COLLECTION OF BEST PRACTICES

Best practices in the use of the LTHP and content development

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1. Introduction - What do we mean by good practices?

A set of good practices is a set of guidelines that experience has shown can lead to positive and effective results. The best practice guidelines have been compiled on the basis of advice from LTHP experts, feedback from user and content educators, and students learning in the app. Best practices and ways of working that can facilitate the way the LTHP is used have been collected on topics and issues frequently raised by users. However, following good practices is not mandatory, but rather practice-oriented suggestions that are always recommended to be adapted to local needs and circumstances. The best practices are rather a general framework for the user.

The aim of this manual is to provide the appropriate professional background for the use of the application and the digital methodology. To this end, in the first chapter we have collected useful manuals, guides, descriptions, tutorial videos that facilitate both the application of the LTHP system and Smart methodology and the development of content. The database of content available in LTHP shares a repository of ready-to-use learning materials that can be used free of charge.

A frequent question from users (content development teachers) is how to assign the content they want to create to tasks, what tasks are useful to implement the designed curriculum. In the last sub-chapter we would like to help the interested reader in this respect by illustrating the types of tasks with practical examples.

2. What are the best practice guides and training aids and where can they be found?

The methodological and educational tools are freely available on the LTHP project website, which can be accessed by anyone interested: https://learnthenplay.hu

Collection of methodological tools:

➢ Teacher's User's Guide presents the teacher interface, the main functionalities, the possibilities to use the ready-made content and how to create teaching materials

➢ A Student's User Manual summarises the features of the problem-solving interface for students.

- User Videos: the User Manuals are accompanied by user tutorials, which demonstrate how to use the LTHP in practice. The short videos presenting the application make it easy to learn how to use the application by showing step-by-step the procedures to be followed.
- The Game Engine Attributes document provides a technical description of the more than 10 types of game engines, video and text task types, how they are created, their basic characteristics such as scope limits, character counts, number of correct answers, etc.
- Benefit Handbook: provides a useful and informative description of the basic features and benefits of the LTHP system for all interested parties (teachers, parents or students).
- FAQ for teachers: a collection of frequently asked questions to help teachers prepare for face-to-face meetings with the parent community
- FAQ for parents: frequently asked questions for parents
- Documentaries and promotional films: presenting the project results, the benefits of the LTHP application and suggestions for using the system.

3. Database of content available in the LTHP

The system's database currently contains a variety of pedagogical content, mainly in the fields of mathematics, science, history, reading comprehension, grammar, German, English, etc. for grades 5-8. The existing content is freely available free of charge and can be flexibly adapted to local needs. The LTHP application and the ready-made content are available after registration at the following link: https://learnthenplay.classyedu.eu

4. Assigning game engines to action types

- Pairing task engine: Forbidden to use the A

- Grouping task type: Sets

- Answer-choice game engines: Ask-Answer, Bubble Monster, True-False

- Complementary game engine: Word Understanding game engine, Word Problem, Fish in Water, Hangman

- Text creation game engine: Individual text task (requires teacher assessment)

- Pdf tasks: suitable for uploading text content, presentations

- Audiovisual tasks: suitable for uploading audiovisual content
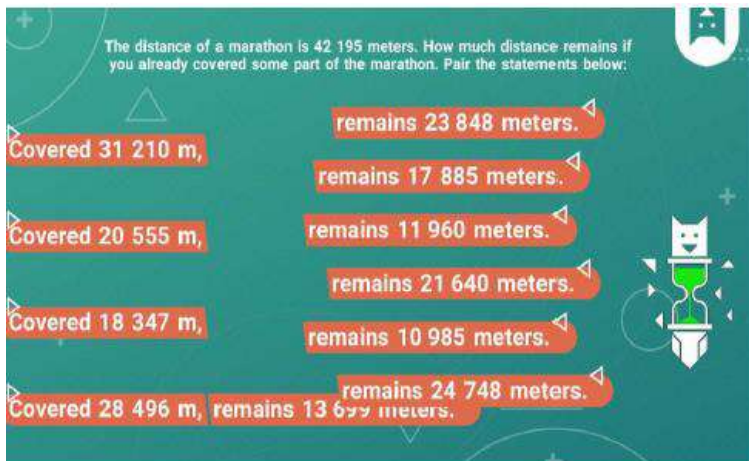
4.1. Pairing task engine

Affix

Forbidden is a pairing task engine, very useful for creating a wide variety of content. It consists of a set of names, phrases or statements which must be correctly paired with another set of names, phrases or statements. It is important that the parts to be matched are not too long, otherwise they will not fit on the screen.

- For determining the meaning of synonyms, antonyms, colloquialisms and old-fashioned expressions, the Forbidden is the most appropriate, as pairs of words that belong together can be easily paired in the exercise.
- Pair the word with the corresponding meaning.
- It can also be used for sequencing events, as long as they are short answers. In this case, the first member of the pair is the numbering and the second is the event itself. The slats must be short, otherwise pairs that are too long will stick out from the surface.

Put the events in order!

1 - Hansel takes the princess home.

2 - The King of France gives Hansel a new name.

3 - Hansel refuses the hand of the princess.
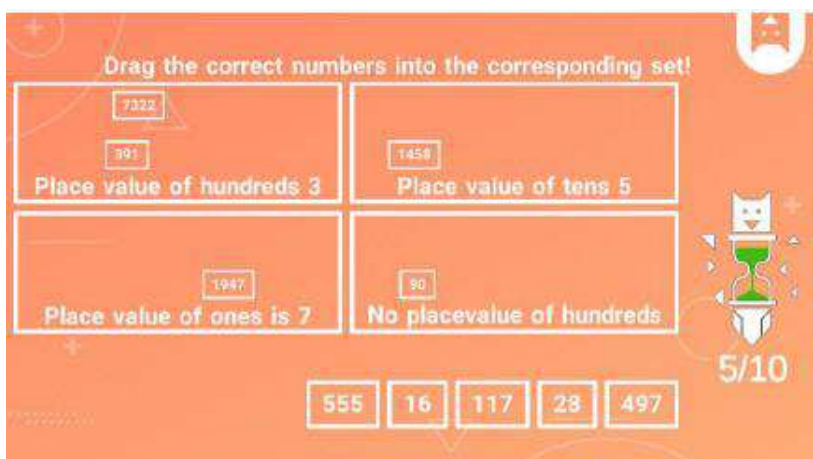
4 - Hansel starts to tell her story.

➢ It is an excellent way of putting together "cut-up" and mixed-up proverbs:

The distance of a marathon is 42 195 meters. How much distance remains if you already covered some part of the marathon. Pair the statements below:

Covered 31 210 m,
Covered 20 555 m,
Covered 18 347 m,
Covered 28 496 m, remains 13 699 meters.

remains 23 848 meters.
remains 17 885 meters.
remains 11 960 meters.
remains 21 640 meters.
remains 10 985 meters.
remains 24 748 meters.

4.2. Grouping task type

4.2.1. Sets

This task type is used to process and compare logical relationships, relations, contrasts, similarities. In the task, 2-4 sets can be created, into which the given terms and words are to be grouped and drawn according to the given criterion. The task develops comparative thinking, recognition of common and different features.

Drag the correct numbers into the corresponding set!

7322
391
Place value of hundreds 3

1458
Place value of tens 5

1947
Place value of ones is 7

90
No placevalue of hundreds

5/10

555 16 117 28 497

4.3. Answer-choice game engines

4.3.1. Millionarie

In the Question Answer game engine, the student has to choose the correct answer from several alternative solutions. Virtually any type of content can be created using this task type. In the multiple-choice game engine, more than one correct solution can be given, the indication of which depends on the individual choice in the instructions. If you want to make the task easier, you can even specify the exact number of correct answers.

If you want to make the task more difficult, you may also want to add "deflectors" for wrong answers. The usefulness of a task is determined more by the quality of the distractors than by the question itself or the correct answer. It is advisable to formulate both good and bad answers that are close to each other, with only small differences between them, which make the task more difficult and increase the difficulty of the content.

4.3.2. Bubble monster

The Bubble Monster game engine is a type of multiple-choice task with a logical twist, where incorrect answers are to be elicited rather than correct ones. It's worth using it for content with shorter answers, given the limitations of bubbles.

4.3.3. True or False

The True-False game engine is a multiple-choice question with only two possible answers. In this type of task, for example, statements in a text have to be decided whether they are true or false.

4.4. Complementary game engine

In the fill-in game engine, the missing text needs to be filled in with a given unit, a task type known as gap-filling. It consists in filling in the gap in the text with a sentence or phrase from the text. There are several variants, some require the student to fill in the missing element or to select the correct element from a predefined list.

4.4.1. Comprehension

A task engine specifically designed to accommodate large amounts of text and therefore has a wide range of applications. The incomplete text must be completed with the correct solution from a predefined set of alternatives. A big advantage is that the student can see the tasks and the text at the same time, the latter can be re-read at any time in the bar on the left of the screen, and the information sought can be retrieved.

Missing text: for the Text section, you should enter only part of the instruction or the Text title. In the Full Text section of the Exercise, place the missing text that needs to be filled in.
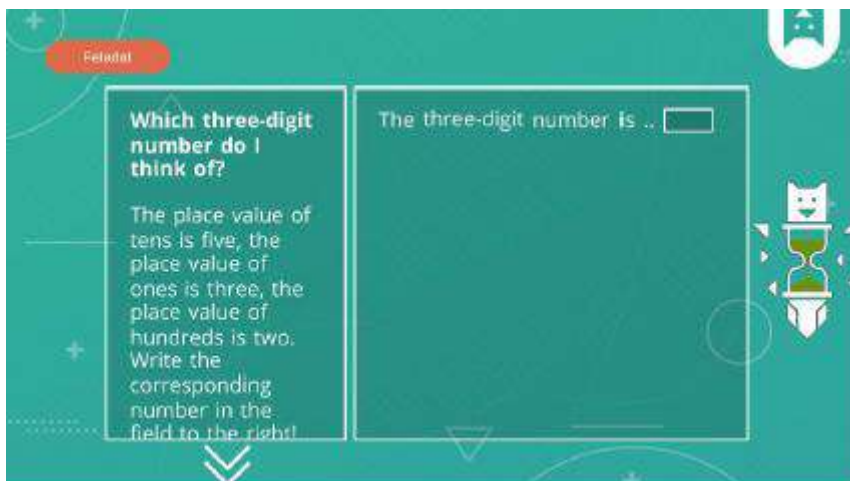
T 4.4.2. Text Task

The Text Task is useful when a specific answer is expected from the students. There are no variants of the solution, as the system will not accept a solution that is not formally different from the correct answer, regardless of the content, and distinguishes between the use or absence of capital and small letters, spaces, or enumerators. The student has to enter a short text. If the text typed does not correspond to the answer given by the teacher, the answer is unsuccessful.

Sequencing: a possible application is to sort the mixed text (paragraphs, sentences): the mixed text, marked with numbers/letters, is inserted in the Text section. The correct order of the punctuation marks should be indicated in the Sentence section. Clarify in advance that punctuation should not be used, capitalise the solution.

4.2.1. Fish in the water

In the Fish in the Water task engine, the text can be completed in a more playful way, by selecting the right solution from the wrong ones and inserting it in the appropriate part of the sentence. To make the task more difficult, it is worth giving more wrong answers. The text used is shorter in this case, maximum 1-2 sentences, and the number of missing words is 2-3.

4.4.4.4.Hangman

The Hangman task engine is a special variant of the supplementary game engine, which is based on the well-known game, where the solution phrase, shorter sentence, proverb or saying can be made up of letters.

4.5. Word-creating game engine

Individual text task

The Individual Text Task can be used for independent text creation, but since the digital application(s) cannot interpret it, the system will evaluate the written work as correct regardless of the content of the answer, and will therefore evaluate the work in the traditional way.

5. Useful content development and application suggestions

5.1. Digitisation of existing professional material

Digitising existing professional materials is the fastest way to develop content: worksheets, tests, presentations. It is easy to produce narrated video content from PowerPoint presentations, either by using a screen recorder or by importing it into the prezi.com application and recording it using the video maker option.

5.2. Role of traditional methods and tools in the LTHP

When solving a text comprehension task, the LTHP application can be used with other methods, e.g. we can also provide students with the text on paper, as it makes the work much easier if they can mark the information they are looking for and if they can see the questions and the text itself at the same time.

5.3. Introduction

Before starting the task, it is useful to welcome the students and prepare the topics to be studied. In the case of linear content, this can be done in a simple pdf document or even in video form. In the case of plug-in learning materials, this introduction should also be in the form of a superunit, otherwise the system will not be able to jump on to the next task.

5.4. Linear or adaptive content

For linear content, the recommended structure of the learning core is that students first receive the text in pdf format, followed by the associated tasks in the form of game engines. However, as already mentioned, only superunits can be used for level jump content, so a stand-alone game engine in pdf format is not a solution. However, the texts can be uploaded using the info button in the game engine, in which case it is important to warn students to always pay attention to the text being uploaded, as this could lead to unnoticed switching between texts, which would disrupt the learning process.

5.5. Defining levels of difficulty

In the case of a level-hopping curriculum structure, it is recommended that the criteria for the difficulty levels are defined in advance. This can be done in two ways:
- content/topic structure: difficulty levels are created within subtopics.
- structure by difficulty level: e.g. the same sub-topics are repeated in easy, difficult and medium levels. E.g. sub-topics within decimal fractions: at each level of difficulty these sub-topics are repeated - local value; number line; rounding, addition - subtraction; multiplication by one, etc.

5.6 Criteria for difficulty levels

The simplest way to determine difficulty levels is to match them to the grade.

5.7. Audiovisual content

Audiovisual content can be used for: audio books, thematic videos downloaded from youtube, film clips, but also self-created content, etc.

5.8. Scope of the curriculum

It is worth thinking about the purpose and format of the learning you want to do with your students. The recommended structure of the curriculum is that there should not be too many blocks in a module, or too many levels within a block. The aim is to allow for a relatively predictable time frame in which to cover a single lesson or topic. Avoid combining several topics in a way that results in too much material, as this makes it impossible to cover smaller units in a lesson. If the aim is to produce preparatory content for admission, it may be appropriate to combine several subjects in a single block.

5.9. Scope criteria

 From a pedagogical and functional point of view, texts should not exceed 1-1.5 pages in length, as it is tedious to read a longer text on a task-solving interface, tablet or smartphone. However, you can work with shorter or smaller texts by breaking them into several parts.

5.10. Readability - visibility

When producing stand-alone content, it should be taken into account that learners can also use the app on a smartphone, so all text and graphics should be readable and visible at a smaller size. For text content, it is recommended to use a larger font size, at least 20.

5.11. Formats that can be uploaded to the LTHP

Text content is most easily uploaded in pdf format, which can be created from word or a ppt file created using PowerPoint. Audiovisual content can be uploaded in mp4 format.

5.12. Developing text comprehension in the LTHP

In the area of skills development, the development of text comprehension is of particular importance and is therefore dealt with in more detail in the following sections. In developing text comprehension, it is worthwhile to work on all the levels of text comprehension that the application offers. However, higher level comprehension tasks (e.g. text creation, independent opinion) are not suitable due to the limitations of digital applications in general. The types of text comprehension operations that can be processed in the LTHP system are: information retrieval, comprehension, inference, text cohesion, interpretation.

5.13. Text comprehension - text types

The system can be used to process texts in different ways: either by asking several questions as a counter-argument to a longer text, or by using different shorter texts for each task, with which different comprehension operations are to be performed.

5.14. Supporting tasks

In the case of simpler questions, it is not always appropriate to use prompts in the superunit, e.g. for historical data or for text comprehension in the case of information retrieval. Since the info button enables students to find the correct answer in the text, it may be sufficient to give the correct answer and its exact location in the explanation.

5.15. Explanations

In all cases, it is essential to provide an explanation for the superunit task, including the correct solution and explaining the process of solving it.