

## Elaboration of questions with multiple choices using the liveworksheets.com platform



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### ABSTRACT

With the COVID-19 pandemic, educational institutions around the world have had to adapt, and emergency remote learning has been the solution found to continue the school year. The pandemic has made it difficult to conduct in-person assessments, which has enabled teachers to adopt online alternatives for creating educational activities and among them exams. Liveworksheets.com is a platform that makes it possible to transform traditional printable tasks (pdf, jpg, png) into interactive exercises with self-correction, called "interactive spreadsheets". The objective of this work is to present the versatilities of an educational platform, little known in the national academic environment, but which has a pedagogical potential that allows successful results for the dynamics of the classroom. The article addresses the different possibilities of the interactive tool, specifically directed to the elaboration of questions of multiple alternatives, being an exploratory research of bibliographical character. The platform allows you to elaborate questions of multiple choices of five different modalities: (1) of "marking with X"; (2) "right or wrong"; (3) "select yes or no"; (4) "check box dropped" and (5) "true or false". In the end it was possible to see how dynamic the platform is being a tool that makes the most of educational technologies.

**Keywords:** Education, Evaluation, Examination, Technology, Interactivity.

## 1 INTRODUCTION

With the COVID-19 pandemic, educational institutions around the world have had to adapt and emergency remote learning has been the solution found to continue the school year. Teachers needed to reinvent themselves to continue pedagogical activities (RONDINI et al., 2020). Remote teaching as a pedagogical strategy raised several questions that had repercussions on the teaching-learning process, among them the understanding of the material concept, the accomplishment of tasks and motivation, essential factors for the success of learning (CHARCZUK, 2020; Rondini et al., 2020).



There are numerous factors that contribute to the achievement of learning in 'online' teaching, and in this context mobile devices, computers, 'internet' networks, as well as the availability and diversities of appropriate didactic resources (MACEDO et al., 2018). Education innovations are linked to this challenging period, indicating that digital technologies are great allies in the teaching-learning process at all levels of education (RONDINI et al., 2020).

The pandemic has made it difficult to conduct in-person assessments, which has allowed teachers to adopt alternatives for creating tests. The realization of '*online*' tests has become a topic with great repercussion (PIMENTEL; CARVALHO, 2020). And it rekindled aspects punctuated by Luckesi (1999), when differentiating examination from evaluation, because according to the author when we apply an exam, we perform a punctual activity, effected by a test of classificatory character to select who passes the discipline, who enters the university, in the postgraduate course, in the vacancy disputed by public tender among others, allowing the classification of students allowing to record their results in numbers and thus, enable them to be summed and divided into averages (LUCKESI, 1999). While the evaluation is a dynamic process and consists of activities carried out continuously throughout the classes, by different approaches, aiming to subsidize the teacher to decide the strategies that should take to help the student to learn, being, therefore, diagnostic, among other words, what most schools / teachers do are examinations and not evaluation.

There are different strategies adopted to "evaluate" or "examine" students, categorized mostly into open questions (direct and dissertation) and multiple choice questions (marking x and true or false). All have advantages and disadvantages. In open questions, when direct the answers are short and spontaneous, but requires a longer time for the respondent to complete; In dissertations, the response is spontaneous, but longer, requiring more time for correction. In questions with several alternatives, the type mark with "x" allows the correct chance that varies according to the number of possible answers, while the true or false can cover several contents, but allows 50% chance of correct answers at random (TRONCON, 2007).

According to Buchweitz (1976) a multiple choice question is one that brings a statement followed by a certain number of possible answers, one of which correctly answers the proposed question. Through the Liveworksheets.com platform it is possible to elaborate these questions using different routes. Mattar (1994) recalls that in multiple choice questions, respondents choose one of the alternatives, or a certain allowed number of options, remembering two essential aspects, the number of alternatives offered and the position biases.

The objective of this work is to present the versatilities of an educational platform – Liveworksheets.com, little known in the national academic environment, but which has a pedagogical potential allowing successful results for the classroom dynamics. It will be addressed in this work,



among the different possibilities of the platform, those directed specifically to the elaboration of questions with multiple alternatives.

## 2 METHODOLOGY

The article covers the versatility of the platform and aspects related to the creation of activities with emphasis on multiple answer questions, the advantages and care of the use of this resource in the teaching-learning process. In this article, five types of questions will be addressed: (1) "mark with X"; (2) "right or wrong"; (3) "select yes or no"; (4) "check box dropped" and (5) "true or false". Fig. 1 shows the home page of the Platform Liveworksheets.com where three spreadsheets are displayed.

Figure 1. Platform Liveworksheets.com. Home page featuring spreadsheets. Left a list of content choices. The arrow marks the (Language Portuguese) option.



It is an exploratory research of bibliographical character, Gil (2022) explains that this study provides greater familiarity with the problem, making it more explicit allowing the construction of hypotheses, being a study that facilitates the understanding of the phenomena. The present study was carried out on the platform Liveworksheets.com using as examples the electronic spreadsheets existing in the platform itself.

## 3 RESULTS AND DISCUSSION

### 3.1 QUESTION OF "MARKING WITH X";

Fig. 2 illustrates a math activity, which is asked to mark the correct answer with "X". To ask this question just put the letter "X" in the check box of the right answer, the other alternatives are blank. This modality among the multiple choice questions, is the most used, characterized by having a statement, a problem-question and the answer options, with a template (correct alternative) and 3 to 5



distractors, that is, an apparently correct answer, but that has error, used to distract or cause distraction to the respondent (DICIO, 2022).

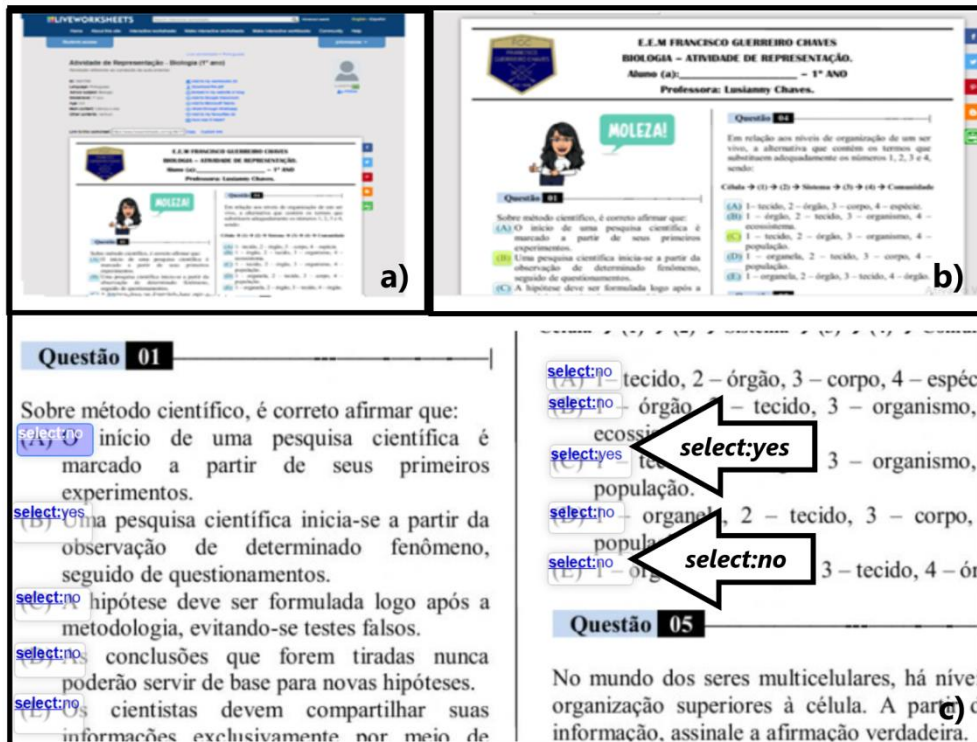
Figure 2. Liveworksheets platform, com. In a) Spreadsheet ID: 647570, available at: <https://www.liveworksheets.com/lo647570nc>. In b) Enlarged area of the spreadsheet. In c) command used to carry out the activity.



Fig. 3 presents an alternative: the question of marking "X". In the biology activity seen in the example, one is asked to mark the correct answer (Fig. 3a). In this question the correct answer stands out in yellow color in relation to the other alternatives that remain blue (Fig. 3b). To construct this question we used the command *"select:yes"* or *"select:no"*, that is, select yes or no for the answer. In Fig. 3c details of the commands in the answers to the questions. Multiple questions can be directed to several students simultaneously, and the advantage is the speed of correction, because it has only one true alternative, another advantage is to be able to address different contents, being effective due to its objectivity, reliability and validity, however they require attention in their elaboration (TRONCON, 2007; GRAGO, 2013; BAARTMAN; BASTIAENS, 2007).



Figure 3. Platform Liveworksheets.com. In a) Spreadsheet ID: 1661758, available at: <https://www.liveworksheets.com/og1661758hi>. In b) Enlarged area of the spreadsheet with marked questions. In c) Command used to carry out the activity.

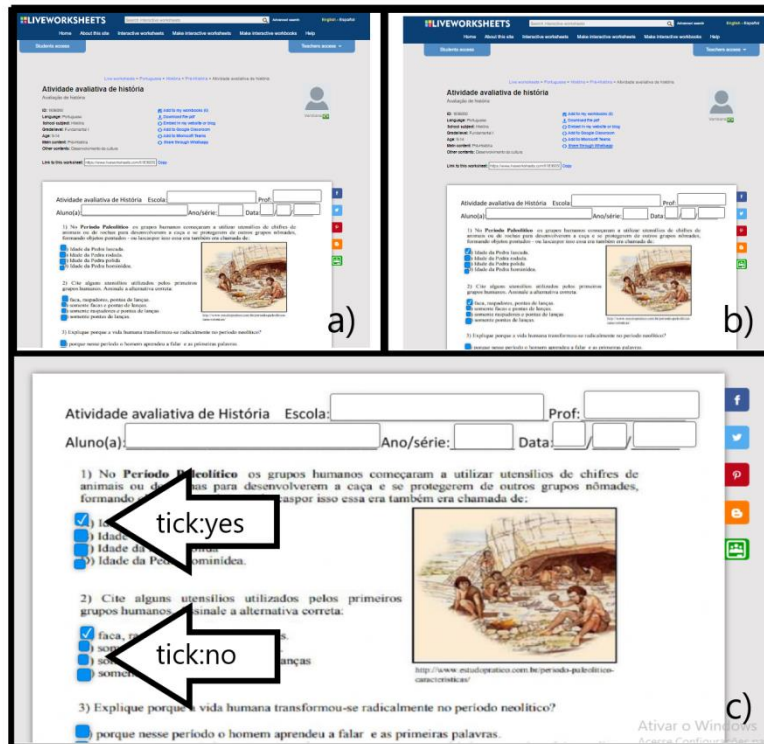


### 3.2 QUESTION, "RIGHT OR WRONG"

Another way to design multiple choice questions using the Liveworksheets.com platform is represented in Fig. 4. In the history activity you are asked to mark the correct question, just by selecting the right answer. To do this, type in the text box "tick:yes" or "tick:no", that is, check yes or no. In this type of question the correct answer is marked with the visa sign "✓". Troncon (2016) explains that the validity of the multiple choice question is related to the existing connection between the content studied and the context that is being presented in the proposed alternatives, thus, the respondent must accurately identify the content being addressed, and in this aspect, the words used in the elaboration of the alternatives, should be extended to the statement of the question, They should be constructed with caution and express what is desired, avoiding ambiguity, short, long or unnecessarily complicated sentences and without misleading.



Figure 4. Platform Liveworksheets.com. In a) Spreadsheet ID: 836050, available at: <https://www.liveworksheets.com/lt1836050dr>. In b) Expansion of the spreadsheet with marked alternatives. In c) Command used to carry out the activity.

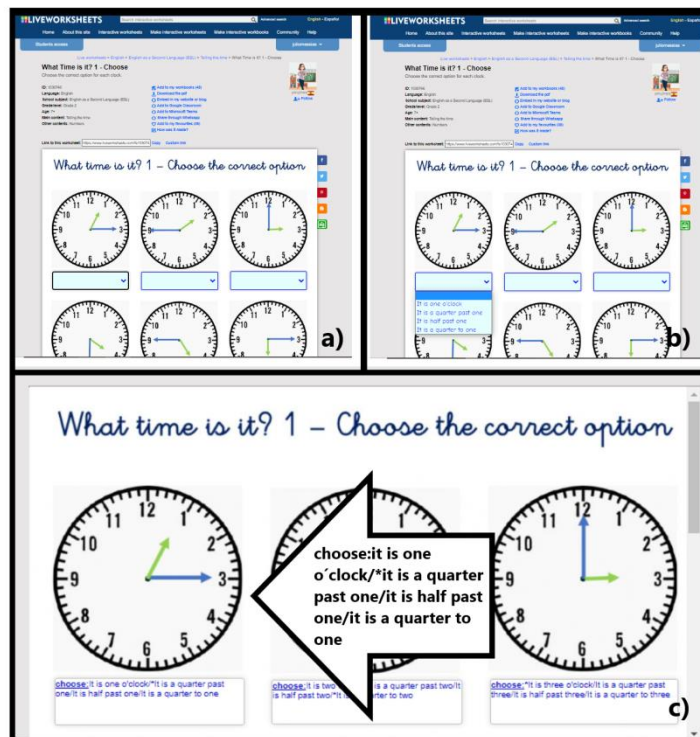


### 3.3 SELECTION QUESTION SUSPENDED

A sophisticated way to design multiple-choice questions is through a drop-down check box. It offers a list of options for the student to choose from. Just draw a text box and type "choose:" followed by the options separated by slashes and an asterisk is inserted before the correct answer. Figure 4 is an example of an English activity, which the student must choose the correct time that the clock is marking questions with multiple possibilities of response, stimulate the student to reasoning, decision making, and the ability to solve problems and not only the memorization of content, but for those who are elaborating the questions requires specific knowledge about the subject addressed (GRAGO, 2013).



Figure 4. Platform Liveworksheets.com. In a) ID: 1530746, available at: <https://www.liveworksheets.com/fe1530746bl>. In b) Expansion of the spreadsheet with the possibilities of response. In c) Command used to perform the activity (Blue letters inside the rectangle).

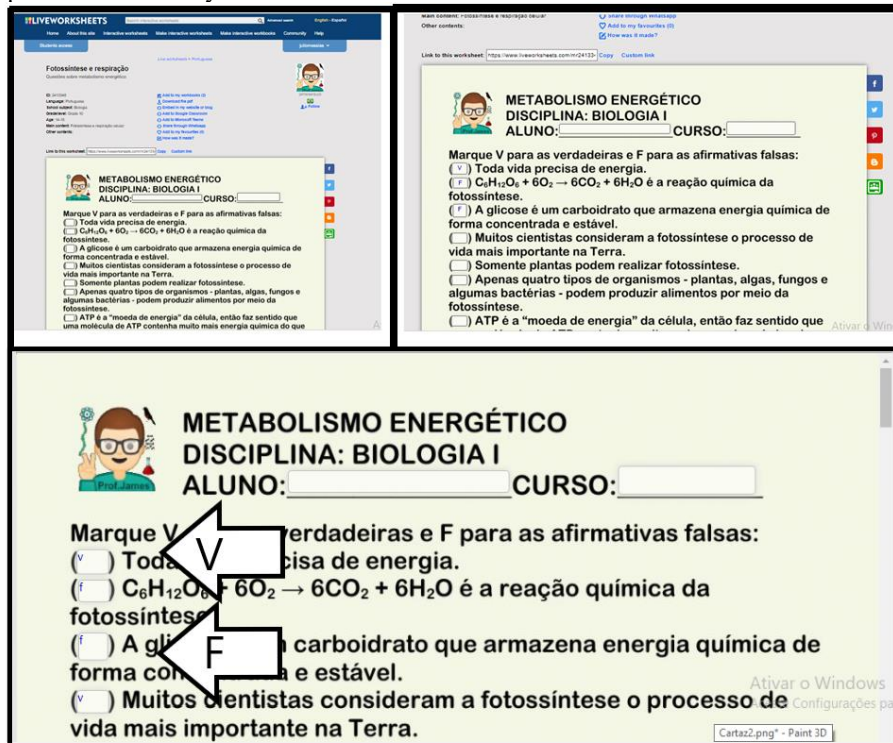


### 3.4 (5) QUESTION OF "TRUE AND FALSE."

As its name suggests, this question format accepts only two categories of answer: true or false, often called right or wrong. According to Pereira (2008) are common issues for students of the initial grades. In the platform Liveworksheets.com are simple questions to elaborate, just put the letters V or F (true or false, respectively) in the text boxes, as the example presented in Fig. 5. In this activity the author uses this question modality for a biology activity to discuss photosynthesis. Pereira (2008) explains that this type of question is common in the initial series. Questions like true or false, can cover a broad domain and require little time to answer, however, being difficult to construct and can make it difficult for students to answer the questions (MELO, 2019).



Figure 5. Example of true or false activity. In a) Spreadsheet ID: 2413348, available at: <https://www.liveworksheets.com/mr2413348ia>. In b) Expansion of the spreadsheet with answered alternatives. (In c) Command used to perform the activity.



#### 4 FINAL CONSIDERATIONS

The electronic spreadsheets (exercises) of the platform Liveworksheets.com has numerous resources among them the questions of multiple choices. The different way of elaborating questions becomes a stimulus to learning enabling the realization of dynamic activities with quick answers, being, therefore, an excellent pedagogical and interactive resource that provides opportunities for students to learn dynamically. It is a platform that has many features, but that requires more disclosure among teachers.





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