

# LearningBuddy (Educational Game Program)



## DESCRIPTION OF THE PROGRAM.-

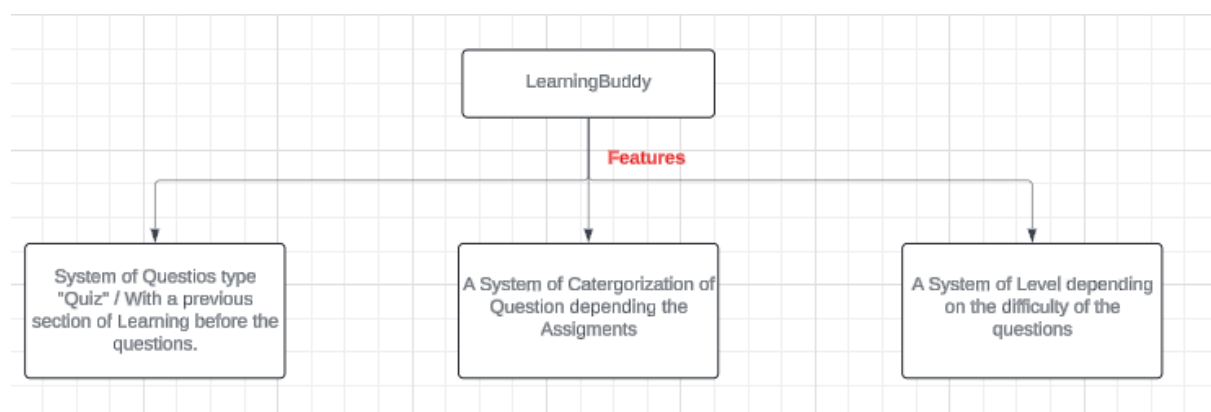
### 1. Definition of the Project

So *who wants to learn?*.....LearningBuddy is a learning program designed for children to learn by playing. The childrens can choose between the different subjects (Math, Science, History, etc.) the subject of the questions. So they start at level one, and as they answer the questions and move up the level, they acquire new knowledge.

The program contains materials about each subject and related questions. The children have to read the material in order to learn first so that they can later answer the questions. If they already know about the topic of the material, they can skip this step and answer the questions directly.

This method of gaming by implementing a quiz system with limited attempts releases enough dopamine to keep the children's attention (like the TV show "Who Wants to be a Millionaire").

The program also could help teachers to improve the focus of students in the lessons, using a system of game competition between each lesson to reinforce acquired knowledge.

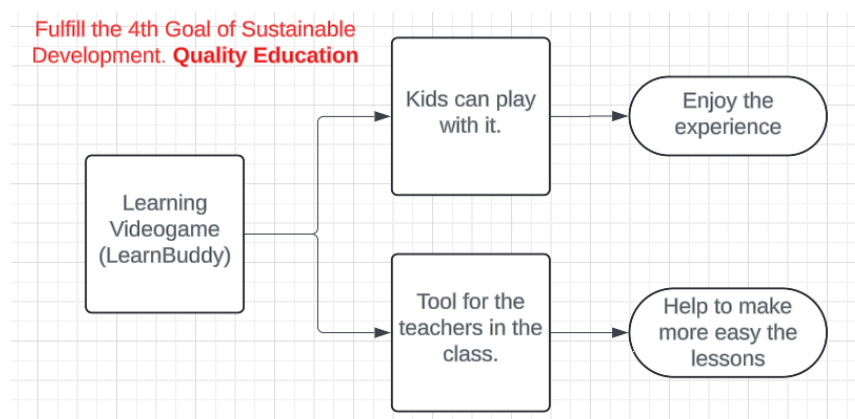


## 2. Goal of the Program

In recent years, the constant influence of cell phones and apps that encourage the rapid acquisition of dopamine (Instagram Reels or Tiktok) causes attention deficit problems in children. This deficit results in children not being able to concentrate in class and not being able to retain the acquired information.

For this reason, we seek to create a program that helps children to learn, or reinforce what they learn in class in a fun way (releasing enough dopamine to allow children not to lose interest in the activity). In addition, it serves as a tool for teachers to reinforce learning in the classroom.

*The goal of our program follows the 4th goal of the United Nations 17 sustainable development goals which is **quality education** as it will help the children to improve their learning experience.*



## 3. Main Requirements of the Program

- **Create Material to read and get tested based on it.**

The children have material that they actively learn from before answering the question. The main element that forms the backbone of our program is the questions and their difficulty. Focusing on this issue, a thorough search for information relevant to each subject must be carried out.

- **Separate the questions according to the subjects.**

The questions that we want to implement will be categorized into main topics like History, Geography and Math. We must identify the subject of each question. This is necessary so that children can learn on one topic at a time.

- **Creation of the different choices for each question and a System of Levels.**

The program will use multiple choice questions. It will include incorrect answers that are related to the topic to increase the difficulty of the questions and ensure that the answer is based on correct learning and not by discarding.

Once we have created the questions. The questions created will be assigned to a level which will be chosen based on the material we are using in the topic. For

example we are using a history book then how will we create levels using this book? The process here is to divide the books into sections so unit 1 and 2 in the book will be level 1 then unit 3 and 4 will be level 2 this way children could have an organized practice based on their knowledge.

- **Graphical User Interface.**

It is necessary to design the minimum essential for the interface. The purpose of this is to make the experience of using the program enjoyable and understandable for the user. In addition, we seek to integrate positive messages that encourage and motivate the user to keep learning constantly and not give up.

#### **4. Implementation phase with features in the first 2 weeks**

- **Categorization of materials and questions**

A database system will be implemented from where the user will be allowed to choose the subject that he/she wants to learn and in this way only the material and questions corresponding to that category will be played.

- **Score system**

A grading system will be implemented to give a grade at the end of each level. This is to provide an incentive to repeat a lesson and improve the grade. In addition, when there will be a user's systems in the future, it will encourage competition between them.

- **A number of attempts**

A function will be implemented in which for each level, a certain number of lives will be assigned to the user. This to keep him in tension and force him to know the topic well in order to pass to the next level.

#### **5. Features to implement in future**

- Level System (Easy to implement)
- Add effects after answering each question (Easy to implement)
- Profile creation system (Medium difficulty)
- Algorithm to show questions in a random order(Hard to implement).
- Text Reader to read the material for the children (Hard to implement feature)