

La prensa como recurso didáctico en la enseñanza de la Biología

The press as a didactic resource in the teaching of Biology

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Resumen

En la actualidad los textos escolares de la disciplina Biología en la escuela media cubana carecen del adecuado y necesario nivel de actualización. En respuesta, se aporta un procedimiento para la elaboración de folletos a partir de la recopilación, clasificación y selección de artículos de la prensa plana y digital cubana, con informaciones sobre temas de carácter científico y tecnológico actualizados que pueden ser utilizados en la enseñanza de la Biología. Los métodos empleados permitieron llegar a conclusiones generales acerca de la necesidad de la propuesta para fortalecer la motivación de los estudiantes en las clases de Biología.

Palabras clave: Recurso didáctico; Prensa plana; Proceso de enseñanza-aprendizaje; Revolución sociocultural

Abstract

At present, the textbooks of the Biology discipline in the Cuban secondary school lack the adequate and necessary level of updating. In response, a procedure is provided for the preparation of brochures from the collection, classification and selection of articles from the Cuban digital and flat press, with information on updated scientific and technological issues that can be used in the teaching of the Biology. The methods used allowed to reach general conclusions about the need of the proposal to strengthen the motivation of students in Biology classes.

Keywords: Educational resource; Flat press; Teaching-learning process

Introduction

The world is plunged into a great sociocultural revolution, based on the vertiginous development of science and technology; this makes the teaching - learning of school sciences also a vitally important sociocultural activity and this implies that knowledge is updated continuously.

In this sense, the teaching-learning process in the Cuban middle school faces difficulties with the updating and necessary contextualization of the knowledge that is part of the knowledge system of school sciences, within them, Biology. In this regard, it is known that its school programs and texts suffer from the appropriate and necessary level of updating.

On the other hand, there are alternative print media to school texts, which do not replace them, but complement them, and which are generally very little used, these media are useful since the necessary update and are the great variety of articles taken from the press or specialized magazines, with which the teacher prepares printed teaching materials such as brochures, monographs, among others and that is something known, but not sufficiently exploited.

The use of the press, as a didactic resource, allows to develop skills of inquiry and contrast of information and other research skills fundamental for the development of the student, also allows to raise the motivation towards teaching activities, strengthens the vocational orientation, allowing knowledge to recover its essential character, recoverable and transferable to other learning situations.

With the work “The press as a didactic resource in the teaching of Biology”, a procedure is proposed for the preparation of teaching materials, as brochures, based on the collection, classification and selection of articles from the flat and digital press and that can be used in the teaching of biology in middle school.

Development

The teaching-learning means have stopped being a mere auxiliary of the teacher, to become an active component and developer of the whole educational process.

The teacher has been and will continue to be the guiding element of the whole process, but in order to transmit knowledge, train skills and develop feelings and attitudes; the teaching-learning means will

always be very useful. The teaching means serve not only for the direct exhibition work of the teacher, it is also a powerful tool for the independent study of students in their different modalities.

However, the biological knowledge that is taught in the Cuban middle school has remained stable and without significant changes in the different educational improvements, predominantly the leading roles of the teacher who directs it, basically under an instructive posture of supposedly finished and imperishable knowledge and where the student is simply a receiver of information. In its teaching, the use of traditional teaching-learning means has predominated, which evidences an insufficient use of the updated information coming from the flat and digital press, which means that for some students it has little significance.

- The press, due to its characteristics, becomes, without a doubt, the most didactic means to use in the classroom, its easy access and varied information allow it to be used in different areas of the curriculum. Thus his employment in class allows students to be trained in understanding what happens, in the space in which they live; they become aware of this reality as citizens, they value freedom as expression, they encourage self-expression and creativity, among other benefits.

It agrees with (Quiroga, 1999) that the use of the press as a teaching resource encourages the integration of content assimilation (the instructional), the formation of faculties (the developer), and the achievement of traits in other ways of personality (the educational).

- The instructive is the process and result of the assimilation of knowledge, of the mastery of the skill for the development of work, for the sake of its preparation for life.

- The developer refers to the faculties that man has, and which are the psychophysiological support for the execution of the activity. The faculty and other physical and spiritual qualities of man (functional potentialities), are the result of the mastery of multiple abilities whose learning does not respond to a single algorithm, but which are included by the psychophysiological peculiarities of the student in the context of his ontogenesis, and in which their aptitudes, as well as genetic characteristics, play a transcendent role.

- The educational is related to the formation of values and convictions, in the course of the teaching-learning process of Biology and at the philosophical, ethical, political, aesthetic and physical level.

In the teaching of Biology, the teacher must insist that the student acquires knowledge as long as it is significant for his subsequent performance (instruction), so that the student's aspiration is not reduced

to the immediate satisfaction of a final exam In this way the general objectives become, in the student, an essential reason for the relative effort in their teaching activity.

However, the use of the press as a means of teaching-learning or teaching resources must be carried out on a scientific basis, taking into account the factors that influence the success or failure of teaching.

In this regard, it is necessary to consider the level of student development, the proposed objectives and the method to be used to develop the activity.

The level of the students is important because, on their intellectual development and previous experience, the ability to interpret the articles of the press depends, so that they help the development of interpretation and reading skills, while enriching their intellect.

Several authors have carried out studies and research on the emergence, evolution, classification and use of teaching means, among which Golkan (1983) Encoder (1985) (Cordero and Álvarez, 1985, 1990, 1991, 1997) González (1986) Guillermo (1995) Cabero (1998) García (2000) Álvarez (2004) Fernández (2003) Matos (2006) and Gómez (2011)

For the purposes of this research, the authors assume as a reference the classification of the means of education of González, 1986 when referring to the means that do not require technical resources as a support for use, referred to as means of direct use.

These media, according to the same author, do not need projectors, recorders, viewers or other technical equipment (electronic or electrical), but can be used as they are, directly. This type of medium acquires an extraordinary relevance at present, because with them the creativity of the teacher in classes is revealed.

On the other hand, its distribution covers educational centers and even where there are none, the teacher can prepare it for himself. To a large extent, the quality and scientific level of teaching depends on its use.

The press is one of the means of direct use, its use in the middle school allows a minimum level of quality that, of course, can be enriched with other means or with technical resources, if they exist.

Related to the use of the press as a means of teaching-learning and teaching resources, the works of Bartolomé (1994) Quiroga (1999) Riverón (2002) and Sanz (2004) stand out. It is an important antecedent for this research, firstly, the article by researchers Ramirez, and Addine (2005) and

(Ramírez, Addine and López, 2006) on the written press as an alternative to encourage scientific culture and where they provide an alternative methodological to enhance the scientific culture from the use of the press in pre-university students and, secondly, the diploma work of Frómeta (2018) about the sociocultural update of biological knowledge and where it provides an algorithm for the collection, selection and preparation of press articles brochures.

In this regard, among the characteristics of the press, as a means of direct use are:

- a) Its didactic value, which depends on the use made of it by the teacher. This is not the case with more complex technical means such as cinema, TV, among others, which carry a coherent and integral message. In direct media, such as the press, the teacher is the one who argues, integrates, contributes and guides.
- b) They are operable by teachers and students. With the use of the press the student does not adopt a passive and receptive position, but can and should be on it, can participate in their learning in an active way.
- c) It allows a high degree of objectivity of teaching. Authors such as Khorin (1979) state that to the extent that the development of logical thinking and the cultural level of the student is lower, their ability to assimilate scientific abstractions is also less, and therefore, these means are generally recommended for lower levels and intermediate teaching (middle school).
- d) Enable independent student work. These resources can be used individually to solve exercises, tasks, problems, be updated on a specific scientific topic that is related to some school content and the press whose relevance is decisive so that the biological content that is taught acquires a social significance for the student, a social sense.
- e) Its didactic use is limited within the course.

In order to select the press as a didactic resource, it is necessary to consider the level of development of the students, this is very important, because as previously mentioned of their intellectual development and their previous experience depends on the ability to interpret the biological content that the press transmits.

Its use should be conceived in a way that also helps to develop its capacity for interpretation and reading, while enriching its intellect. In this case, the press acts as a means for the integration of the concrete and the abstract and facilitates the continuity of thought processes.

Another aspect to consider with the use of the press is the methodological objective of its use. We consider that it constitutes the basis of independent study and assumes its basic source of knowledge. Its correct use helps to develop habits of scientific work in the student and allows linking theory with practice.

In summary, we can specify that the didactic resource in the teaching of Biology, in this case the press and very particularly the brochures made from the collection, classification and selection of articles from the flat and digital press, with information on topics of scientific and technological nature updated and / or novel, should stimulate the student's productive activity, must be inserted into a media system, is considered as a means of direct use that meets the characteristics mentioned here and should consider the level of development of students , the methodological objective of its use and the ideal moment of its use depending on the level of assimilation and depth of content.

Procedure for the use of brochures made with press articles

The work was grouped in 2 fundamental directions

1st. The collection, classification and selection of articles from the Cuban flat and digital press

2nd.- Preparation of brochures.

In this sense, it constituted an important antecedent, the methodology proposed by Ramírez, López, and Addine (2006) used in the analysis and commentary of a documentary.

The authors of this work assume the steps suggested by Quiroga (1999) although adapted to the characteristics of the article present in the flat or digital press, as well as to the objective of the present investigation.

This author agrees to assume that the success of the use of brochures made from the collection, classification and selection of articles in the flat and digital press, with information on scientific and technological topics updated and / or novel, As a teaching resource in the teaching of Biology, it is conditioned by objective and subjective factors in each of its different steps:

- Selection.

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- Documentation.
 - Proposal.
 - Usage.
 - Evaluation.

Selection: The selection of the aspect of the biological content to be developed, with the use of brochures made from the collection, classification and selection of articles from the flat and digital press, with information on updated scientific and technological topics and / or novel, it is developed from the general objectives of the program, as well as those of the level and grade. It also takes into account the methods to be used, since the same objective can be achieved from different methods that the teacher selects.

It is necessary to specify whether the objective to be achieved is aimed at the sphere of knowledge and learning of concepts, the understanding of events, the development of creative thinking, the promotion of skills, the updating of content, the linking of theory with the practice, among others.

Documentation: After selecting the aspect of the content to be used, we must proceed to the documentation, or what is the same, to investigate what we have within our reach.

It is unavoidable to perform a search for articles in the press related to the study content. For this it is important to take into account: 1. Type of publication in which the article and section appear, date of publication and author of the article, 2. Identify the article that is related to the biological content, 3. Scientific interest and / or News for meaningful learning of the biological knowledge that is taught in the middle school and 4. Social repercussions of the content of the article that can be used as a point of debate and reflection on themes of the Biology discipline program taught in the middle school.

Disregarding this step can lead to the quality of this teaching resource being mediocre because ignorance causes us to stop using potentially instructive articles, the contents of which can be used to update the biological content.

Proposal: The planning is the step to determine, from the methodological treatment of the subject, the order, place and moment in which the brochures prepared with articles of the press will be used and that basically obey the order of the objectives and the contents and other components of the teaching-learning process.

The logical order of presentation is given by the contents of the program and logically fit the didactic principles. The procedure of starting from the general to the particular, from the simple to the complex, from the known to the unknown is respected.

Usage: The success of the brochures of articles made with press clippings as a means of teaching depends, ultimately on the teacher. It could be well selected and planned and ineffective if misused.

The knowledge of the teacher determines the success of this step that he must know how to use the brochures in Biology classes in middle school, so that students do not get distracted, managing to direct attention to what they want, how to prepare students emotionally for their use, how to guarantee their use.

Evaluation: Each time the brochures or other teaching resources are used, we must determine to what extent it allowed the achievement of the stated objectives and their effectiveness. For this, the learning assessment can be carried out: What have you learned? What has it contributed to your teaching? On these considerations the teacher adapts again the system of teaching means at the end of the class or school year and proceeds to its new use. Thus, one course after another, the system is perfected.

Conclusions

The rational use of teaching means makes them essential tools for successfully develop the teaching-learning process. In the case of the Biology discipline in middle school, school texts are outdated in some of the contents they deal with. In the current circumstances, it is necessary to complement these with the development of brochures of marked scientific updating, based on the collection, classification and selection of articles in the flat and digital press. The planned use of the elaborated brochures allows to raise the quality of the classes and the motivation of the students for the study of Biology in the middle school.

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