

**Super
RED**

Supporting
Self Regulated Learning
In Digital & Remote Education

THE SRL-4Ts GAME

USER GUIDE

D2.1 - APPENDIX 1

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1 INTRODUCTION

This document is a User guide for the digital game called SRL-4Ts Game. The game is a tool for teachers' professional development, aimed at supporting teachers in the design of innovative and ICT-based learning activities oriented to collaboration and Self-Regulated Learning (SRL).

The game was developed within the SuperRED¹ Erasmus+ Project (as Project Result 2) and is composed of 2 main parts:

- the 4Ts core module (4Ts game[®]), focused on designing a new collaborative learning activity;
- the SRL module, focused on reflection on SRL features of an existing design (possibly created with the 4Ts core module).

To be noted that a tangible version of the core 4Ts module (called 4Ts game[®]) was already available prior to project implementation and a digital mock-up of the game had been already developed as a feasibility study, which has been then customized for the SuperRED context. Moreover, a hybrid version of the game was developed in the Erasmus+ [PLEIADE](#) project (where it was called *i4Ts game*) (Bicocchi et al., 2021; Bicocchi et al., 2022).

The SRL module, instead, has been fully developed under SuperRED itself, according to the project proposal.

For this reason, the first part of this document, where the 4Ts game[®] User guide is provided, derives from the User Guides produced in [PLEIADE](#) (Bicocchi et al., 2021; Bicocchi et al., 2022).

The two components of the game can be used together, or independently one from the other.

¹ The SuperRED project (<https://www.superred.eu/>) is funded by Erasmus+ KA2. Project Reference 2021-1-IT02-KA220-SCH-000034442

2 THE SRL-4Ts GAME USER GUIDE

The SRL-4Ts game in SuperRED is composed of two main modules:

- the core 4Ts module (4Ts game[®]), focused on designing a new activity;
- the SRL module, focused on reflection on SRL features of an existing design.

2.1 The core 4Ts module User guide

The 4Ts game[®] has been developed (and can be played) in 3 different formats:

- a tangible game
- a digital game
- the hybrid game (which is composed of the integration of the tangible + digital versions).

In the following, the **digital version** of the module is described, as this is how the module will be prevalently used in SuperRED.

The digital module is intended to be used by groups of players in front of a touch-screen Interactive Whiteboard (IWB). The module includes a board and a set of cards.

The board (Figure 1) represents the Time component (4 columns = 4 weeks) and has also room for the definition of the learning goals, the contents and the context.

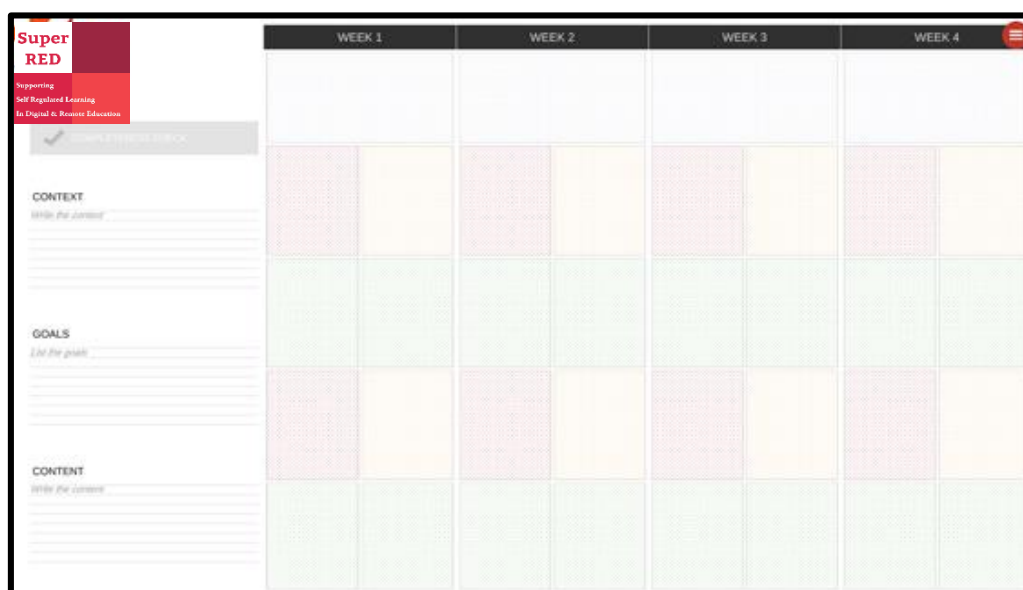


Figure 1 – The board in the digital game (4Ts module)

The decks contain cards for the Tasks (red), the Teams (yellow), the Technologies (green) and the Techniques (light blue). For a complete list of the cards, click [here](#).



Figure 2 – Example of cards in the digital game (4Ts module)

Each card contains a definition and indications of how they can be combined with cards of the other decks (see Figure 2). Moreover, cards contain inclusion tips.

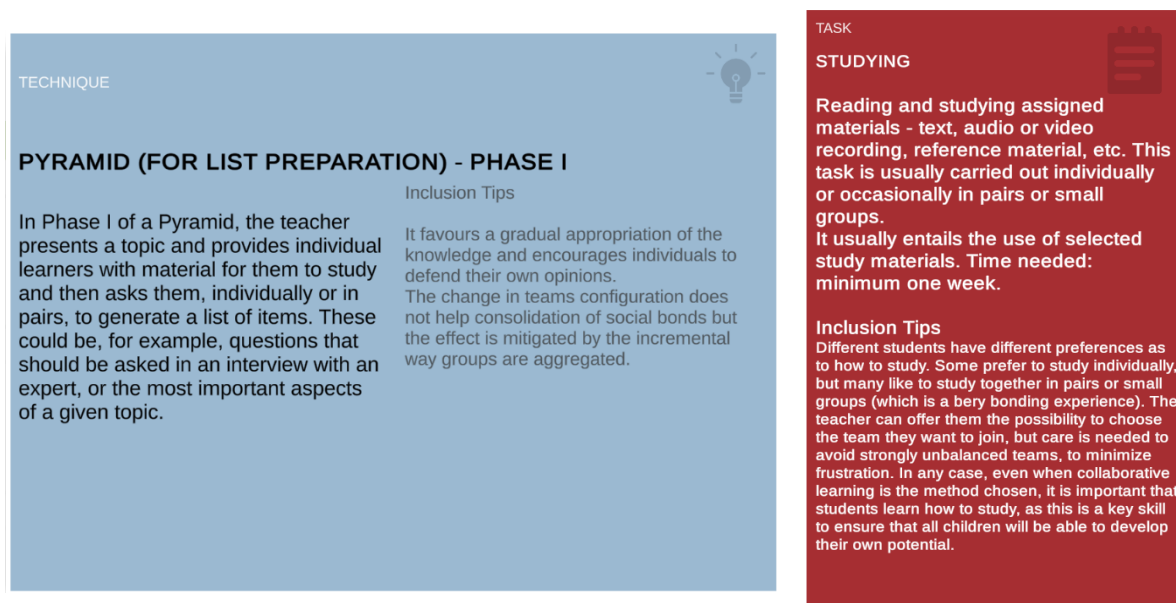


Figure 3 – Examples of contents of cards (4Ts module)

2.1.1 Technical requirements & module download

Table 1 illustrates the module technical requirements and the instructions for launching the digital module. Users are strongly advised to check the requirements before trying to use the module.

Table 1 - Module technical requirements and the instructions for launching it

	Mac	Windows
Internet	a stable internet connection to connect to the KnowledgeBase Server	
System	macOS 10.15.x (Catalina or newer), 8Gb RAM	Windows 10 or newer, 8Gb RAM
Disk Space	At least 500Mb	
Install the game	Download the zip carrying the game files from: https://sites.itd.cnr.it/4TsGame/SRL-4Ts_macOS.zip Double click the downloaded zip file to expand the i4t.app application and move this into your mac Application folder.	Download the zip carrying the game files from: https://sites.itd.cnr.it/4TsGame/SRL-4Ts_Windows.zip Double click the downloaded zip file to reveal the i4T_win folder and extract it on your local disk.
Running the game	To play the module just double-click on the i4t.app application in your mac Application folder. Note: the very first time you launch the module you have to do that by the contextual menu, otherwise you'll receive an alert that prevents the app from running. To do that, right click on the app icon and choose "Open" from the menu. This will open a window from where you can authorise the app to be used on your computer.	To play the module just open the i4T_win folder and double-click on the i4Ts.exe file. If you're presented with a warning about the executable not being safe, don't worry and proceed anyway: the system only does this because it can't certify (yet) the software's origin.

2.1.1.1 IWB Instruction

If your setting is equipped with a touch-screen enabled interactive whiteboard (IWB), you can play the 4Ts module straight on its surface (see Figure 4). To do this, it is necessary to connect the IWB to the laptop running the game and calibrate the interactive whiteboard's screen, so that it recognizes finger pressure on your screen.

Since this procedure can vary greatly depending on the model of the IWB you own, we will provide general guidelines, recommending that you carry out these operations with a technician or an expert:

- Use the right video cable (generally a HDMI cable on Windows laptops, or a DisplayPort cable on Macs) to send the video signal from the laptop to the IWB;
- To calibrate the screen of the IWB use the drivers provided by the IWB itself or download the relevant software (i.e. for [SMART](#) boards it is necessary to use the [SMART drivers and software](#)) and connect the IWB to the laptop running the game
 - Note: generally, it's better and easier to use a USB cable to do this, rather than using a wireless connection, but this greatly depends on your very own setup.

2.1.2 Playing with the 4Ts module

Groups of players (4-5²) will stand around the IWB, look at the cards and discuss, to take decisions together (Figure 4). Unlike other games (including the SRL module), there is no 'turn taking' and all the players are free to contribute to the discussion as they like.



Figure 4 -Players playing with the game through IWB (4Ts module)

When the module is launched, the Start screen of the game is shown (Figure 8).

At the first play, before starting the module, the players need to insert a nickname as a unique identifier to let the system save the gameplay state. The players need to type the name in the field and then click on "Start a new game".

Alternatively, if the players want to continue an already saved game, they should click on the corresponding "Play" button and the game will resume at the state it was left. A saved game can also be deleted.

² The setting with the IWB allows for a few people to stand in front and easily read the contents of the displayed cards. To increase the number of people playing with the digital game, you can consider printing the cards and let people read them while they are also shown on the screen. This way, you will play in a hybrid mode.

The buttons “level 1”, “level 2” and “level 3” identify the 3 levels of the module (i.e. entry level, advanced level and expert level). Please refer to the sub-section “Gamification mechanics in the 4Ts module” below to see how levels work in the digital 4Ts module. Players need to choose the level they want to play with.

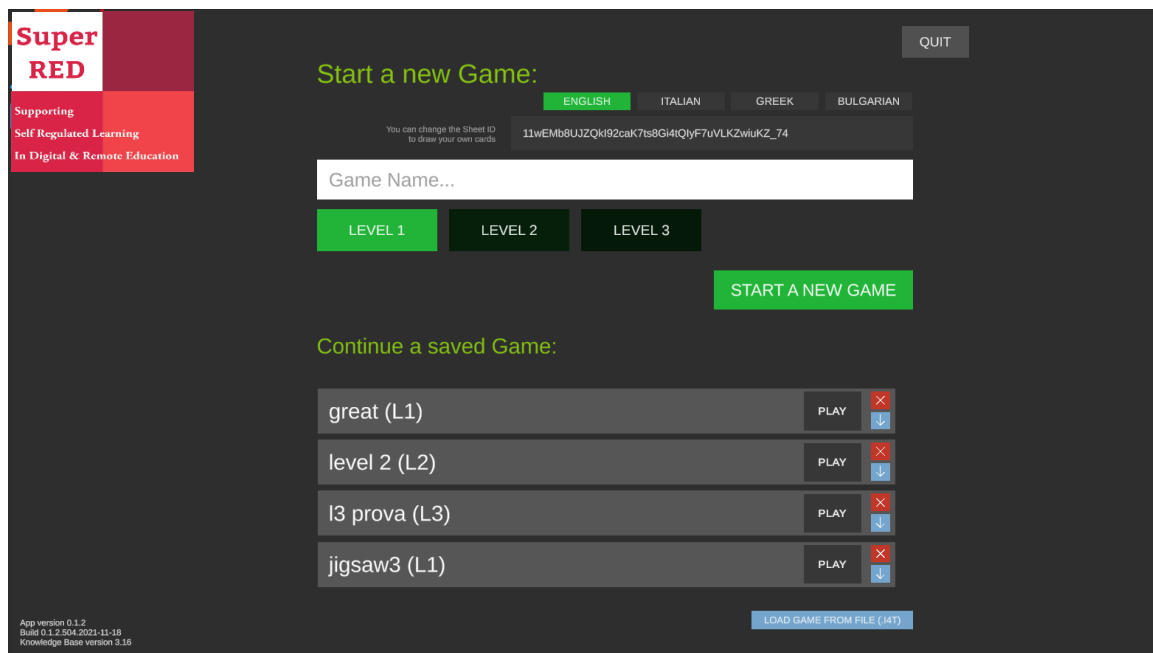


Figure 5 - Start screen of the game (4Ts module)

Once the game is running the board is displayed in full screen (Figure 4).

If not suggested differently from the game master, players will need first to identify Context, Goals and Contents of the activity and type to fill the specific fields in (left side of the screen). To be able to type directly on the IWB screen (see Figure 6), you need to activate the virtual keyboard functionality on the laptop running the game³:

³ **On Windows**, go to Start, then select Settings > Ease of Access > Keyboard, and turn on the toggle under Use the On-Screen Keyboard. **On Mac**, go to the Apple menu then open System Preferences; from there go to the Keyboard preference panel, and then choose the Keyboard tab. Finally check the box next to Show Keyboard & Emoji / Character Viewers in the menu bar. Finally pull down the newly visible Keyboard menu and choose Show Keyboard Viewer.

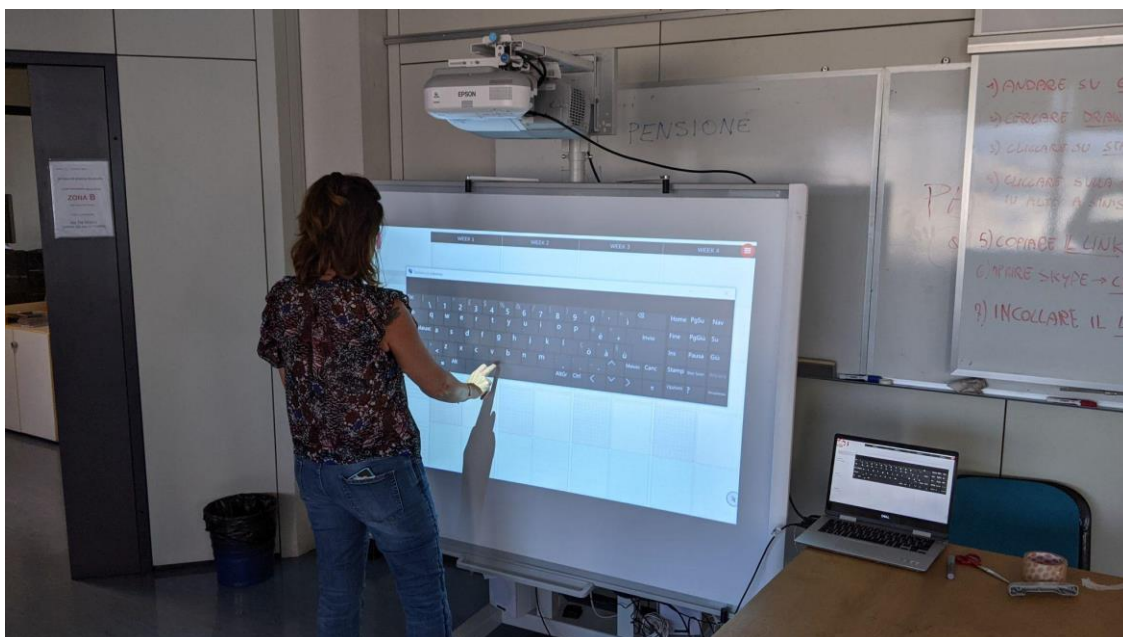


Figure 6 - Use of the virtual keyboard on a IWB to fill the Context, Goals, Contents fields in (4Ts module)

Then, players need to choose a slot on the board, click on it and browse the cards (reading the indications contained inside) that can be positioned on that slot. Once players agree on which card they wish to play on the chosen slot (i.e. put it on the board), they just need to click on it and the card will be positioned on the board on the slot. Then, following the indications contained on the card, they will make decisions regarding (Technique), Task, Teams and Technology (again, in order to browse all the available cards for each card category, click on the related slot, navigate the cards and then click on the one you choose).

Every time a card is added, the board is checked by the system to verify its state. If an error is returned, the user must correct the card before continuing playing (Figures 7 and 8 - Inconsistency of cards).

Players can also ask for card suggestions from the card list display (Figure 9 - Suggestions).

Moreover, at any time, players can ask for a check of completeness (button on the left top of the board) and the system will provide feedback about cells where cards are still missing (Figure 10 - Feedback in terms of completeness).

! IMPORTANT TIP: in the Technology deck, there are 3 cards related to the communication modes among students (i.e.: Forum, Video-conferencing system, No Technology). Be aware that in the digital game they determine the duration of the Task, like the following:

- Forum – implies an asynchronous communication mode; in the game the related Task will take one week.
- Video-conferencing system – implies an online, synchronous communication mode; in the game the related Task will take a few hours.

- No technology - implies a face-to-face, synchronous communication mode; in the game the related Task will take a few hours.
ATTENTION: if you are designing a face-to-face activity and the Task envisages interactions among students, it is mandatory to use the NO TECHNOLOGY card, to indicate interaction is not happening online.

To quit the module or restart with a new session, just click on the red circle at the top right of the screen. The game will be automatically saved and can be retrieved from the list on the Start screen (Figure 5 - Start screen of the game).

2.1.3 Feedback provided by the 4Ts module

The digital 4Ts module of the SRL-4Ts game is featured with a knowledge base, which knows all the possible relationships among cards and is thus able to provide feedback to the player. The game provides feedbacks regarding:

1. Completeness of the design (Figure 10). In this case, the yellow triangles alert players that the design is incomplete (according to the Technique card chosen).

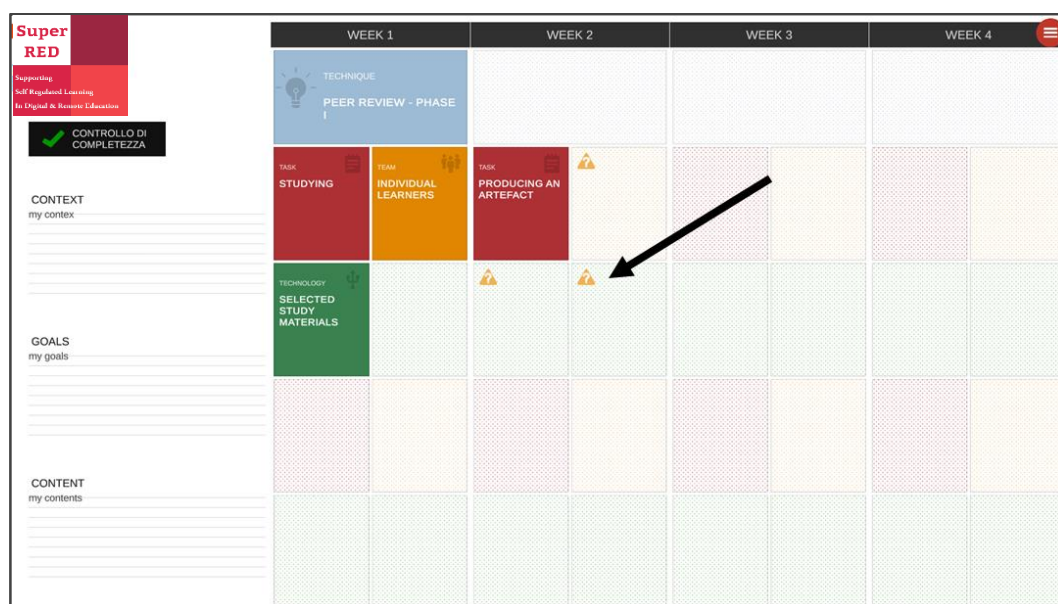


Figure 7 - Feedback in terms of completeness (4Ts module)

2. Suggestions on how to proceed with the design (Figure 11). Players can get indications on possible cards that can be chosen for the selected slot.

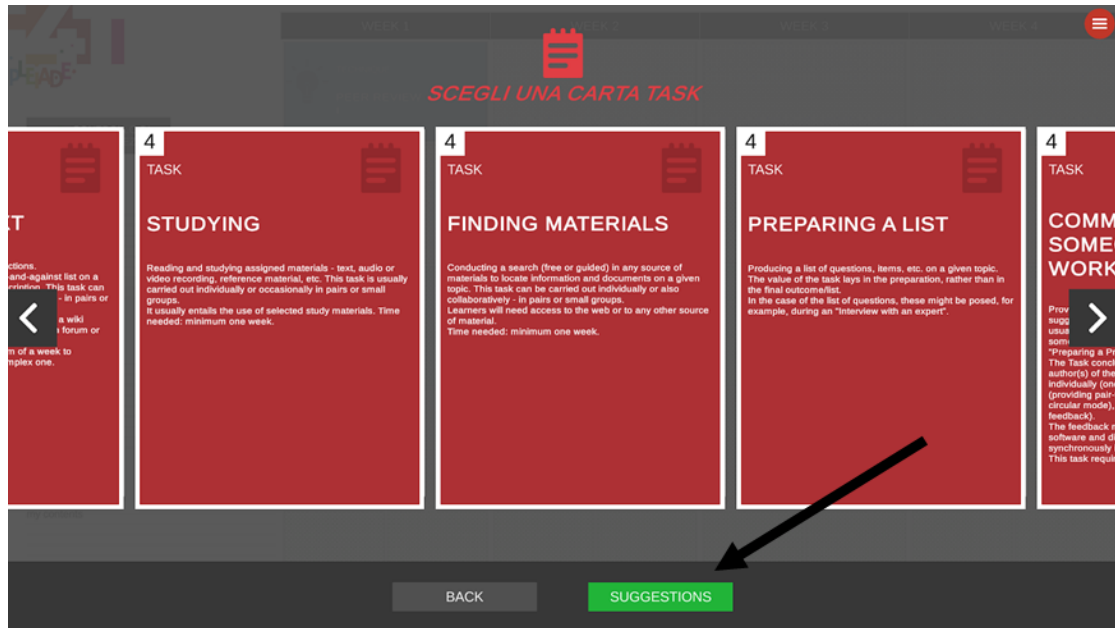


Figure 8 – Suggestions (4Ts module)

3. Inconsistency of cards (Figures 9 and 10). In this case, the system alerts players that the chosen card is inconsistent with the rest of the cards on the board. A red triangle appears on the inconsistent card (Figure 9) and, soon after, an error message window appears (see Figure 10), to provide advice about the specific error and to give suggestions about how to correct it.

Players need to remove the inconsistent card and then make a different choice.

In the case of Figure 9, for example, the inconsistency is due to the fact that the Task “Preparing a list” cannot be associated with the Technology “Selected study materials” (you will need a Text editor to write down the list).

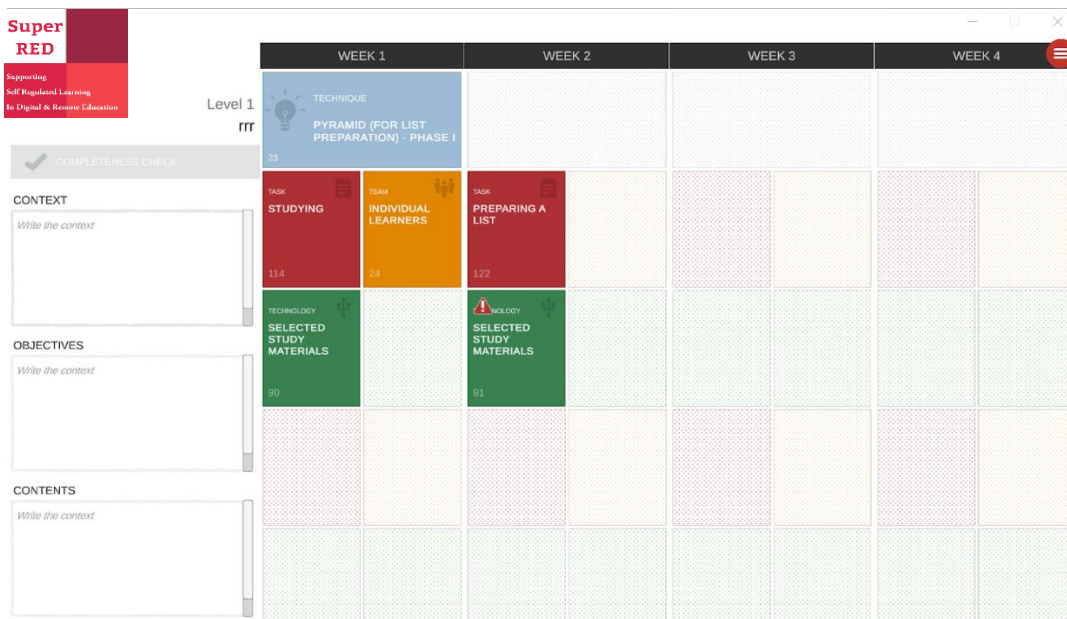


Figure 9 - Inconsistency of cards (4Ts module)

Figure 10 shows a couple of examples of error messages.

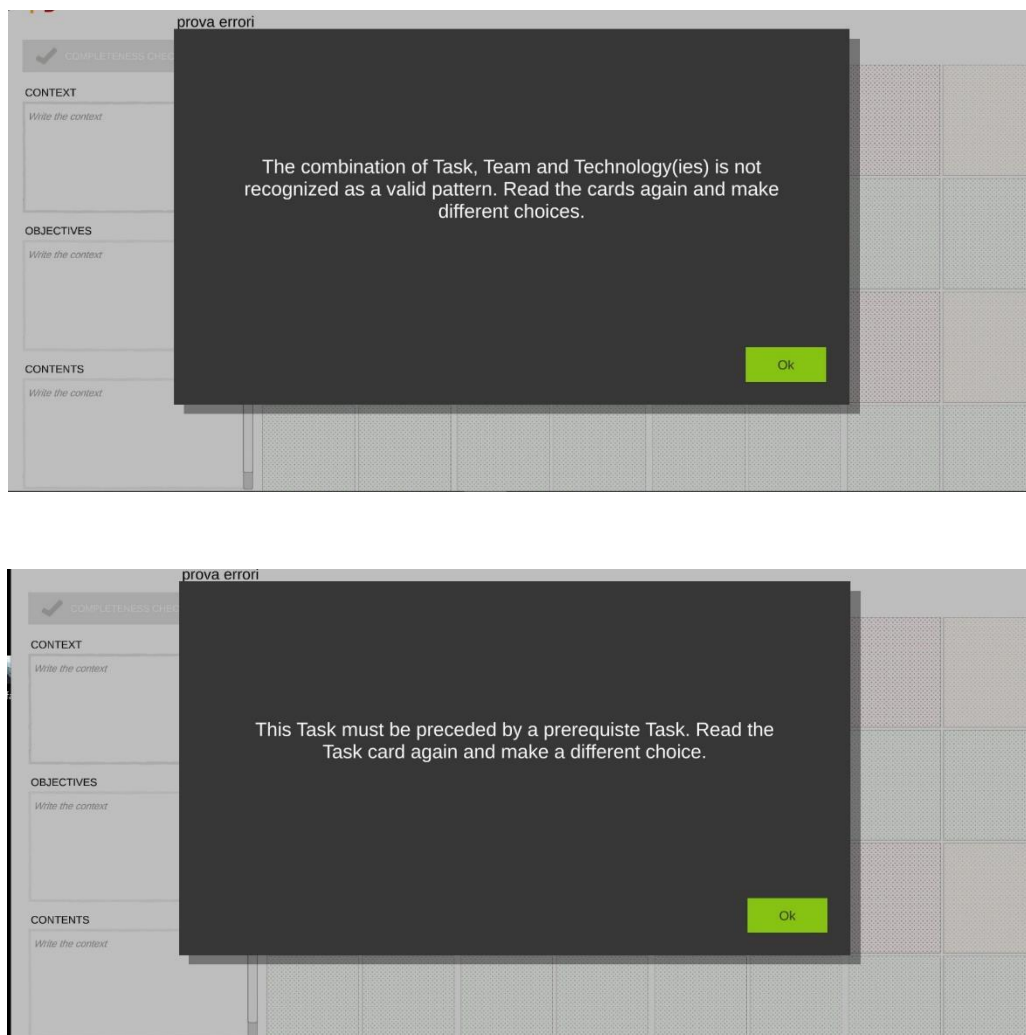


Figure 10 – Examples of error messages displayed in case of inconsistent cards (4Ts module)

2.1.4 Gamification mechanics in the 4Ts module

The module is featured with 3 levels of difficulty:

- Level 1 (entry level) is quite scaffolded and implies using (and starting the design process with) the Techniques deck. The system provides feedback at this level.
- Level 2 (advanced level): is less scaffolded and implies skipping the Techniques cards and playing directly with the Task/Team/Technology decks. The system provides feedback at this level.
- Level 3 (expert level): is not scaffolded. The system does not provide feedback at this level. Wild cards are available at this stage, to allow users to add new cards.

Level 1 is recommended for student teachers and teachers who need to become familiar with the Techniques. Be aware that Level 1 is quite rigid, as the aim is to allow players to understand

the structure of Techniques. Level 2, instead, allows for more flexible designs, but still there are combinations that are not accepted by the game. Level 3 is completely free; any card combination is possible.

The game level needs to be chosen at the beginning of the play, by clicking on the related button in the Start screen (see Figure 5). Once players start the module, depending on the chosen level, they will start by clicking on the top left light-blue slot for the Technique cards (Level 1) to display the full list of the Technique cards, or by clicking on the top left light-red slot for the Task cards (Level 2), to display the full list of the Task cards.

2.2 The SRL module User guide

The SRL module of the SRL-4Ts game is intended to be used by groups of players sitting at a table with a PC. The module can be used in various modes:

- Fully digital
- Fully tangible
- Hybrid mode (some components are used in their tangible format; others are used digitally).

The module is composed of 2 boards (the main board and the leaderboard), 4 decks of cards, 4 dice, and coloured badges.

Figure 11 represents the main board of the SRL module (digital version).

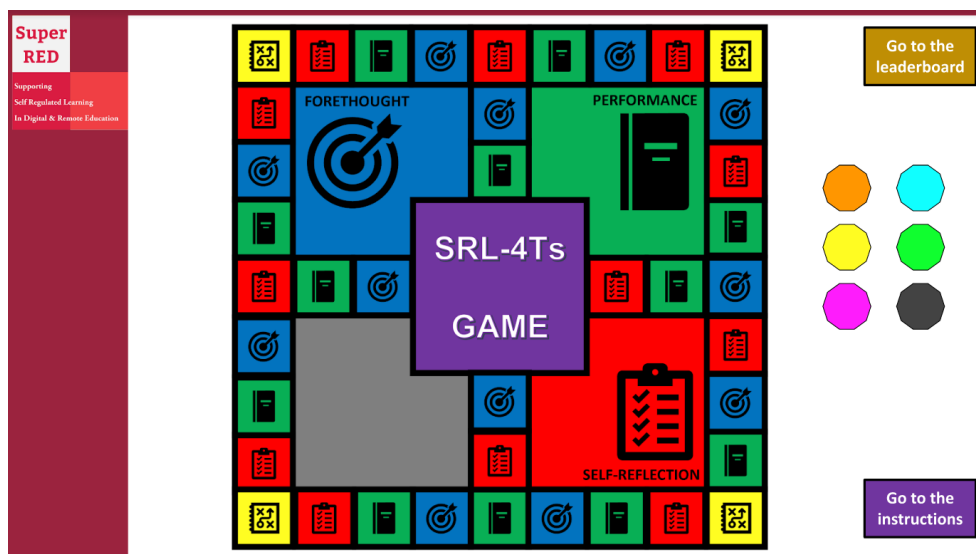


Figure 11 – Main board of the SRL module

The main board contains 40 boxes: 12 for “Forethought” (blue), 12 for “Performance” (green), 12 for “Self-Reflection” (red) and 4 yellow for “Choice”. The central, violet box is the starting point of the game. On the board you can also see 6 coloured tokens (players will choose one token each).

In the module there are 4 decks of cards, for a total of 31 cards: 12 “Forethought” (blue) cards, 11 “Performance” (green) cards, 6 “Self-reflection” (red) cards and 1 “Choice” (yellow) card.

Figure 12 shows one exemplar card. All the cards have a front and a back: the front contains the card unique code (“F7” in the Figure, which stands for “Forethought prompt number 7”) and the card title (“Strategic planning” in Figure 12); the back contains the related SRL prompt (depending on the card colour, the prompts will trigger Forethought, in blue, Performance, in green, or Self-Reflection, in red, aspects of the design).

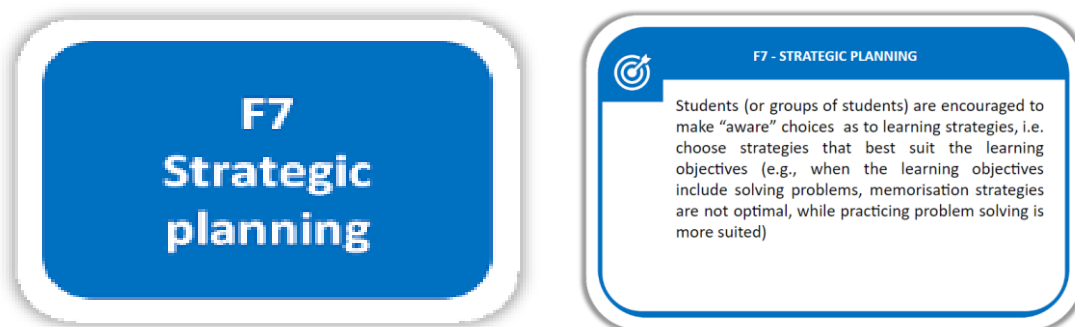


Figure 12 – Front and back of an example of forethought cards (SRL module)

The module has four digital dice (Figure 13). To roll a die, just click on the related menu item. This will make the result appear (see below). Of course, you can also use tangible dice, but they will need at least 12 sides.

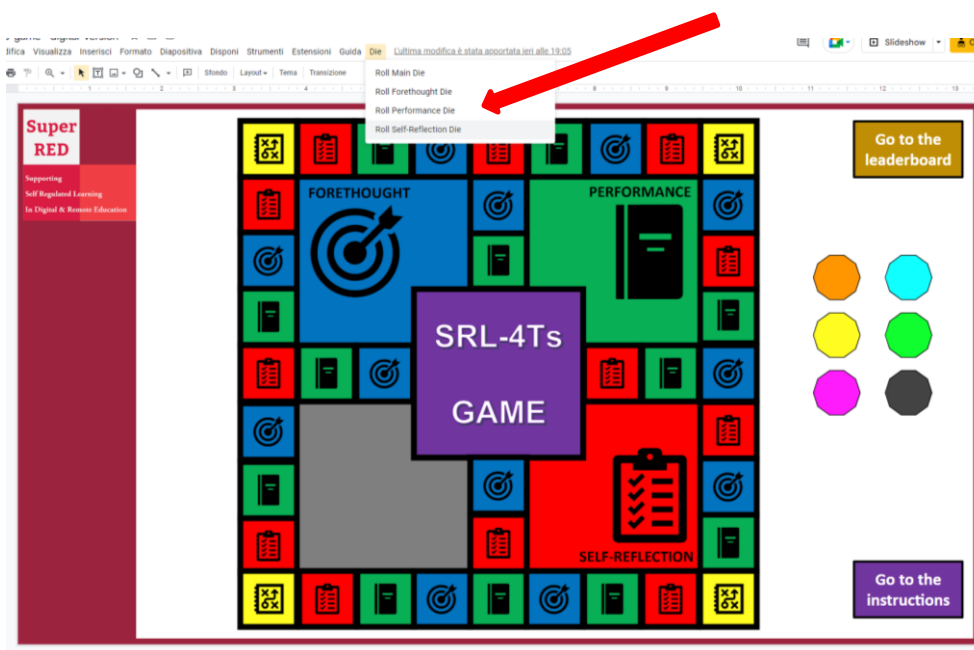




Figure 13 – Rolling the digital dice (SRL module)

The module is also featured with a leader board.

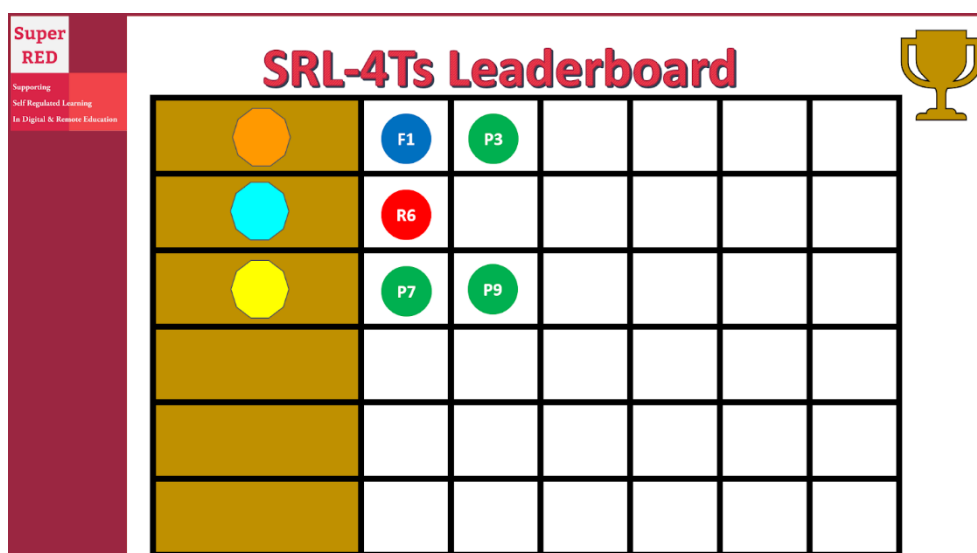


Figure 14 – Leader board (SRL module)

Coloured badges (divided in red, green and blue) are also available in the digital module.



Figure 15 – Coloured badges with codes

2.2.1 Technical requirements & module download

DIGITAL FORMAT. If you want to play in the SRL module in the fully digital format, follow the instructions contained in the Table below.

Table 2 - Module technical requirements and the instructions for launching it

	Mac	Windows
Internet	a stable internet connection	
System	macOS 10.15.x (Catalina or newer), 8Gb RAM	Windows 10 or newer, 8Gb RAM
Accessing the game	There is no need to install the module. The module is made with Google Slides. You just need to login on drive with a Google account and click on https://docs.google.com/presentation/d/19nDTMnZwOQuCAjeE9_BnNeGltiLHJaLRQlxv5AHaTz0/template/preview	There is no need to install the module. The module is made with Google Slides. You just need to login on drive with a Google account and click on https://docs.google.com/presentation/d/19nDTMnZwOQuCAjeE9_BnNeGltiLHJaLRQlxv5AHaTz0/template/preview
Running the game	To play the module, click on “Use the template” button. Then hide the slide sequence on the left and the comments on the right side and leave visible the menu at the top of the screen. Press F11 to enter the browser full screen mode.	To play the module, click on “Use the template” button. Then hide the slide sequence on the left and the comments on the right side and leave visible the menu at the top of the screen. Press F11 to enter the browser full screen mode.

TANGIBLE FORMAT. If you want to play with the fully tangible format, you can download all the necessary game components from [here](#). Then you will need to cut cards and badges + you will need to have tangible dice. As far as colored badges are concerned, you can also use colored stickers and write codes on them.

HYBRID FORMAT. If you want to play with the hybrid format, you should access the digital board from [here](#) and download the paper components from [here](#) (and then cut cards and badges).

2.2.2 Playing with the SRL module

The game can be played by 2 up to 6 individual players, together with a game master. It is recommended that groups who played with the 4Ts module are maintained together, but their members will play individually and competitively in the SRL module.

1st phase of the module

Each player starts from the design of the technique /activity previously conceptualised through the 4Ts module.

Looking at the design (printed or digital) and by reading the SRL prompts contained on the cards, each player takes decision about how to enrich it with possible SRL features. In doing so, the player keeps track of the SRL prompts implemented in the design (either by writing their codes on the design, or by using coloured badges with codes – see Figure 15). At the end of this phase, each player should have a fine-grained design and a number of SRL prompts used in that design.

Please note that in training contexts, where there is not so much time to proceed with the micro-design process, the master player can opt for providing an exemplar design to all the players (the same for all players), who are asked simply to read it and select the SRL prompts they can detect in the design.

2nd phase of the module

Each player chooses a token, and all the tokens are placed on the violet box, in the middle of the (digital or paper) main board.

Meanwhile the leader board is placed on the table (or initialized on the screen, if digital) with the same tokens – one token on each row (see Figure 14).

The main die is rolled: the player getting the highest score starts the game.

S/he rolls the main die again and looks at the score. The player decides which direction to take and moves her/his token of as many boxes as the obtained score. The player (or the master player) needs to click on the box, and this will open the corresponding-coloured deck – see Figure 16 (in the paper mode, the corresponding-coloured deck is taken).

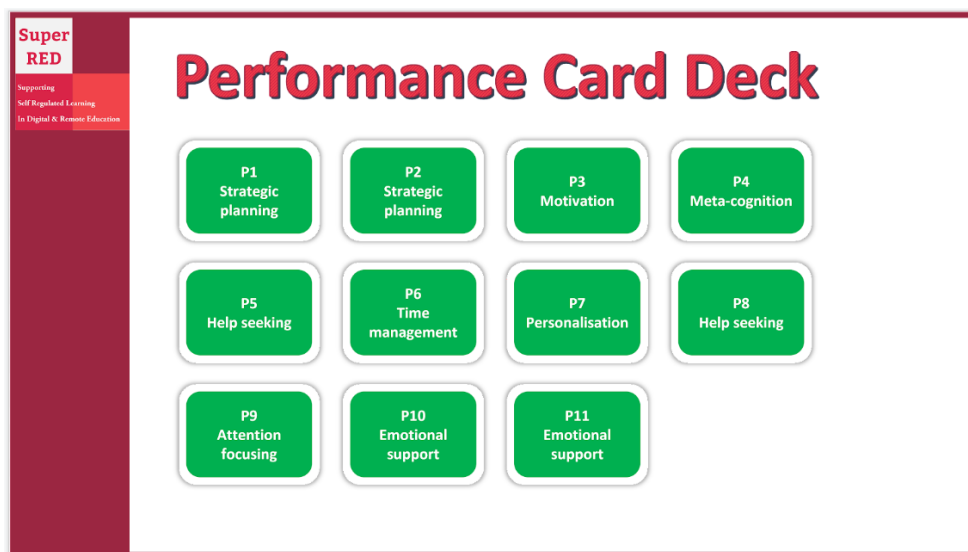


Figure 16 – The Performance card deck (SRL module)

To select a card from the deck, the corresponding die must be rolled (if the deck is the blue one, the Forethought die must be used; if the deck is green, the Performance die must be used; if the deck is red, the Self-Reflection must be used) – see Figure 13. The obtained score indicates the card that must be extracted from the deck. The player (or the master player) clicks on the selected card to show its back and reads aloud the contained prompt; the player says if the prompt is among the ones s/he used in the first phase and explains where exactly in the design this can be retrieved/added. The master player (who in this phase acts as a referee) decides whether the prompt is duly implemented/detected in the design. If so, the player gets the related badge, that is immediately placed on the leader board. If not, no badge is awarded.

By clicking on the “Back to the board” button, the main board is again displayed, and it will be the turn of a new player (the one on the left) to roll the main die. All the players play in the same way and collect as many badges as they can. Each won badge should report the code of the corresponding card.

Note that, each time the die is rolled, the player can choose which direction to take.

If a player ends up on a yellow box, s/he can choose the category of SRL cards (Forethought, Performance or Self-Reflection) and can select /pick up a card without rolling the corresponding die.

Several tokens/players can stand on the same box.

Each time a badge is awarded, this needs to be placed on the leader board, with the indication of the card code they represent. After 1-hour time, 4 winners are given 4 different awards: the SRL award, to the player with the highest number of badges; the forethought, performance and self-reflection awards, to the players with the highest number of Forethought /Performance / Self-Reflection badges.



3 REFERENCES

Bicocchi, M., Ceregini, A., Innocenti C., Persico, D., Polsinelli, P., Pozzi, F., & Sarti, L. (2022). *The hybrid I4Ts game (PLEIADE Intellectual Output No. 2) - Revised version*. <https://doi.org/10.17471/54014>

Bicocchi, M., Ceregini, A., Persico, D., Polsinelli, P., Pozzi, F., & Sarti, L. (2021). *The hybrid I4Ts game (PLEIADE Intellectual Output No. 2)*. <https://doi.org/10.17471/54010>

