one of the scenarios in which health professionals seek to develop educational activities with students, families and teachers. In the perspective of health promotion, proposals for educational activities should be participatory by developing autonomy, respecting the cultural diversities, and the understanding that the participants of this process have about health<sup>(1)</sup>. These actions aim at broadening the concept of health through the clarification of the school community on various topics so that they can make their own choices.

The participation of health professionals in the school environment has intensified in recent years in Brazil with projects such as the Health in School Program (HSP), proposed in 2007, which aims at integrating actions of the basic health network with the education of children and adolescents<sup>(2)</sup>. Currently, in many schools in Latin America, there is a movement to focus on health promotion, even so it cannot be disregarded that educational actions are still carried out for the purpose of screening and prevention<sup>(3)</sup>.

Considering the importance of this space for the development of health education strategies, professionals in this area need to plan the actions along with the teachers, allowing the integration with curricular contents, discussed in a transversal way and contextualized with the local reality from the previous knowledge of students and their families<sup>(4)</sup>.

Digital educational technologies, such as WebQuest and the blog, are resources used in formal educational contexts of young people and adolescents, both in Brazil and in other countries<sup>(5-9)</sup>. WebQuest is a guided research strategy, in which information comes from online resources, developing an active, collaborative and autonomous learning, which involves students in activities to be performed in pairs or in groups<sup>(10)</sup>. This feature is used in textual production<sup>(7)</sup> and can collaborate in blogging. Blog is defined as a public virtual diary that contains information about people, places or situations, used to express ideas, opinions and positions regarding a particular subject<sup>(5,8)</sup>.

The blogs reports on health topics, developed with students of primary and secondary education, signaled the possibility of using these resources for health education in the school environment<sup>(5)</sup>. This is how the proposal of integrating the educational technologies of knowledge of many young people and adolescents with actions of health education in the school environment came up, by connecting the health professionals to the

teachers and using the computer lab infrastructure available in the school.

Thus, the objective of this article was to describe the action of health education on healthy eating using as strategy the WebQuest and the blog with elementary school students of a public school.

## ■ METHOD

The development of health education actions took place in a state public elementary school located in Porto Alegre (Rio Grande do Sul, Brazil) from March to April 2014. The University, the proponent of the activities described in this article, regularly develops health education actions in this School with the participation of undergraduate and postgraduate students.

The proposal for WebQuest and blog development were presented to the School's coordination, which approved the initiative, indicating the 7<sup>th</sup> grade class (8<sup>th</sup> year) and the science teacher who would participate in this activity. Fourteen students aged 12 to 13 years old were enrolled in this class, six females and eight males. It should be highlighted that this was the only 7<sup>th</sup> grade class (8<sup>th</sup> year) of this School. The nurse and an undergraduate student in Nursing attended the School in order to follow the activities of the class, to know the reality experienced by the students, and to evaluate the infrastructure of the Computer Laboratory.

The food content present in the Transversal Health Theme was being developed in science classes and was indicated by the teacher for the development of educational activities. Thus, the "Healthy Food Blog" was developed by the students through the methodology of WebQuest ([www.alimentacaosaudavelblog.blogspot.com.br](http://www.alimentacaosaudavelblog.blogspot.com.br)) and guided by the nurse. The activity took place integrated to the discipline of Sciences and was done in the Informatics Laboratory of the School during four periods of class.

During the realization period of the WebQuest and the blog, diaries with the purpose of highlighting information that would collaborate with the development of the educational action were made by the nurse. At the end, the students performed an oral evaluation of the activities, reporting the positive aspects, the difficulties found and the recommendations for future actions.

Since this educational activity was part of a research, the authorization for its execution was obtained with the direction of the School and the approval of the Research Ethics Committee of the Institution (CAEE No. 23552213.1.0000.5347). The students and their guardians

were invited to participate in the study voluntarily, informed that they could suspend their participation at any time without interfering with their evaluation, in addition to being asked to complete and sign the Free and Informed Consent Term.

## ■ RESULTS

WebQuest has organized the development of the “Healthy Food Blog” ([www.alimentacaosaudavelblog.blogspot.com.br](http://www.alimentacaosaudavelblog.blogspot.com.br)), observing the steps recommended in the literature<sup>(11)</sup>, using a website for this activity (<http://www.WebQuestfacil.com.br>) that was available for free during the activity. The strategy used to develop the WebQuest and the blog will be described below.

## The WebQuest proposal

The educational activity was carried out in the Informatics Laboratory with the duration of four periods of 50 minutes each, with the students being organized into three groups of four to five components. The groups were given the names “Farmers and Cattlemen”, “Traders” and “Nutritionists”, and each had questions to be answered with the support of bibliographical research.

The stages of the WebQuest were the ‘introduction’, with brief text presenting the objectives of the activity and encouraging the students to take interest in the theme. In the second stage, called ‘task’, it was presented what a blog was and the proposal of elaboration of it. The opening page of the WebQuest with the structure of the steps to be performed by the students is presented in Figure 1.



**Figure 1-** WebQuest Homepage. Porto Alegre, 2017

Source: <http://www.WebQuestfacil.com.br/WebQuestphp?wq=8257>

In the item ‘processes and resources’ it was detailed the path needed to carry out the activity. The students researched different topics according to their group, for example, the ‘nutritionists’ researched the composition of foods, the ‘farmers and cattlemen’ group studied the production and distribution of food, while the ‘traders’ sought the way of marketing and preserving food. After completing this first stage, the three groups answered questions about healthy food intake. In the search for information, the students used bibliography indicated in the WebQuest and selected by the nurse, or materials from the library of the School. Cooperative work and individual responsibility were encouraged at all times.

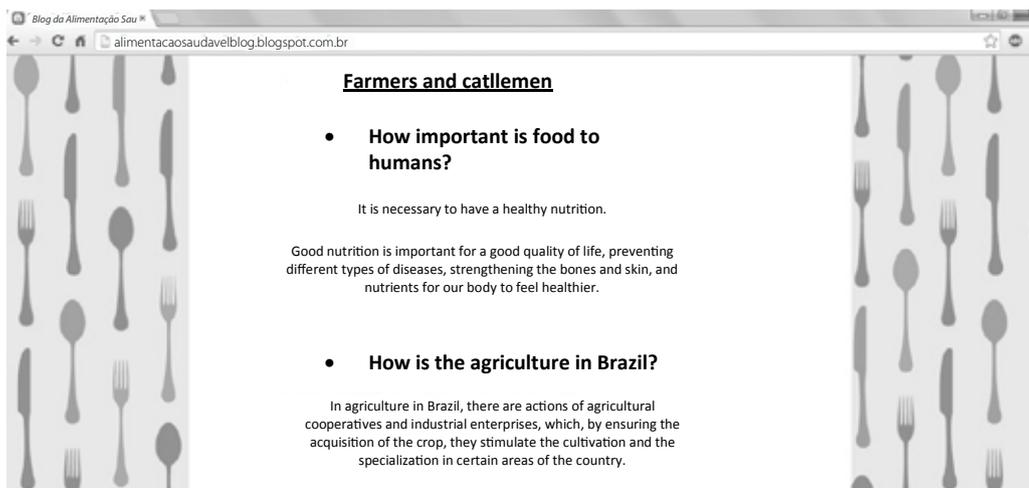
## The construction of the blog

The blog was produced by all the students participating in the three groups that posted the answers to the questions asked in the WebQuest. The posts, that is, the publications made by the students, were presented in the blog in reverse chronological order, with the first post occupying the last position, while the most recent one appears first, having the author’s name, publication date and time, as well as space for comments.

The standard of the publications was textual in the format of questions and answers, using the cultured norm of the Brazilian Portuguese Language with its correct spelling. Images,

videos and other illustrative resources were not included. The “Farmers and Cattlemen” and “Nutritionists” groups highlight-

ed their publications using different font colors and sizes. The structure of the blog is shown in Figure 2.



**Figure 2-** Structure of the ‘Healthy Eating’ blog. Porto Alegre, 2017

Source: <http://www.alimentacaosaudavelblog.blogspot.com.br>

Finally, after consulting the material developed by their own group and their colleagues, the students set the menu of what they considered a healthy meal and published it on the blog according to what they learned in the activity with the support of the materials made available on WebQuest on this subject. The blog space for comments was not used without the participation of readers outside the educational activity. In addition to creating the blog, the students had the opportunity to access educational resources that addressed the topic under study including games and applications.

### Students’ evaluation of the educational activity

In the development of the WebQuest and the blog, fourteen students participated. In general, the students expressed a positive opinion regarding the activity, considered a differentiated proposal that enabled them to work in groups. As for the aspects that they considered positive, it was highlighted the ease in handling the writing software of the blog, the promotion of a better assimilation of the content in study with more attention and concentration in its accomplishment, besides the fact that they liked the subject chosen to be worked.

Among the difficulties highlighted, were the precarious conditions of the computer lab and the Internet access. Students also reported that group work was not always possible, with uncooperative colleagues who made it difficult to complete the activities, but that they had a similar behavior in other situations in the classroom.

### DISCUSSION

The use of digital resources in primary and secondary education, both in Brazil and abroad, has been described in the literature and has been expanding in recent years<sup>(5-6)</sup>, but, as it has been previously observed, there is still a shortage of computer equipment, and the Internet access is not adequate, reflecting the difficulties that exist in public educational institutions in Brazil<sup>(12)</sup>. Despite the difficulties of infrastructure and equipment, the results of the educational activity demonstrated that it is possible to develop a proposal of health education that encourages students to use different resources.

The creation of a blog is intended to share information about a particular subject by expanding the knowledge network, leaving the geographic space of the school. Failure to carry out comments showed that there was no interaction of readers with the authors of the blog. Another study that analyzed blogs about sexuality produced during school activities in Brazil and Portugal, have also found a similar result, emphasizing that when there are comments in blogs, they are not always focused on the theme and promoters of learning<sup>(5)</sup>.

The fact that the students did not interact with classmates from other classes or did not share this activity in their social networks demonstrates the separation between the school world and the world of young people’s lives. Studies about school blogs and the use of social networks by adolescents have demonstrated this rupture<sup>(13)</sup>. Students do not express themselves in the tool as they do in their daily social networks, disseminating school activities with

postings of content solely school-related and with formal language, without making comments that would facilitate the interaction with other Internet users<sup>(13)</sup>.

In educational activities that developed blogs and where comments were posted, it was observed that students were encouraged to proceed with the project, exploring the interaction space for knowledge construction<sup>(14-15)</sup>.

In the present study, it was observed that the receptivity of the school community to the proposed project was very good, demonstrating that health professionals have a space for the realization of integrated projects. However, health professionals play an important role in the development of educational actions, and must be aligned with the needs of the school community and the conditions they offer. The school shows itself as a promising space for the promotion of the health of children and adolescents, offering actions that are capable of triggering reflections regarding their healthcare<sup>(16)</sup>.

The objective of this health education activity in the school environment was not to change the students' habits and customs, but rather to begin from their previous knowledge and to encourage them to rethink their diet and to practice new habits. In the developed educational activity, students were provided with theoretical foundation and critical reflection on the entire process of production, distribution and preparation of food, in addition to the cultural influences present in this process. The school is an important scenario for the construction of a new health culture, and nurses act as triggers of health actions and discussions, as well as they fortify the relations between health and education professionals, making it possible the creation of health education spaces<sup>(4,17-18)</sup>.

## ■ FINAL CONSIDERATIONS

The purpose of the educational intervention presented in this study was to insert digital technologies in the school environment and evaluate them as health education strategies to be used by nurses in school health. As a tool to support teaching, this technology is able to modify the way students learn, making the search for knowledge participatory and active, as well as being a space for integrating health professionals into the school environment.

Some aspects should be taken into account when developing WebQuest and blog in future activities, such as the possibility of integrating this activity with teachers from different disciplines, requesting the maintenance of the equipment, and informatics training in teacher's education and for health professionals, in order to guarantee a better use of the available resources.

As an indication for future assistance and research activities in the area, there is the possibility of building a network among schools through blogs developed by its students in an interdisciplinary way and with the participation of health professionals, by addressing the most diverse subjects on health education.

The accomplishment of this study brought a series of new questions regarding the insertion of the technologies in the school space, specifically regarding the blog as a tool of support to the health professionals and also to other areas that work in that place. Regarding the Nursing care, it is important that there is an incentive to the presence of the nursing professional in the school environment, so that it acts with the objective of promoting the comprehensive health of the students, in addition to rethinking the nurse's training, so the professional would be able to act in the area of health education, aiming at developing their thinking.

It is important to prepare teachers and all those who work in schools so that they know the possibilities of technology as a teaching strategy and so that they can insert them in that context. In order to encourage that the activities carried out have students as the center of the learning process, so that the teacher and/or other professionals may act as mediators in the process of insertion of technology as a teaching strategy, thus stimulating online cooperation.

There is the possibility of carrying out new studies, investigating the possibilities of developing blogs with school communities, and forming a collaborative network that goes beyond the limits of the school. The limitations of this study were related to the fact that it is an activity in phase of implantation, developed with a single class of students and that faced some problems of infrastructure for its execution, which needed to be overcome.

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