



**Gamified Platform for the Blended Training
Activities – PLEIADE Intellectual Output 3
(Revised version)**

**“Playful Environment for Inclusive
Learning Design in Europe”
“PLEIADE”**

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Abstract	This document is intended as a text file annexed to IO3 and is distributed as release notes to the PLEIADE Gamified Platform – final release, which can be reached online at the following URL: https://moodle.plejade-project.eu/ . The main scope of this file is to document the configuration of the platform to provide a legacy for other initiatives aiming to promote motivation, participation, interaction and peer collaboration in Teacher Professional Development settings. Particularly, this document describes all the activities carried out with reference to the overall iterative and incremental development process of the platform, starting from its initial planning and design, its deployment (i.e., first release), its actual usage during the BTAs, and its evaluation and revision (i.e., final release).

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1 Executive summary

This document is intended as a text file accompanying the third Intellectual Output (i.e., IO3) of Erasmus+ project “PLAYful Environment for Inclusive leARNING Design in Europe” (PLEIADE), the Gamified Platform. According to the project proposal, the Gamified Platform is produced as a web-based application to promote motivation, participation, interaction, and peer collaboration in Teacher Professional Development (TPD) settings.

More specifically, the main scope of this text file is to document in detail the configuration of the Gamified Platform to provide a legacy for other initiatives aiming to promote motivation, participation, interaction, and peer collaboration in Teacher Professional Development (TPD) settings. Particularly, this document describes the activities carried out with reference to the overall iterative and incremental development process of the platform, starting from its initial planning and design, its deployment (i.e., first release), its actual usage during the BTAs, and its evaluation and revision (i.e., final release).

The first release of the Gamified Platform was delivered at the end of April 2021, while the second release at the end of August 2022, after the completion of the Blended Training Activities (BTAs). The platform is in English and supports a Multilanguage interface (Bulgarian, Greek, and Italian). The Gamified Platform is a public resource and will remain available for (at least) 24 months after the project ends. The Gamified Platform can be reached online at the following URL: <https://moodle.pleiade-project.eu/>. The Gamified Platform is tested and approved against the specifications provided by the development team.

2 Introduction

2.1 Aim of this document

This document is intended as part of IO3 and is distributed as release notes to the PLEIADE Gamified Platform. Particularly, two are the expected results from IO3:

- A workspace - the Gamified Platform itself.
- An accompanying text file – which is this document.

The main aim of the Gamified Platform is hosting the online component of the Blended Training Activities (BTAs) and (during enactment) supporting the sharing and peer reviewing of the learning activities conceptualized with IO2.

The main scope of this text file is to document in detail the configuration of the Gamified Platform to provide a legacy for other initiatives aiming to promote motivation, participation, interaction, and peer collaboration in Teacher Professional Development (TPD) settings.

According to the project proposal, the Gamified Platform is produced as a web-based application to promote motivation, participation, interaction, and peer collaboration in Teacher Professional Development (TPD) settings. It is in English and supports a Multilanguage interface (Bulgarian, Greek, and Italian). The Gamified Platform is a public resource and will remain available for (at least) 24 months after the project ends.

In line with the project Gantt, IO3 was released in its first version at M8 (April 2021), while revised version at M25 (September 2022).

To be noted that while, according to the proposal, the IO3 is the Gamified Platform in itself (i.e., the *workspace*), this is an accompanying document (i.e., the *text file*) describing the platform and its main features. In addition, other technical and non-technical information about the IO3 will be provided as part of Intellectual Output 6 ‘Amplification kit’, which is the project document intended to allow up-taking of the main PLEIADE IOs from people external to the project; thus, in IO6 all the necessary information will be provided to allow transferability and re-use of the Gamified Platform in contexts different from the original one.

2.2 Structure of this document

Following a general introduction to IO3 (Section 3), the document provides a more detailed overview of the project activities corresponding to design and the implementation of the Gamified Platform and the next steps, as it follows:

- Section 4. This section describes the main characteristics of the Gamified Platform, its background with reference to the PLEIADE Project, its development process and the time schedule. Furthermore, this section describes the rationale behind the adoption of Moodle, with specific reference to the list of major functionalities and processes that are of interest for the project’s needs.
- Section 5. This section presents the User Requirements analysis carried out to identify the features of the system to be developed. Particularly, the user requirement will be here presented in the following six main logical processes: 1) user account and basic functionalities, 2) courses (learning activities), 3) communication and collaboration, 4) gamification and motivation, 5) self-regulated learning and personalization, and 6) assessment, self-assessment, and tracking.
- Section 6. This section presents the action carried out to set up the Gamified Platform, with particular attention to the activities for: 1) adaptation and customization, 2) testing and debugging, and 3) deployment and maintenance. Furthermore, this section presents the tools needed to enable the following functionalities: 1) Webinar delivery, 2) Gamification to foster motivation, 3) support to self-regulated learning and personalization, and 4) Learning Analytics. Such functionalities were identified as project’s needs (see proposal). Therefore, specific tools were identified to operationally enable such functionalities into the Gamified Platform. Some of these tools have been specifically designed and implemented and/or adapted for the project’s needs. Particularly, we adopted a descriptive approach that will be monitoring only the online activities of the BTAs. The tools devoted to enable analytics into the Gamified Platform are the 4Cs Dashboard – to monitor individual and collective reflection on practice sharing, also exploiting the adopted gamified metaphor - and the Moodle learning analytics system – to monitor engagement and participation of users at different levels.
- Section 7. This section presents some information about the usage of the Gamified Platform to host the BTAs, starting from May 2021.
- Section 8. This section introduces the evaluation and the revision activity of the Gamified Platform that took place between M22 and M24 and that was ran in synergy with IO1 and the implementation of the BTAs.
- Section 9. This section presents a short description of the main functionalities of the Gamified Platform used to support the actual implementation of the PLEIADE BTAs (i.e., Section 5): BigBlueButton, 4Cs Dashboard, Learning Analytics, and graphical layout. Particularly, this section describes the main changes made to such functionalities during the BTAs, and those should be intended as a sort of addendum to the [User Guide v 1.0.0 \(2021-04-27\)](#).

- Section 10. This section presents conclusions and prospects.

3 Description of the IO3

This Intellectual Output consists of a gamified digital platform that hosts the online interactions and teaching materials of the PLEIADE Blended Training Activities (BTAs), described in IO1, the Teacher Professional Development (TPD) Pathway. The platform is customized to offer the affordances needed to foster collaboration, practice sharing and exchanges among teachers. It is accessible from the project website, by registered participants (i.e., the PLEIADE teachers) and is accompanied by release notes in the form of a text document.

In the context of the PLEIADE Project, the Gamified Platform operates as a scaffolded context for teacher interaction to design PLEIADE - inspired classroom activities and the exchange of related experiences. The platform is in English, supporting a multilanguage interface (Bulgarian, Greek, and Italian). The Gamified Platform is developed as a customized functionality of an already existing system/tool. Particularly, we decided to use Moodle (<https://moodle.org/>).

In terms of sustainability and transferability, the Gamified Platform will remain available for (at least) 24 months after the project ends. Particularly, the platform will remain available to the PLEIADE schools to share knowledge and artefacts, including (but not limited to) those developed in PLEIADE.

To produce IO3, the following specific tasks (i.e., tasks’ list) were accomplished during the project lifespan:

1. Identification of the functionalities needed by the PLEIADE teachers based on the User Requirements analysis. [DONE].
2. Set up of the Learning Management System. [DONE].
3. Identification and integration of the tools needed to enable the functionalities (e.g., game mechanics for the “gamification layer”; self-regulated learning tools to better address PLEIADE contexts and users). [DONE].
4. Specifications and development of learning analytics functionalities needed to support gamification and self-regulated learning. [DONE].
5. Revision of the platform configuration based on data collected during the Blended Training Activities. [DONE].

3.1 Timeline

IO3 run from 2020-09-01 to 2022-08-31 (see Project GANTT chart for intermediate deadlines/milestones). Originally, the first release of platform was due at month 7 of the project (i.e., end of March 2021). Following a re-scheduling of some project

activities, agreed with the National Agency, this deadline was moved to month 8 (i.e., end of April 2021).

Based on the internal project calendar, which provides for an internal review of the quality of the outputs, the preliminary version of the platform was released for the internal review process by 10 April 2021. Following the validation, it was then released for the start of the BTAs (i.e., begin of May 2021).

The final release of the Gamified Platform (due at month 24, that is, August 2022) was revised based on (a) data and feedback collected during and after the BTAs, and (b) feedback from the PLEIADE project evaluator, Prof. Yannis Dimitriadis. The revision process took place in the period going from month 22 to month 24 of the project.

3.2 Partners' contribution

The partners involved with major effort (in terms of working days) in this output were CNR-ITD and University of Sofia, as follows:

- CNR-ITD led IO3, guaranteeing the scientific coordination and the support to the other partners; moreover, CNR-ITD was responsible (as task leader) for Task 1 and Task 4 (see tasks' list mentioned above).
- University of Sofia was responsible (as task leader) for Task 2, Task 3, and Task 5 (see tasks' list mentioned above).

Other partners involved with less effort (in terms of working days) were:

- Open Lab (5 days in total), which contributed to the internal review of the platform.
- Schools (2 days in total, each school) which provided their feedback on the platform during the enactment.

Furthermore, EDEN also contributed as an internal reviewer for the first release of the platform.

4 The PLEIADE gamified platform

The PLEIADE Gamified Platform includes some features specifically designed for the objectives of the project that can be easily (re)used in different contexts. The PLEIADE Gamified Platform can support teachers in their TPD activities through sharing documents, discussing practices, commenting on case studies, etc. The Gamified Platform sustains collaboration and communication with web conferencing, forums, etc. It is a web-based application to support TPD in hybrid learning contexts. Hybrid means a mix of learning activities in presence and at a distance, both synchronous and asynchronous. Particularly, a hybrid approach to course delivery combines face-to-face classroom instruction with online activities.

Given the importance of the community/social dimension (sustaining the sharing of the practices), the tool must also be equipped with proper functionalities sustaining collaboration and communication among users. More specifically, in the project proposal the Gamified Platform was described being equipped with specific tools according to four conceptual dimensions:

- Tools for webinar delivery, allowing synchronous exchange and collaboration among teachers
- Collaborative-oriented and teacher-appropriate gamification tools (motivation)
- Mechanisms and tools for promoting self-regulated learning (SRL) strategies and personalization
- Learning Analytics applications to track networked knowledge sharing practices and underpin the above functions

Gamification is the keyword characterizing the online platform, and is the basis of its design according to the following four reference ideas:

- Fostering teachers’ acceptance of new methods and tools, which is central to an effective professional development.
- Promoting the development and sharing of inclusion-oriented and collaborative learning designs.
- Boosting teachers’ motivation to enact those designs in class.
- Promoting sharing and peer review of each other’s designs for further development.

4.1 Adapting Moodle as a basis for the gamified platform

In the context of the PLEIADE Project, Moodle was identified from the beginning as the most suitable candidate to be adapted as a technological basis for the Gamified Platform.

Moodle (<https://moodle.org/>) is a learning platform designed to provide educators, administrators and learners with a single robust, secure and integrated system to create personalised learning environments ([https://docs.moodle.org/310/en/About Moodle](https://docs.moodle.org/310/en/About_Moodle)). Moreover, Moodle relies on an extremely customisable core that comes with many standard features (<https://docs.moodle.org/310/en/Features>).

To inform and motivate our initial intuition with a theoretical foundation, we first of all investigated scientific research. Recent studies confirmed that Moodle can be validly used in learning and training contexts where gamification is adopted to promote motivation among participants. Particularly, a recent systematic review of the use of gamification in flipped learning found that Moodle is one of the most preferred platform and points, badges and leaderboards are the most used game elements for gamification (Ekici, 2021).

Most studies report use specific cases where Moodle is used to instantiate gamified approaches that exploit different techniques and processes. Donath et al. (2020) presented a mapping from gamification concepts to Moodle elements where various gamification techniques were used in a course design, such as recording and presenting the learner’s progress, role-playing and similar. In another study, gamification elements such as points and different types of rewards, progress bars, leaderboards, content locking and trading were implemented in Moodle (Moreira et al, 2020).

An interesting perspective, which combines gamification and learning analytics - a technical feature of which Moodle is natively equipped - is presented by Tzelepi et al. (2019). In their study, they investigated gamification and learning analytics tools for promoting and measuring Communities of Inquiry in Moodle courses. In such contexts, learning analytics are used by the instructors to reward specific good social practice (related to the theoretical model to be promoted, that is, Communities of Inquiry) through gamification.

Another important reason which made us lean towards Moodle was that both CNR-ITD and University of Sofia have strong technological and pedagogical knowledge/skills in Moodle setup, administration, and use. This background would positively impact both the quality and the time required for adapting Moodle to the needs of the project.

Other technical and non-technical reasons behind the choice of Moodle were identified in the following strengths:

- Moodle natively supports a multilingual installation.
- Moodle is free and open-source software, and its international development community provides more than adequate technical and user documentation.
- Moodle can be easily customized in its graphic configuration and layout.

As Moodle would represent a flexible and modular learning management system, and scientific research offered us encouraging confirmations, at this first stage of the project we were quite confident that Moodle could be proactively used – in the context of the PLEIADE Project - for:

- Supporting learning activities and learning resources within structured, predefined learning contexts.
- Managing interactions and connections and organizing information within multiple less-structured, self-directed knowledge contexts.

Specifically, it was quite clear that the Gamified Platform based on Moodle would be able to provide users with active learning tasks (both individually and collaboratively), self-regulated learning prompts/facilitations, and gamification mechanics and elements.

This initial intuition, however, had to be validated by a more precise and contextual analysis. This validation happened in two stages. More specifically, a first, initial analysis of Moodle’s available functionalities confirmed our choice with respect to the specific tools of the four conceptual dimensions required by the project, as shown in Table 1.

Table 1: Checklist of the Moodle available functionalities with respect to the project’s needs

Functionalities/tools needed	Technical notes	Availability in Moodle
Tools for webinar delivery, allowing synchronous exchange and collaboration among teachers.	Although Moodle does not natively have a synchronous communication tool, it can easily be integrated - always with an open-source solution (i.e., BigBlueButton) already identified and tested in other contexts. Certified integration:	Yes (BBB integration)

	https://moodle.com/certified-integrations/bigbluebutton/	
Collaborative-oriented and teacher-appropriate gamification tools (motivation).	Given that the approach to gamification that is planned to be adopted in PLEIADE is based on the design of a narrative process and on storytelling (see IO1), Moodle has functionalities (both native and in terms of plugins) that allow to instantiate gamification elements within the learning process.	Yes (core + plugin)
Mechanisms and tools for promoting self-regulated learning (SRL) strategies and personalization.	The approach adopted in PLEIADE is procedural and the level of instantiation will depend on the design of the activities (see IO1). In any case, Moodle has features that allow to support SRL and personalization processes at various levels (e.g., forum for meta-reflection). Furthermore, CNR-ITD will provide the PLEIADE project with a Moodle plugin specifically devoted to monitor SRL behaviours (i.e., 4Cs Dashboard).	Yes (core + plugin)
Learning Analytics applications to track networked knowledge sharing practices and underpin the above functions.	Moodle natively support analytics: https://docs.moodle.org/310/en/Analytics Additionally, the aforementioned 4Cs Dashboard leverages an analytics-based approach to track user activity.	Yes (core + plugin)

The second stage of Moodle validation occurred downstream of the User Requirement analysis and will be presented later in this document.

4.2 Development process of IO3

As already mentioned, the Gamified Platform is not born from scratch, but rather derived from the **adaptation** and **customization** of an already existing open-source platform (i.e., Moodle). More specifically, with reference to what we had to implement for the Gamified Platform, we already had a masterplan (i.e., the project proposal). This means that system modelling and major processes of the Gamified Platform had to be defined mainly according to what we have promised in project proposal. For this reason, no formal development process was envisaged. In doing this, we have also considered that most of those processes and functionalities were already well described in the Moodle official technical documentation – so we could rely on that.

A development process usually involves “iterative and incremental development” methods (Cockburn, 2009; Larman & Basili, 2003). Iterative and incremental development is any combination of both iterative design or iterative method and incremental build model for development. In such settings, the core activities are processes, requirements, design, engineering, implementation, testing, debugging, deployment, and maintenance. In the case of the Gamified Platform, this formal process was modified and adapted to the needs of the PLEIADE project. Particularly:

- The initial phase of planning and identifying the processes was carried out the basis of the four conceptual dimensions defined by the project proposal – which were declined at more operational levels to identify proper functionalities and tools, based on such processes.
- The requirement analysis/concept development phase was conducted in a top-down way, rather than bottom-up. At this stage, therefore, it was not necessary to involve final users.
- The design, engineering, and implementation phases concerned only some specific features of the platform which were not natively available in Moodle, as well as its graphic and visual customization.
- The testing, debugging, deployment, and maintenance phases have been maintained as defined by the reference model.

Therefore, the development process of the PLEIADE Gamified Platform – and therefore of IO3 in general - has been adapted to the PLEIADE Project’s needs, as presented in Figure 1.

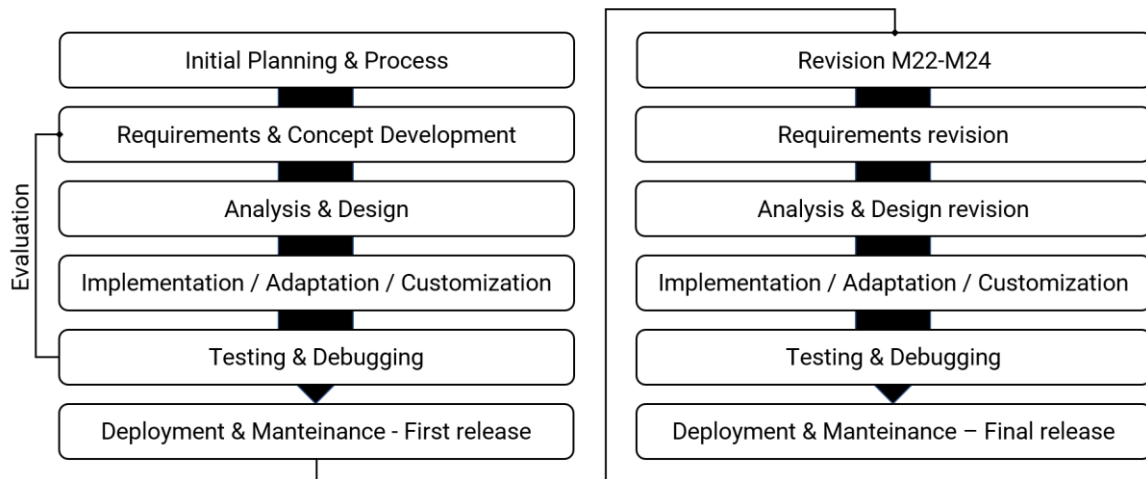


Figure 1: IO3 - The Iterative and incremental development process

The IO3 development process will be presented in the following sections, organized in the following steps:

- Identification of the functionalities needed by the PLEIADE teachers based on the User Requirements analysis.
- Set up of the Learning Management System.
- Identification and integration of the tools needed to enable the functionalities.
- Specifications and development of learning analytics functionalities needed to support gamification and self-regulated learning.
- Revision of the platform configuration based on data collected during the Blended Training Activities.

5 User requirements analysis

Generally, the User Requirements Specification (URS) specifies what the user expects the system to be able to do. URS is written early in the validation process, typically before the system is created. In the context of the PLEIADE Project, this task was a very important preliminary step informing the choice of the functionalities and configuration of the main functionalities to be made available through the Gamified Platform. As we already had a technical solution in mind (i.e., to adopt Moodle as a basis for the Gamified Platform), we decided not to run a **strong** user requirements analysis for software development.

We instead decided to adopt the **less rigid** design approach allowing us to easily describe scenarios of what we already had (at least partially) in mind, starting from the knowledge of the Moodle platform. That is, we started from the identified processes and, on the basis of the functionalities, operational scenarios were described (in terms of **user stories**) to map these functionalities in contexts of use.

The current list of user stories produced for the Gamified Platform can be accessed here:

<https://docs.google.com/spreadsheets/d/16CrS0T9Fv93vmpJtCy5KwDiba6KQjU0hLJqwUcgpm1s/preview>

More importantly, in this phase Moodle was assessed as an adequate candidate to serve as a basis for the Gamified Platform. In fact, it was possible to verify the effectiveness of the functionalities already available in Moodle and / or specifically to be developed according to the specific needs of the project, up to map them all.

The Gamified Platform User Requirement analysis is presented in the following and is not intended to be a technical document. User requirements were organized in six main logical processes and then declined in their related functionalities:

1. User account and basic functionalities.
2. Courses (learning activities).
3. Communication and collaboration.
4. Gamification and motivation.
5. Self-regulated learning and personalization.
6. Assessment, self-assessment, and tracking.

The detailed list of user stories organized into the logical processes mentioned above can be found here:

<https://docs.google.com/spreadsheets/d/1xr2eweu4gXhLSvu1RoT5agvHEPHpmBuqEOeKgN645bw/edit?usp=sharing>

Additionally, requirements for each functionality were preliminarily defined with reference to their level of priority (High, Medium, Low). Particularly, core functionalities were prioritized as high, midterms as medium, and hypothetical/desirable as low.

Based on their priority, the functionalities presented in the following would be “ready & available” on the Gamified Platform, but they would not necessarily all be used during the BTAs. Their level of usage mainly depended on the choices made by the designers of the BTAs.

5.1 User account and basic functionalities

Table 2: User Requirements - User account and basic functionalities

		Priority
Authentication	Manual accounts - accounts are created manually by administrator.	H
	E-mail-based self-registration - for enabling users to create their own accounts.	M
Registration/Enrolment	Platform/program registration (self/manual/guest).	H
	Course registration (self/manual/guest).	H
User profile	Cover page	H
	Basic contact info	H
	Photo	H
	Demographic info	H
	Visibility options	H
	Password management	H

Personalized dashboard	A customizable page for providing users with details of their progress and upcoming deadlines.	H
Multilanguage	Localization of the User Interface in different languages (at least Bulgarian - English - Greek – Italian)	H

5.2 Courses (learning activities)

Table 3: User Requirements – Courses (learning activities)

		Priority
Flexibility on delivering learning	Support of various format of courses, lessons or learning paths.	H
Ability to managing various educational resources	Documents, multimedia files, links etc.	H
Course overview	Tutors/Participants.	H
Announcements	All levels: site/course/group.	H

5.3 Communication and collaboration

Table 4: User Requirements – Communication and collaboration

		Priority
Tool for webinar delivery	Real-time synchronous discussions in a course.	H
Forums	Asynchronous discussions in a course.	H
Calendar	Calendar.	H
Surveys / Polls	For getting feedback.	M
E-mail support	All levels: site/course/group.	H

Internal messaging	Internal messaging.	H
Group-based activities	Synchronously.	H
	Asynchronously.	H

5.4 Gamification and motivation

Table 5: User Requirements – Gamification and motivation

		Priority
Digital badges	A validated indicator of accomplishment, skill, quality, or interest that can be earned.	H
Activity completion	To set completion criteria in a specific activity's settings.	H
Restrict access	To restrict the availability of any activity or even a course section according to certain condition.	H
Inventory of items	To add an inventory of items to any course and let participants find items by exploring the activities.	L
Completion progress	A time-management tool for participants.	L
Metaphorization of the environment	Graphic customization of the space rocket metaphor (see IO1)	H

5.5 Self-regulated learning and personalization

Table 6: User Requirements – Self-regulating learning and personalization

		Priority
4Cs Dashboard	To monitor individual and collective reflection on practice sharing	H

Group choice	Participants can access specific course activities or resources based on the group they have chosen	M
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5.6 Assessment, self-assessment and tracking

Table 7: User Requirements – Assessment, self-assessment and tracking

		Priority
Assessment and self-assessment tools	(Self)assessment based on individual or group- activities.	H
Log analysis	Data stored in the system that concerns participants’ profiles and achievements, activities logs and results.	H
Events monitoring	4Cs Dashboard (choice of the events to be monitored, see IO1)	H
Learning Analytics	To monitor engagement and participation	M

6 Setup of the Gamified Platform

We decided to adopt **Moodle version 3.9.4**. Official releases notes can be found here:

https://docs.moodle.org/dev/Moodle_3.9.4_release_notes.

University of Sofia is hosting the Moodle platform on their server. Particularly, two specific server environments were implemented to run Moodle:

- Development - <https://dev-moodle.pleiade-project.eu/>
- Production/Live - <https://moodle.pleiade-project.eu/>

6.1 Server specification

- Database - Percona SQL 5.7 (database server is on separated server).
- Disk space - 350G (RAID10 SAS hard drives).
- Processor - 12 cores (Intel Xeon Gold).
- Memory - 36G.
- OS - CentOS 8.3.
- Frontend is Apache httpd with php-fpm (PHP 7.3).

6.1.1 Integrating Moodle and BigBlueButton

- BigBlueButton version - 2.2.36
- Moodle plugin for integration: BigBlueButtonBN
 - URL: https://moodle.org/plugins/mod_bigbluebuttonbn
 - Version: 2.4-rc (2019101005)

6.2 Adaptation and customization

With reference to adaptation and customization, first of all the graphic theme of Moodle was customized to fit the PLEIADE visual identity. Particularly, we installed the “Fordson” theme (https://moodle.org/plugins/theme_fordson).

Furthermore, additional functionalities and processes were added to the basic core Moodle installation. These characterizations - which emerged from the requirements analysis phase and were described there (see Section 6.2 and Section 6.3) - had to do with the following aspects of Moodle:

- Basic functionalities.
- Web conferencing (online webinars).
- Gamification and motivation.
- Self-regulated learning.
- Analytics.

The details of the adaptation and customization activities are shown in Table 8.

Table 8: Adaptation and customization – additional functionalities and processes

Functionalities	Tools (URA)	Adaptation/ Customization
Basic functionalities	Multilanguage	Language packs were installed (Bulgarian - English - Greek - Italian).
Web conferencing (online webinars)	Tool for webinar delivery	BigBlueButton was integrated.
Gamification and motivation	Metaphor	<p>The graphic/visual customization of the space rocket metaphor for enacting gamification (as defined in IO1) was deployed in the following user interface elements.</p> <p>Course format: Tiles (https://moodle.org/plugins/format_tiles) – to add themed icons elaborated according to the gamification-based metaphor.</p> <p>Other elements: 4C Dashboard “spaceship version”.</p>
Self-regulated learning	4Cs Dashboard	The 4Cs Dashboard (<i>graphical interface</i>) was highly customized to specifically target the PLEIADE context and be adapted to the project’s needs.
Analytics	4Cs Dashboard (choice of the events to be monitored)	The 4Cs Dashboard (<i>events monitoring</i>) was highly customized to specifically target the PLEIADE

		context and be adapted to the project’s needs.
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Below, some illustrative screenshots are presented to show the level of graphic customization of the Gamified Platform and its level of integration with the visual identity of the project.

6.2.1 The user dashboard

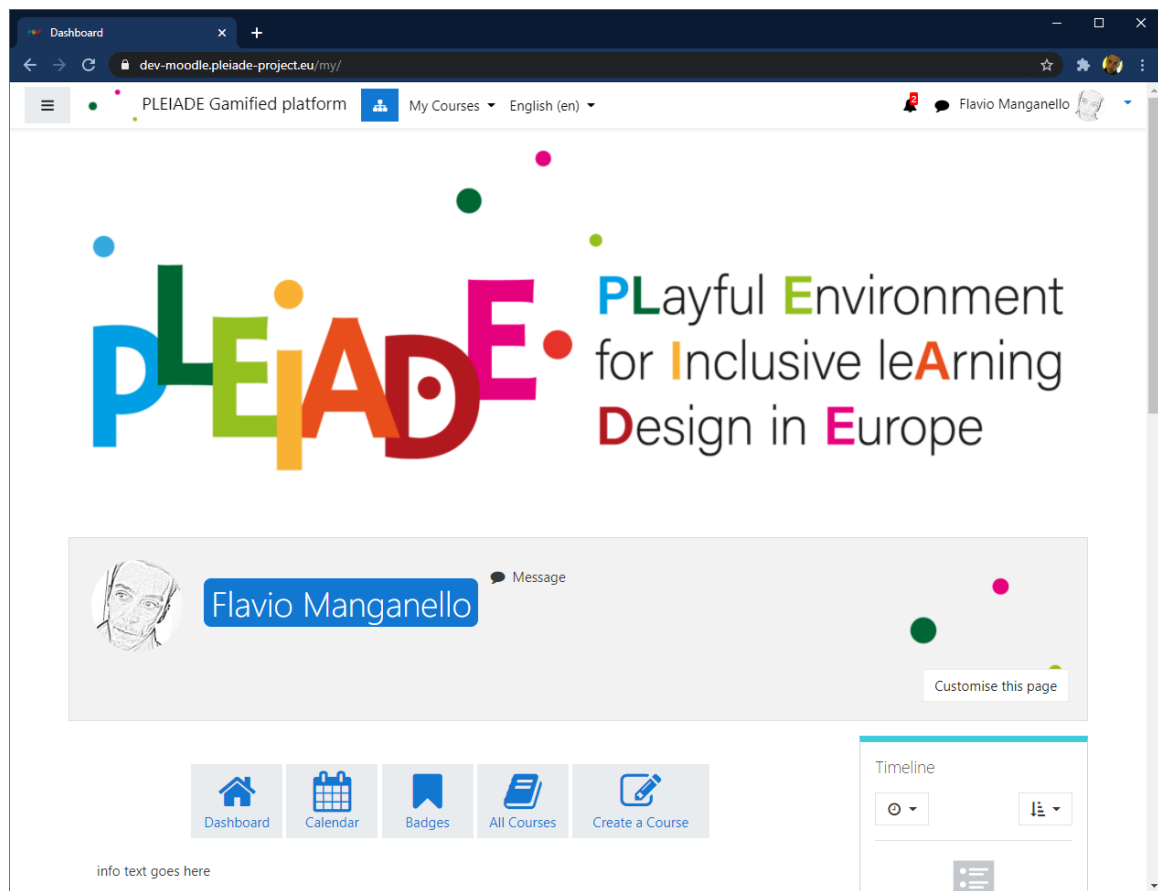


Figure 2: PLEIADE Gamified Platform - User Dashboard

6.2.2 The user profile

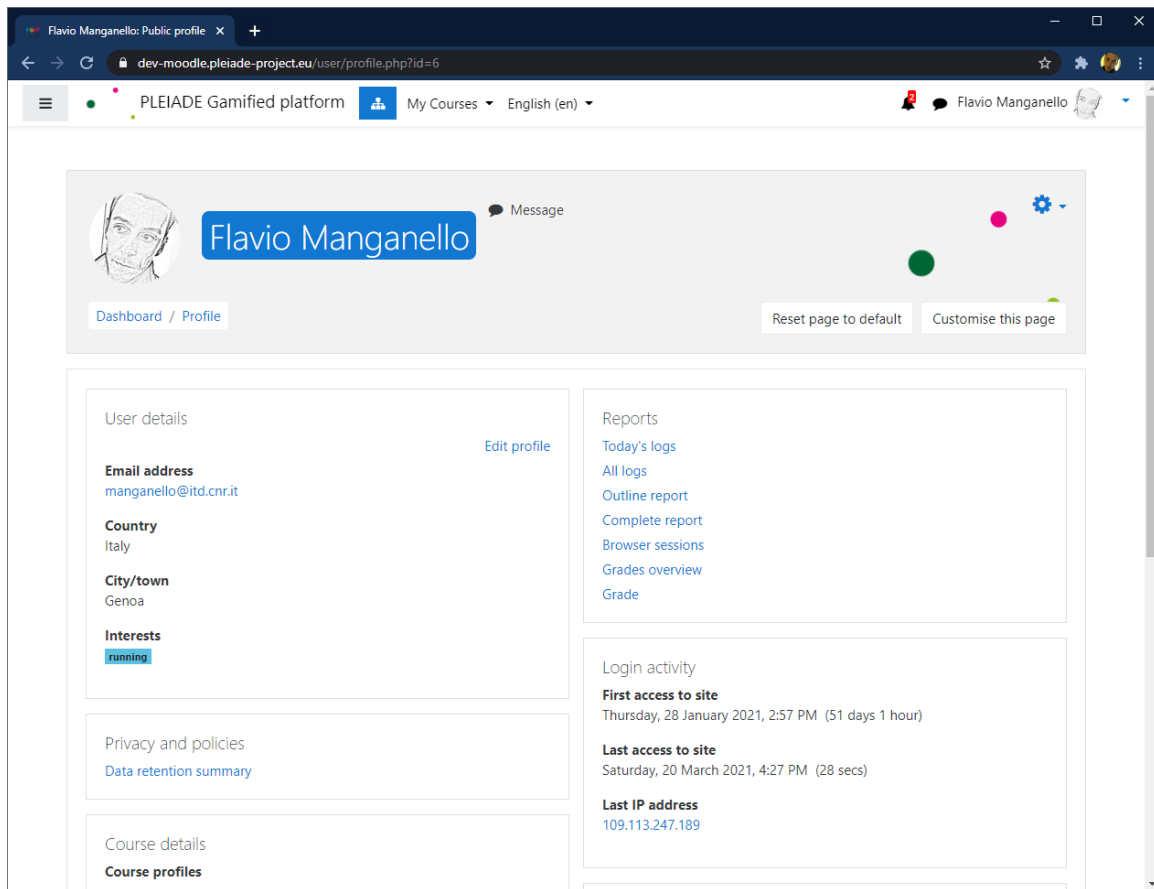


Figure 3: PLEIADE Gamified Platform - User Profile

6.2.3 The course home page

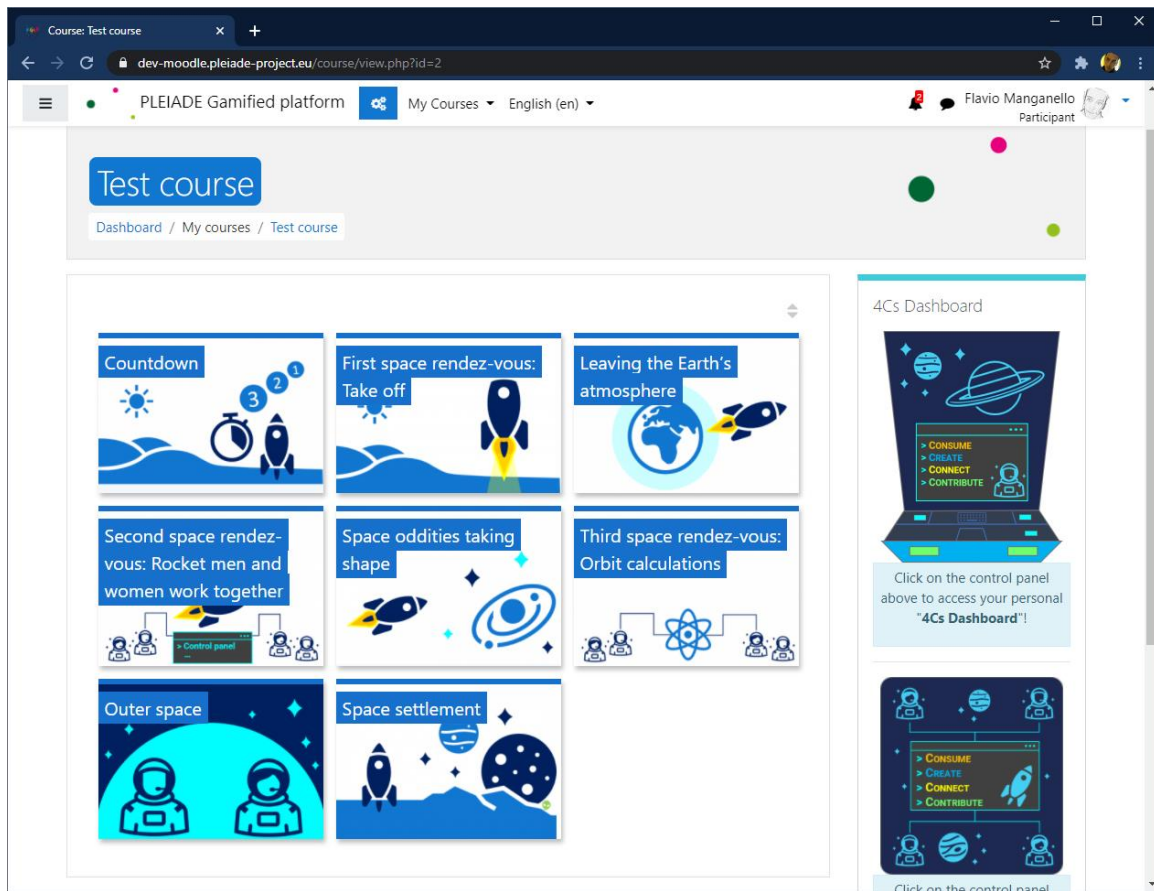


Figure 4: PLEIADE Gamified Platform - Course home page

6.2.4 The course section

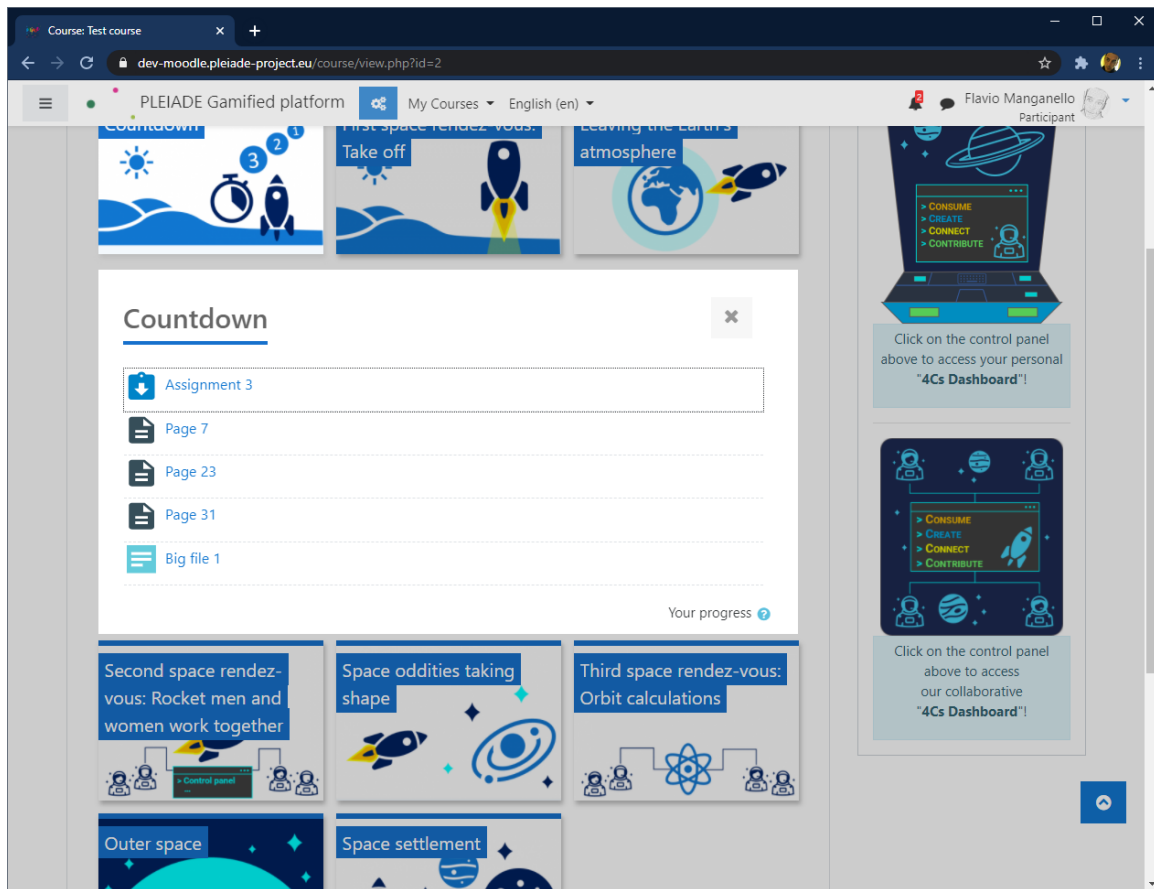


Figure 5: PLEIADE Gamified Platform - Course section

6.2.5 The 4Cs Dashboard – My report

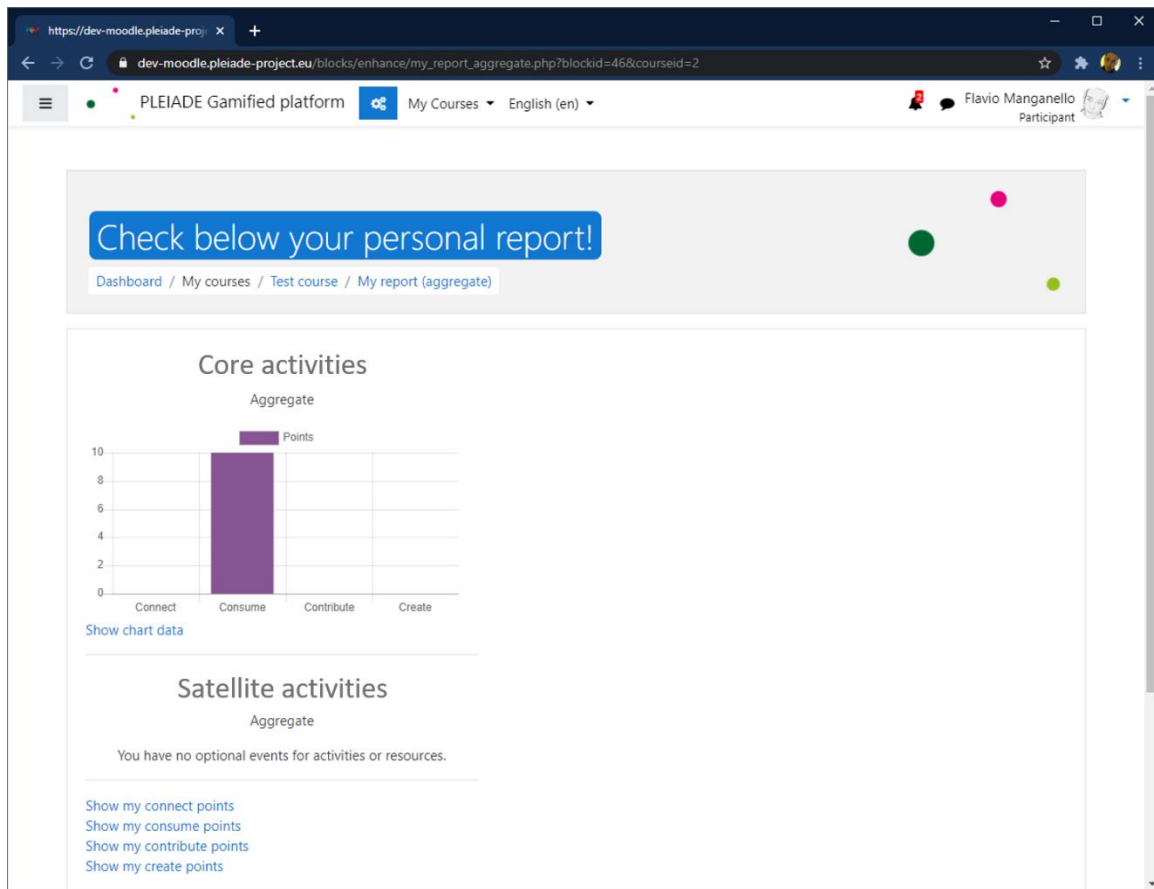


Figure 6: PLEIADE Gamified Platform 4Cs Dashboard - My report

6.3 Tools needed to enable the functionalities

The features to be enabled had to do with the following dimensions:

- Online synchronous audio/video communication delivery.
- Gamification and motivation.
- Self-regulated learning and personalization.
- Learning Analytics.

To enable these dimensions, various tools have been identified, some native to Moodle, others available as additional plugins, others still specifically designed and developed for the context of the PLEIADE Project. The detail of the tools is shown in Table 9.

Table 9: Tools needed to enable the functionalities

Functionalities	Tools (URA)	Priority (URA)	Status

Online synchronous audio/video communication delivery	BBB	H	Ready
Gamification and motivation	Moodle core functionalities (e.g., digital badges, restrict access)	H	Ready <i>The level of use was defined in accordance with IO1</i>
	Moodle “gamification” plugins (e.g., Stash, completion progress)	L	Ready <i>The level of use was defined in accordance with IO1</i>
	Graphic customization of the space rocket metaphor	H	Ready
SRL and personalization	4Cs Dashboard (plugin)	H	Ready
	Group choice (plugin)	M	Ready
Learning Analytics	4Cs Dashboard (choice of the events to be monitored)	H	Ready <i>The level of use was defined in accordance with IO1</i>
	Choice of the analytics model to be adopted in the course	M	Ready <i>The level of use was defined in accordance with IO1</i>

6.4 Specifications and development of learning analytics functionalities

The two main functionalities implementing analytics in the Gamified Platform are:

- The 4Cs Dashboard.
- Analytics.

Particularly, with reference to specifications and development of learning analytics functionalities:

- Both functionalities - 4Cs Dashboard and Learning Analytics – were descriptive in nature - they informed participants about what happened, based on tracking and log analysis.
- They were monitoring only the online activities of the BTAs – i.e., what was happening into the gamified platform.

6.4.1 The 4Cs Dashboard

The 4Cs Dashboard (Manganello et al., 2021) aims at promoting individual and collective reflection on practice sharing. Particularly, the 4Cs Dashboard exploits analytics (i.e., Moodle events - https://docs.moodle.org/310/en/Events_list_report) to monitor SRL behaviours enacted in the online course. The 4Cs Dashboard tracks a selected, predefined set of Moodle events, and maps them based on the 4Cs framework (Milligan et al., 2014):

- “Consume” behaviours are those that entail making use of knowledge and resources created by others.
- “Create” behaviours are those concerning producing new knowledge or distilling and organising existing knowledge.
- “Connect” behaviours regard linking with others and/or providing feedback on their work.
- “Contribute” behaviours occur when new knowledge is made available to others.

For example, the ‘Post created’ event of the ‘Forum’ component is by default mapped as an action under the ‘Connect’ behaviour (see Figure 7). The way in which Moodle events are mapped against the 4Cs framework can be customized, depending on the specific learning design of the course and the related learning objectives.

Originally, the 4Cs was designed and developed by CNR-ITD and Hellenic Mediterranean University in the context of the ENhANCE Project (<https://www.enhance-fcn.eu/>). For the PLEIADE Project, the 4Cs Dashboard was highly customized - not only in the graphical representation of the user interface, but

also in the events to be mapped - to specifically target the PLEIADE context and be adapted to the project’s needs.

Event Name	Event ID	Component	Role	Action
Course module viewed	\mod_folder\event\course_module_viewed	Folder	Participating	read
Some content has been posted.	\mod_forum\event\assessable_uploaded	Forum	Participating	create
Course module viewed	\mod_forum\event\course_module_viewed	Forum	Participating	read
Course searched	\mod_forum\event\course_searched	Forum	Participating	read
Discussion created	\mod_forum\event\discussion_created	Forum	Participating	create
Discussion subscription created	\mod_forum\event\discussion_subscription_created	Forum	Participating	create
Discussion subscription deleted	\mod_forum\event\discussion_subscription_deleted	Forum	Participating	delete
Discussion viewed	\mod_forum\event\discussion_viewed	Forum	Participating	read
Post created	\mod_forum\event\post_created	Forum	Participating	create
Post updated	\mod_forum\event\post_updated	Forum	Participating	update
Subscription created	\mod_forum\event\subscription_created	Forum	Participating	create
Subscription deleted	\mod_forum\event\subscription_deleted	Forum	Participating	delete
User report viewed				

Figure 7: PLEIADE Gamified Platform - Event list, with the “Post created” event of the “Forum” component in evidence

6.4.2 Analytics

Analytics are natively embedded in Moodle: <https://docs.moodle.org/310/en/Analytics>.

Particularly, the Moodle learning analytics system can be used to monitor engagement and participation of users at different levels, according to a variety of models such as:

- Participants at risk of dropping out.
- Participants who have not accessed the course recently.
- Participants who have not accessed the course yet.

- Upcoming activities due.

In the PLEIADE Gamified Platform context, the model to be adopted was defined in accordance with the design of the training path, as established in IO1.

6.5 Testing / Debugging

A preliminary release of the Gamified Platform was available for testing and debugging. Particularly, the development environment went under an iterative process of “testing & debugging”, as described in the development process. This evaluation / validation process run from 11 April 2021 to 30 April 2021 and had as output the Gamified Platform - first / initial release - ready to be deployed in the production environment.

6.6 Deployment / maintenance

Once validated, the development environment was deployed to the production environment and the users were registered. This release of the Gamified Platform hosted the online activities of the BTAs, starting from the begin of May 2021.

University of Sofia took care of the maintenance services.

The system will be up and running for a at least 2 years after the end of the project.

7 Using the Gamified Platform to host the BTAs

The first release of IO3 was delivered at M8 (April 2021), with one month delay with respect to plans, and started to be used straight after the release for the BTAs, starting from May 2021. The delay was due to late communication of project approval and further administrative delays in Grant agreement signature, as declared in the Interim Report (pg. 15).

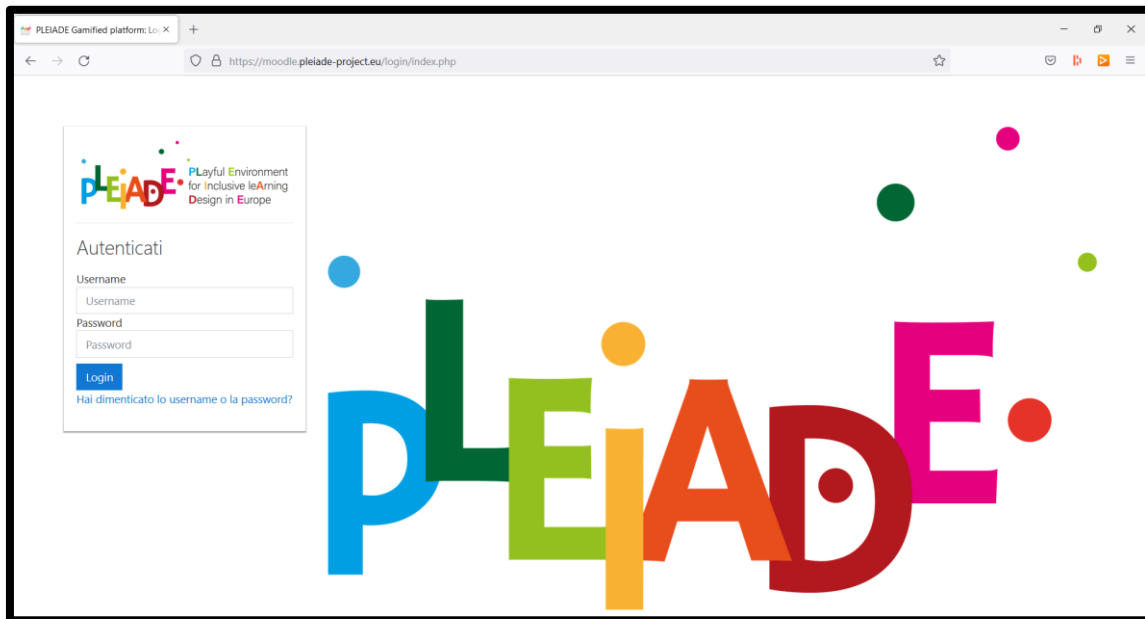


Figure 8: PLEIADE Gamified Platform – Access page

The participants in the BTAs are the primary target of this output and include the 83 teachers enrolled in the training and 16 CNR-ITD and UniSofia tutors and experts in Learning Design, inclusion, and Collaborative Learning, acting as learning facilitators. As both the CNR-ITD team and the Sofia University team are well versed in the use of Moodle, no major issues were faced in managing this task. It is noteworthy, though, that some unexpected additional effort by UniSofia was needed to arrange course recognition.

During the BTAs, the Gamified Platform was used by a total of **83 PLEIADE teachers** enrolled in the platform, as declared in the Interim Report (pg. 13). The PLEIADE teachers learnt how to use the platform functions rather quickly, supported as they were by their online tutors and by a bespoke area for “technical support”. Participation in the online SJSTEs was monitored through the **forums** and **learning analytics** tools of the platform, by the BTA Leader, the school principals and Team Leaders (TLs).

8 Evaluation of the first release and revision of the platform configuration

The evaluation and the revision of the Gamified Platform took place between M22 and M24 in synergy with IO1 and the implementation of the BTAs. Particularly, this task was based on data collected during the BTAs, where the first release of the platform was used – as shortly described in the following. The **revision** of the Gamified Platform (expected between M22 and M24, after its use in the BTAs) took place in synergy with IO1 and the implementation of the BTAs. Particularly, this task was **based** on:

- (1) data and feedback collected during and after the BTAs, and
- (2) feedback from the the PLEIADE project evaluator, Prof. Yannis Dimitriadis.

The results of such evaluation will be reported in IO6 ‘Amplification kit’, but they constituted the backbone for revising the Gamified Platform.

8.1 Feedback from the project evaluator

In the following Table 10, feedback from the project evaluator and actions taken to respond to the various points raised are reported.

Table 10: Feedback from the project evaluator

	Feedback from the evaluator	Actions taken / Justifications
1	To make more explicit the connection to the User Needs analysis with respect to teachers/learners (IO1) - how the finding informed the design of the platform.	This point raised by the reviewer has to do with the design of the platform , particularly the step of requirement analysis/concept development phase. This activity was conducted through a design approach that, starting from both CNR-ITD and UniSofia knowledge of the Moodle platform, and was informed from 1) the user needs analysis run under IO1 and 2) specific consultations with the designers of the BTAs (authors of IO1). Notably, this process ran in parallel and iteratively: the User Needs analysis informed the design of IO1, and the design of IO1 guided the design of the platform. The User Needs analysis began in the context of the IO1 to inform the learning design of the BTAs and, based then on such needs, IO3 actions were informed.

2	To make more explicit the specifications reported by the BTAs designers (IO1).	As a result of iterative process at the basis of the User Needs analysis, operational scenarios were prepared (in terms of user stories) to describe specific processes and functionalities of the Gamified Platform and to map these processes and functionalities in contexts of use. The user stories incorporated the specifications reported by the designers of the BTAs and were validated by them, in the various steps.
3	To add more details in the reporting of the analysis of the “user persona” and the interaction with them.	Persona analysis was informally used preliminary to the definition of user stories , to get to know the target audience of the Gamified Platform (starting again from the IO1 context and needs analysis) and to explore their needs and goals. To conduct persona analysis, main profiles of target users of the platform were identified: (1) Administrator, (2) Course manager; (3) Teacher; (4) Tutor; (5) Student (BTA’s participant). A user persona is a characterization of an average user or customer who will interact with your software product. Interaction with these user personas was carried out and ensured through the knowledge of the characterizations of average users , such knowledge being held by both BTAs designers and platform designers (educational technology researchers from CNR-ITD and UniSofia teams).
4	To add more details about key indicators for “good performance” and “achievement of the project objectives”, and to report about and analyze the associated risks with respect to the design of the platform.	These indicators will be provided in IO6. Particularly, reference will be made to qualitative-quantitative indicators related to the TRAINING PHASE.
5	To describe the measures put in action to try to effectively connect the different elements of the platform, such as the metaphor, the 4C dashboard, the forums, the BBB, and the course spaces, in a fluent workflow.	The effectiveness of the metaphor implemented in IO3, based on what was defined in IO1, is based on a narrative-driven approach of storyfication that transformed the e-learning environment of the BTAs into an engaging and motivating “story”. Based on this theoretical premises, all the functionalities of the Platform, as well as the graphical elements of its User

		Interface , were coherently and jointly adapted and rendered to the narrative aspects implementing the space travel metaphor .
6	To track data as possible solution to address the need of producing evidence of the use of the platform in the BTAs in order to complement the direct feedback given by the users.	(1) The feedback provided by the PLEIADE schools will be integrated into IO6 . (2) As far as the evidence collected via the tracking tools of the Gamified Platform , the most suitable and effective data and information will be carefully selected and analysed, and then integrated into IO6 .

8.2 Main changes made to the Gamified Platform during the BTAs

Below is the list of the main changes made to the Gamified Platform in respect to the first release:

- Although a **user manual** of the platform was made available on the platform itself [see [User Guide v 1.0.0 \(2021-04-27\)](#)], some specific requests for technical help led to producing **additional sections of support material** (see Section 9 of this document).
- The platform configuration had to be adapted to allow both CNR-ITD and UniSofia in setting up **simultaneous translation sessions** for the Italian and Bulgarian teachers who had linguistic problems during the synchronous sessions, by means of a particular configuration of **BigBlueButton** with two rooms open in parallel (see Section 9.1.1 of this document).
- The “**4Cs Dashboard**” was not made visible to users from the beginning, because according to IO1 the related concepts of self-regulated learning and practice-sharing were to be introduced to the teachers only during SJSTE2. Thus, after SJSTE2 the Dashboard was duly activated, to allow participants to monitor the community practice sharing behaviours. However, during the BTAs it was decided not to promote among the participants the use of the **Individual** part of the Dashboard (see Section 9.2.1 of this document).
- The “**Open online collection of good practices for inclusion**” database-based course was added and activated to host IO5 (see Section 9.5 of this document).

9 Main functionalities of the Gamified Platform used to support the implementation of the PLEIADE BTAs

The platform relies on the Moodle Learning Management System, with additional features implemented through plugins fitting PLEIADE’s aims and needs. These include:

- A **tool for webinar delivery**, called BigBlueButton, allowing webinars, synchronous exchange, and collaboration in small groups among teachers.
- A **tool for promoting self-regulated learning** (SRL) strategies and encouraging participants to practice sharing behaviours (i.e., the “Dashboard”).
- **Learning Analytics** applications to track networked knowledge sharing practices and underpinning the above-mentioned Dashboard.
- A **graphical layout in line with the chosen metaphor** (the design of the BTAs entails the adoption of a space journey narrative and related metaphor).

Thanks to these expansions, the platform is a highly innovative digital environment, capable of supporting the professional development of teachers and of hosting the subsequent interactions among all the teachers involved in the enactment phase. This should also favour the creation of a sense of community among the teachers.

The platform is entirely based on Open Source code and this makes it highly and easily transferable to other contexts of use. In line with the project proposal, the platform’s user interface supports multiple languages and has been made available in English, Greek, Italian, and Bulgarian (the four languages of the PLEIADE project).

In the following, a description of the main functionalities of the IO3 – Gamified Platform used to support the actual implementation of the PLEIADE BTAs:

- BigBlueButton (Section 9.1).
- 4Cs Dashboard (Section 9.2).
- Learning Analytics (Section 9.3).
- Graphical Layout (Section 9.4).

Furthermore, the main changes made to such functionalities during the BTAs are described in this section, and those should be intended as a sort of addendum to the [User Guide v 1.0.0 \(2021-04-27\)](#).

9.1 BigBlueButton

As Moodle does not natively have a synchronous communication tool, it was necessary to integrate it with an open-source solution already identified and tested

in other contexts. Such solution was **BigBlueButton** (BBB). This is an open source (except for some versions of its database software) web conferencing system designed for online learning. BBB is a tool that helps instructors access Learning Management Systems, engagement tools, and analytics.

This functionality was implemented into the PLEIADE Gamified Platform specifically to support online synchronous audio/video communication delivery (i.e., **Webinars**) within the PLEIADE BTAs. Particularly, BBB was used as a **tool for synchronous audio/video communication, allowing synchronous exchange and collaboration among teachers.**

Technical information about the integrating Moodle and BigBlueButton:

- BigBlueButton version - 2.2.36.
- Moodle plugin for integration:
 - BigBlueButtonBN (https://moodle.org/plugins/mod_bigbluebuttonbn).
 - Version: 2.4-rc (2019101005).

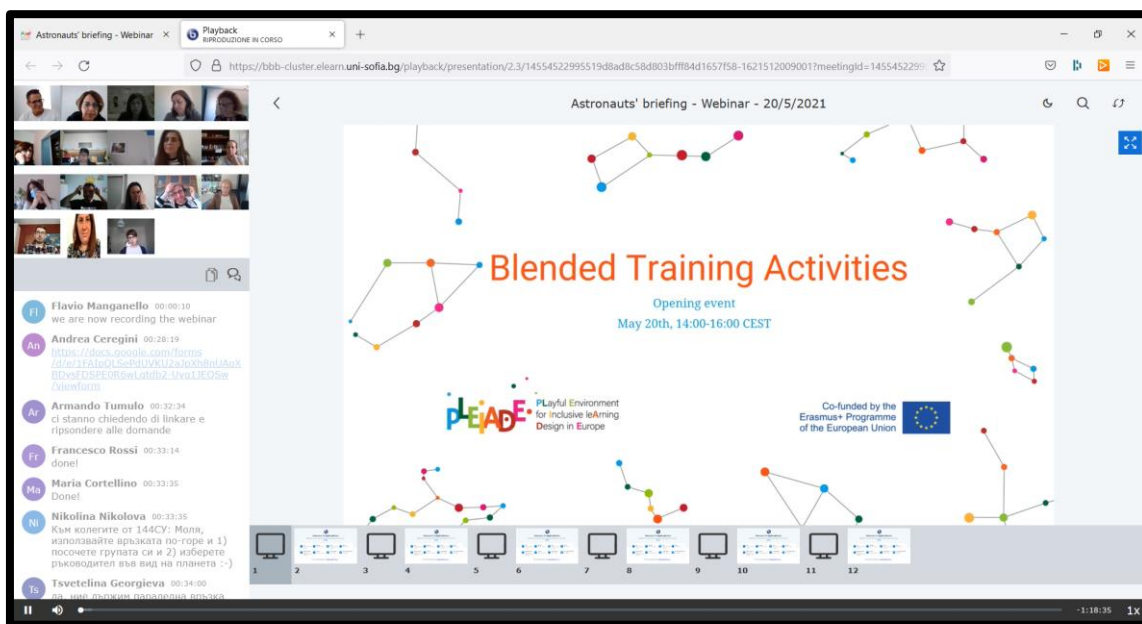


Figure 9: PLEIADE Gamified Platform – Playback session of BBB – Astronauts’ briefing - Webinar

Full details regarding the operational use of BBB in the context of PLEIADE BTAs as support for Webinars are available in the [User Guide v 1.0.0 \(2021-04-27\)](#), particularly:

- **Accessing a webinar.**
<https://docs.google.com/document/d/1nFxjYY6xq5gr10mtqH20iWqiL4ZCRxND30UtLcuK-Zo/view#heading=h.8wk1y7qhy8wg>
- **Webinar interface.**

<https://docs.google.com/document/d/1nFxfjYY6xq5gr10mtqH20iWqiL4ZCRxND30UtLcuK-Zo/view#heading=h.6pvnku9cm8x5>

- **Participation in a BBB session.**

<https://docs.google.com/document/d/1nFxfjYY6xq5gr10mtqH20iWqiL4ZCRxND30UtLcuK-Zo/view#heading=h.z5d0etcsdnll>

- **Breakout rooms.**

<https://docs.google.com/document/d/1nFxfjYY6xq5gr10mtqH20iWqiL4ZCRxND30UtLcuK-Zo/view#heading=h.769z9zeq5f4s>

More specifically, with reference to the use of BBB in the context of the PLEIADE BTAs within the Gamified Platform, in “**Appendix 1 - Joining a webinar**” it is possible to access the specific user guide “**How do I join Webinars in the PLEIADE BTAs as a crew member?**” – also available online at the following URL: <https://moodle.pleiade-project.eu/mod/page/view.php?id=149>.

9.1.1 Main changes made to BBB during the BTAs

As mentioned in Section 8.2, the native functionalities of BBB as in its version 2.2.36 were not able to support **simultaneous translation sessions**. Therefore, to help Italian and Bulgarian teachers who had linguistic problems during the synchronous sessions, CNR-ITD and UniSofia set-up a specific workflow of BBB based on two rooms open and running in parallel. Below, the workflow that was implemented is explained. In particular, reference will be made to the **SJSTE (online event)** held between **June 17 and 25, 2021**, which could be followed via webinar (i.e., BBB) by accessing the “**First space rendezvous: Take off**” module. This workflow was implemented to provide the Italian teachers with simultaneous translation ENG > ITA.

Two parallel rooms were created:

- **Room A** – the main room, to host the English-based session.
- **Room B** - the secondary room, to host the simultaneous translation ENG > ITA.

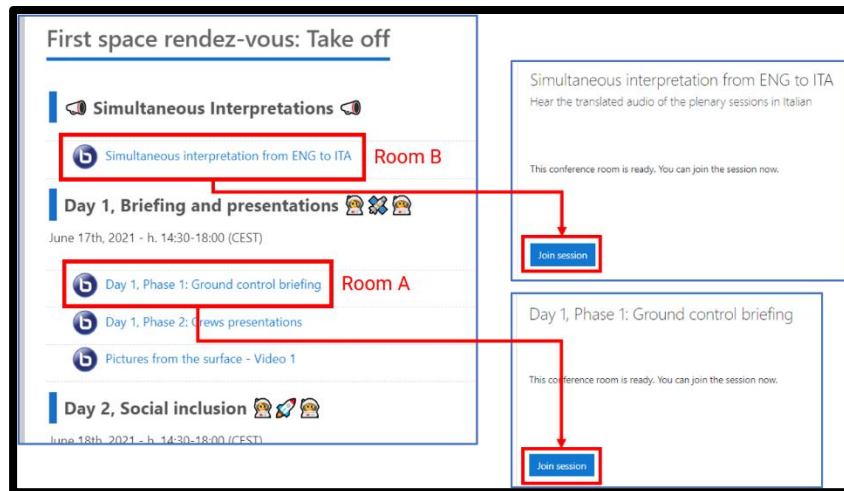


Figure 10: PLEIADE Gamified Platform – Simultaneous translation sessions in BBB

During the event, the participant had the opportunity to listen to simultaneous Italian translation of the plenary sessions and webinars, which were held in English. To do this, it was necessary to open two BBB rooms simultaneously, in two different browser tabs (see Figure 11).

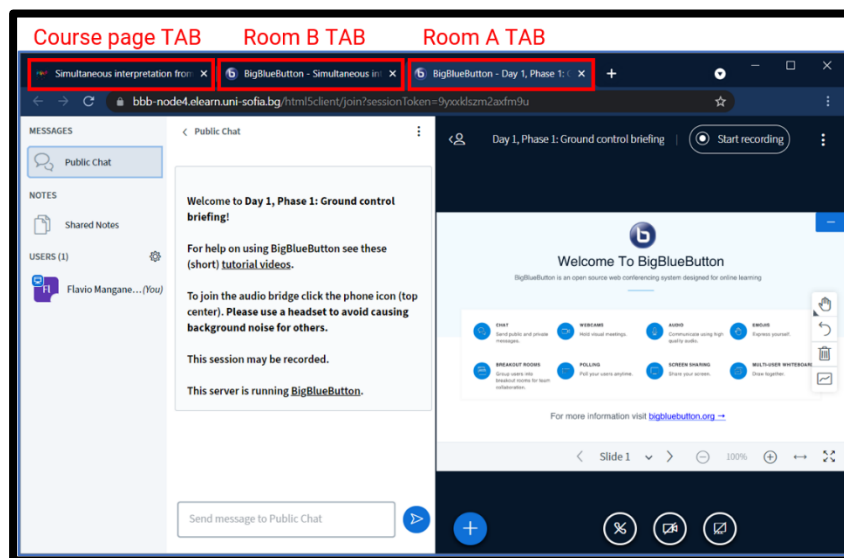


Figure 11: PLEIADE Gamified Platform – Simultaneous translation sessions in BBB

More specifically, from left to right:

- In the first browser tab (Course page TAB), the participant could view the course page.
- In the second browser tab (Room B TAB), the participant could view the BBB room where they could listen to the audio translated into Italian - this room was always the same for the duration of the SJSTE.
- In the third browser tab (Room A TAB), the participant could view the BBB room where the English plenary took place - this room could change from time to time (according to the SJSTE agenda).

NOTE: To enable simultaneous translation, **a participant in charge of performing this task had to be simultaneously connected to the two rooms:** in ROOM A, with the microphone enabled and the incoming audio disabled (so he could speak but not listen); in ROOM B, with the microphone disabled (so he could speak without disturbing the room) and the incoming audio enabled (so he could listen to the presenter).

The participant then clicked on the link to the BBB plenary room in English that they wanted to access (e.g., Room A in Figure 5). It was recommended to always have the main room (the one in English) open in the foreground. Here the presenters projected their slides. This way the participant could follow the presentation and interact in the main text chat. The audio channel in this room was then to be “turned off”.

More specifically, with reference to the use of BBB in the context of the PLEIADE BTAs within the Gamified Platform support **simultaneous translation sessions**, it is possible to access the specific user guide “**Simultaneous Interpretation of the plenary sessions in BigBlueButton**” – from English to Italian (**Appendix 2 - Simultaneous Interpretation ENG > ITA**) and from English to Bulgarian (**Appendix 3 - Simultaneous Interpretation ENG > BUL**).

9.2 4Cs Dashboard

Moodle does natively have some tools that can be adapted for promoting self-regulated learning (SRL) strategies (e.g., forum for meta-reflection). The approach adopted in PLEIADE was procedural and the level of instantiation depended on the design of the activities (see IO1). Furthermore, CNR-ITD provided the PLEIADE Gamified Platform with a Moodle plugin specifically devoted to monitor SRL behaviours (i.e., 4Cs Dashboard).

The 4Cs Dashboard (Manganello et al., 2021) aims at promoting individual and collective reflection on practice sharing. In particular, the 4Cs Dashboard exploits analytics (i.e., Moodle events - https://docs.moodle.org/310/en/Events_list_report) to monitor SRL behaviors enacted in the online course. The 4Cs Dashboard tracks a selected, predefined set of Moodle events, and maps them based on the 4Cs framework (Milligan et al., 2014):

- “Consume” behaviours are those that entail making use of knowledge and resources created by others.
- “Create” behaviours are those concerning producing new knowledge or distilling and organising existing knowledge.
- “Connect” behaviours regard linking with others and/or providing feedback on their work.

- “Contribute” behaviours occur when new knowledge is made available to others.

For example, the ‘Post created’ event of the ‘Forum’ component is by default mapped as an action under the ‘Connect’ behaviour. The way in which Moodle events are mapped against the 4Cs framework can be customized, depending on the specific learning design of the course and the related learning objectives.

Originally, the 4Cs was designed and developed by CNR-ITD and Hellenic Mediterranean University in the context of the ENhANCE Project (<https://www.enhance-fcn.eu/>). For the PLEIADE Project, the 4Cs Dashboard was highly customized - not only in the graphical representation of the user interface, but also in the events to be mapped - to specifically target the PLEIADE context and be adapted to the project’s needs.

The 4Cs Dashboard (*graphical interface*) was highly customized to specifically target the PLEIADE context and be adapted to the project’s needs (see Figure 12).

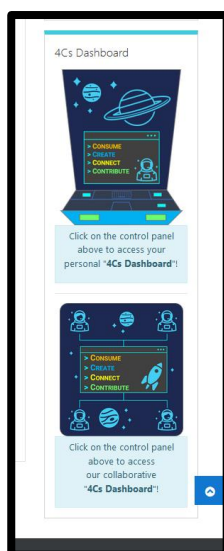


Figure 12: PLEIADE Gamified Platform – 4Cs Dashboard customized according to the space travel metaphor

Full details regarding the operational use of the 4Cs in the context of PLEIADE BTAs as support for Webinars are available in the [User Guide v 1.0.0 \(2021-04-27\)](#), particularly:

- **4Cs Dashboard.**
<https://docs.google.com/document/d/1nFxjYY6xq5gr10mtqH20iWqiL4ZCRxND30UtLcuK-Zo/view#heading=h.2x2f8y5ek3uo>

9.2.1 Main changes made to the 4Cs Dashboard during the BTAs

As mentioned in Section 8.2, during the BTAs it was decided **not to promote among participants the use of the Individual part of the 4Cs Dashboard**. This was because it was particularly complex to perform individual tracking of group activities managed by a single spokesperson, as well as the few messages sent to the platform via the Forums; the activities and interactions between the participants were there, but they were not visible in the platform.

Another relevant change that was made to the original idea of how to use the 4Cs Dashboard in BTAs concerns the **mapping of activities**. In the original idea, for example, the activity of joining webinars was supposed to be mapped as a “Consuming” 4Cs behaviour, while the activity of creating discussions and posts in forums as a “Connecting” one. In the practice of BTAs, however, it was realized that some webinars had the characteristic of promoting interaction and connection among participants and did not have an exactly “transmissive” setting (i.e., the typical approach of “consuming” a learning resource). As such, for example, joining in some webinars has been mapped as “Connecting Webinars”, while joining in other webinars have been mapped as “Consuming Webinars”. The same for the forums (some mapped as “Connecting forums”, others as “Creating Forums”). In addition, it was decided **not to map all activities and resources in all course modules**, but only some of them in the most relevant modules. **BTAs’ final preferences to set up the “4Cs Dashboard” are shown in “Appendix 4 – Dashboard preferences”**.

At the end of the BTAs, the **collaborative facet** of the 4C dashboard state was as shown in Figure 13.

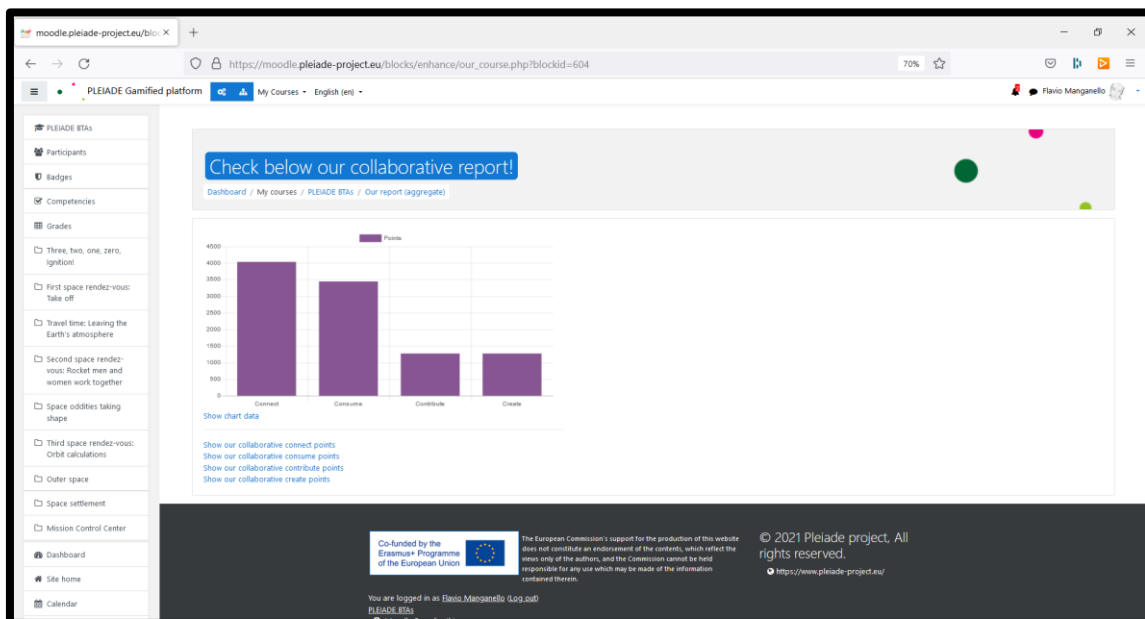


Figure 13: PLEIADE Gamified Platform – Collaborative report page of the 4Cs Dashboard

As the Figure 13 shows:

- The 4Cs behaviour most enacted by participants was **connecting** with other participants (**4039 points**), i.e., joining **connecting webinars** via BBB (2245 points) and creating **discussions** (858 points) and **posts** (936 points) in the forums.
- The second-most enacted 4Cs behaviour was **consuming** training resources (**3447 points**). This result is due to high participation in the course **consuming webinars** via BBB (1500 points), as well as a high rate of access to **textual educational resources** provided (files, folders, pages, and links).
- The third-most enacted 4Cs behaviour was **contributing** (**1273 points**).
- The fourth-most enacted 4Cs behaviour was **creating** (**1270 points**).

9.3 Learning Analytics

Moodle does natively support analytics: <https://docs.moodle.org/310/en/Analytics>. In the context of the BTAs, such tools were of help in tracking networked knowledge sharing practices. Particularly, learning analytics were of help in tracking participants progress in the BTAs, providing teachers and tutors with consistently updated information (i.e., *insights*) about participants who not accessing the BTAs course recently (the interval of analysis was set as “last month”) (see Figure 14).

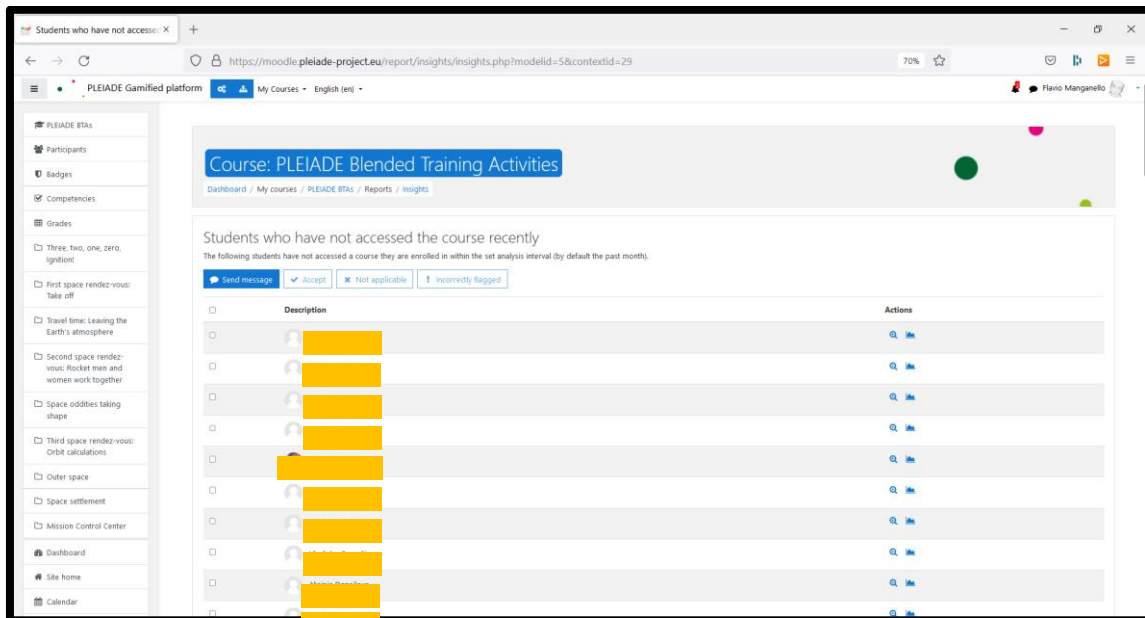


Figure 14: PLEIADE Gamified Platform – Learning Analytics Report - Insights

Additionally, the 4Cs Dashboard leveraged an analytics-based approach to track user activities as an aggregate (i.e., via the collaborative report page, see Figure 13). To that end, the 4Cs Dashboard (*events monitoring*) was highly customized to specifically target the PLEIADE context and be adapted to the project’s needs.

9.3.1 Main changes made to the Learning Analytics during the BTAs

No changes were made to Learning Analytics settings during BTAs. However, in order to enrich the reporting with additional data useful for the purpose of ex-post analysis of BTAs, it was decided to also use **reports from Moodle to track participants' activity**. In fact, Moodle allows teachers and tutors to request reports detailing which resources and activities of a course have been accessed, when, and by whom. Particularly, the following kinds of reports will be used to produce a **quantitative analysis report** to be integrated into IO6:

1. **Activity report** – generates a simple unfiltered report that can be sort by column header showing all activity in the course (see Figure 15).
2. **Course participation** – provides a sortable list showing all class members, with details about a particular resource or activity.
3. **Forum Summary Report** - generates a summary report of Forum participation.

During the BTAs, a total of **25198 interactions** took place in the Gamified Platform. Further details about the reporting of BTAs and the tracking of the online activities into the Gamified Platform will be integrated in IO6.

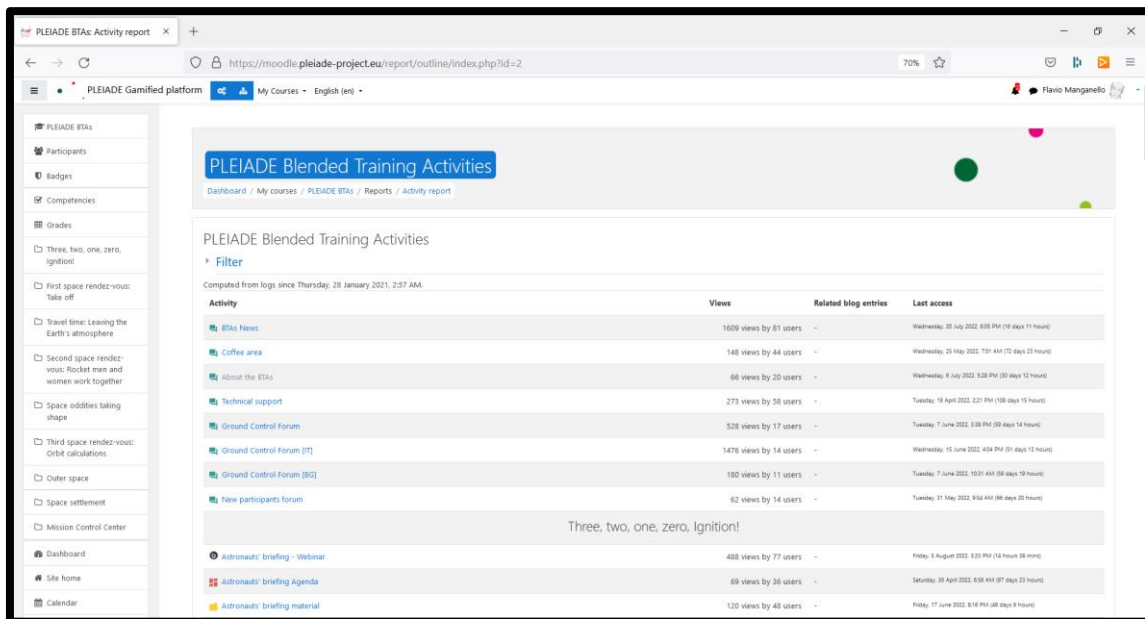


Figure 15: PLEIADE Gamified Platform – Reports - Activity

9.4 Graphical layout

To characterize the Gamified Platform, a playful method of meaningful *storyfication* was applied to captivate attention and spark interest among participants. A **graphical layout** was chosen **in line with the chosen metaphor** (the design of the BTAs entails the adoption of a space journey narrative and related metaphor). As

shown in Figure 16, each module of the BTAs was representing graphically a step of the space journey.

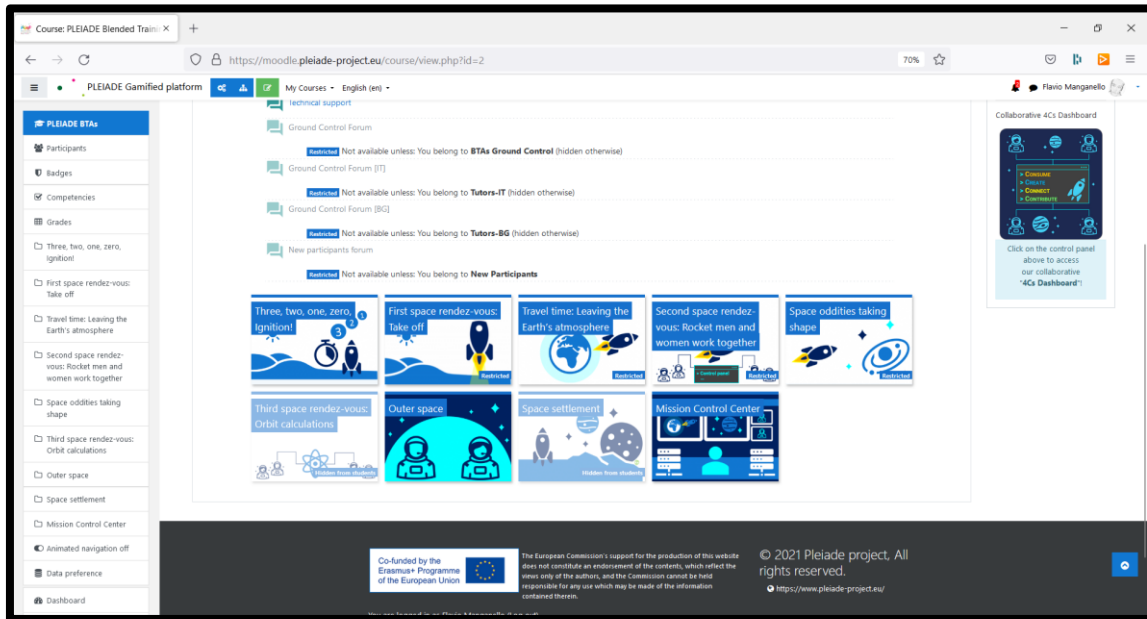


Figure 16: PLEIADE Gamified Platform – Home page of the PLEIADE BTAs

Furthermore, the metaphor was applied also into each module, to name the specific activities and resources (see Figure 17).

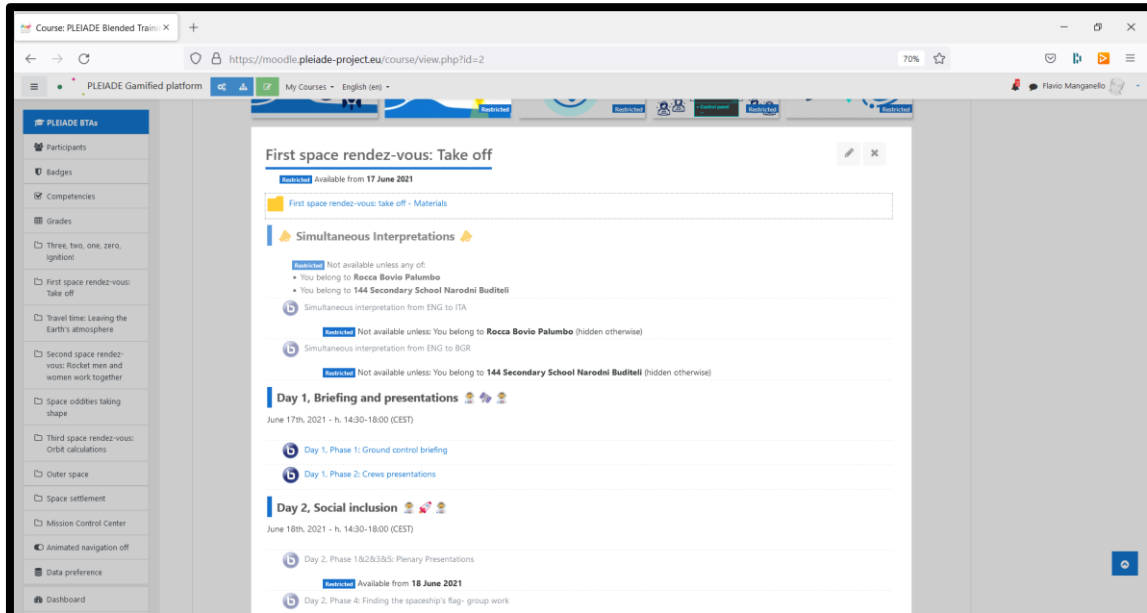


Figure 17: PLEIADE Gamified Platform – Detail of the training activities of a BTAs section

9.4.1 Main changes made to graphical layout during the BTAs

No changes were made to Learning Analytics settings during BTAs. However, an important element has been added, namely the “**Mission Control Center**” (MCC). “A MCC (sometimes called a flight control center or operations center) is a facility that

manages space flights, usually from the point of launch until landing or the end of the mission. It is part of the ground segment of spacecraft operations. A staff of flight controllers and other support personnel monitor all aspects of the mission using telemetry, and send commands to the vehicle using ground stations. Personnel supporting the mission from an MCC can include representatives of the attitude control system, power, propulsion, thermal, attitude dynamics, orbital operations and other subsystem discipline.” [Source: https://en.wikipedia.org/wiki/Mission_control_center]

This module served as a **technical support space for participants**.

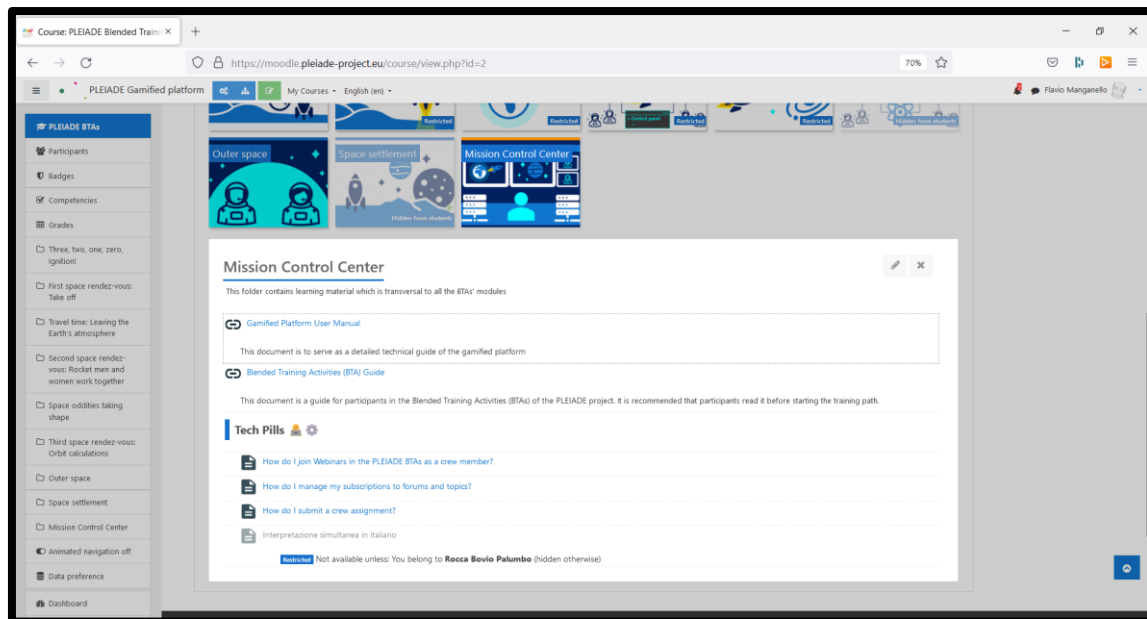


Figure 18: PLEIADE Gamified Platform – Detail of the module “Mission Control Center”

In addition to the “**Gamified Platform User Manual**” and the “**BTAs Guide**”, specific **tech pills** were made available here, based on the needs raised by participants:

- How do I join Webinars in the PLEIADE BTAs as a crew member?
- How do I manage my subscriptions to forums and topics?
- How do I submit a crew assignment?
- Simultaneous interpreting into Italian (in Italian, available only to Italian participants).

More considerations and reflections on the effectiveness of the adopted metaphor will be provided in the final version of IO1 as well as in the final PLEIADE report.

9.5 Open online collection of good practices for inclusion

Furthermore, **during the enactment (IO5)**, the Gamified Platform will host selected designs and related learning resources in an openly accessible area (that is, the

“Open Online Collection of Good Practices for Inclusion” database-based course) – see Figure 19 and Figure 20.

Currently, for the purpose of hosting this collection into the Gamified Platform, an *ad hoc* database-based course was set up. The database configuration is provisional, acting as an empty base that for the moment does not have any content. The final version will be agreed with IO5, based on specific needs. Particularly, UniSofia – which is leader of IO5 – is conceptually and technically investigating about more advanced possibilities to be integrated into the gamified platform to support OER standards requirements. Should UniSofia identify a more suitable and effective technological solution, this will be adopted under IO5 as an alternative to this database-based course configuration.

To implement the PLEIADE “Open Online Collection of Good Practices for Inclusion”, a specific single activity (i.e., database) public course has been created into the Gamified Platform. The course is currently available at: <https://moodle.plelade-project.eu/mod/data/view.php?id=342>. Login is currently required to access the course, while in the future - upon release of IO5 - it is expected that the course will be accessible without login to view the collected resources (in an open manner, therefore, even by users who are not registered to the platform).

In order to implement such workflow, the access to this course into the Gamified Platform has been made available to guest users (with auto-login on: https://docs.moodle.org/310/en/Guest_access#Auto-login_guests).

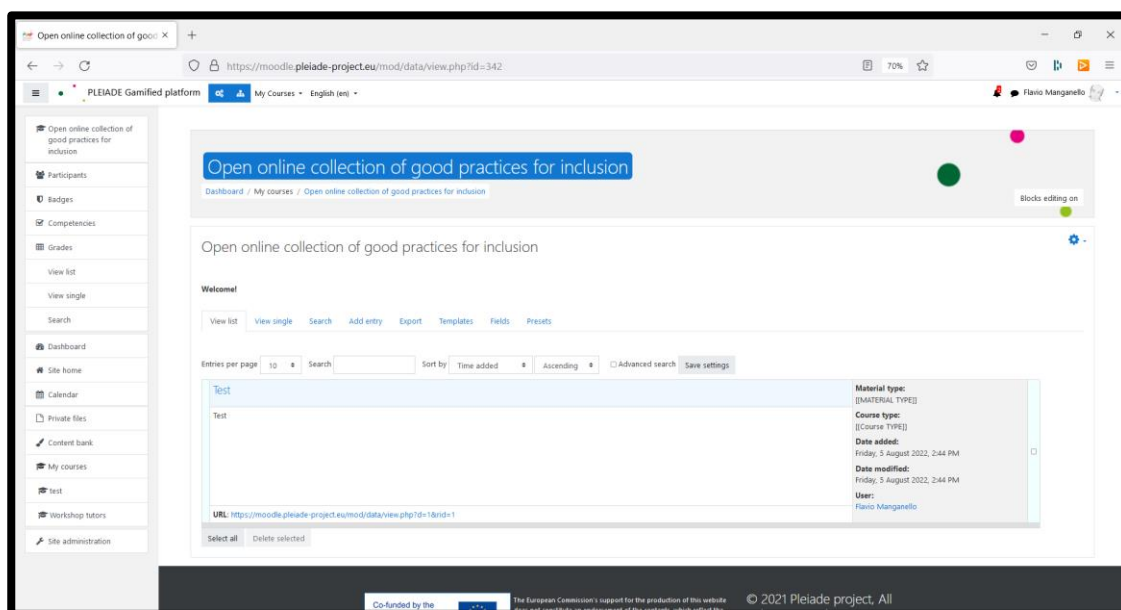


Figure 19: PLEIADE Gamified Platform – Home page of the “Open online collection of good practices for inclusion” database-based course (testing version) – VIEW LIST

By accessing the single resources, it is possible to see the sheet with detailed information and the direct link to download the resource stored into the database, i.e., the **Open Content** (see Figure 20).

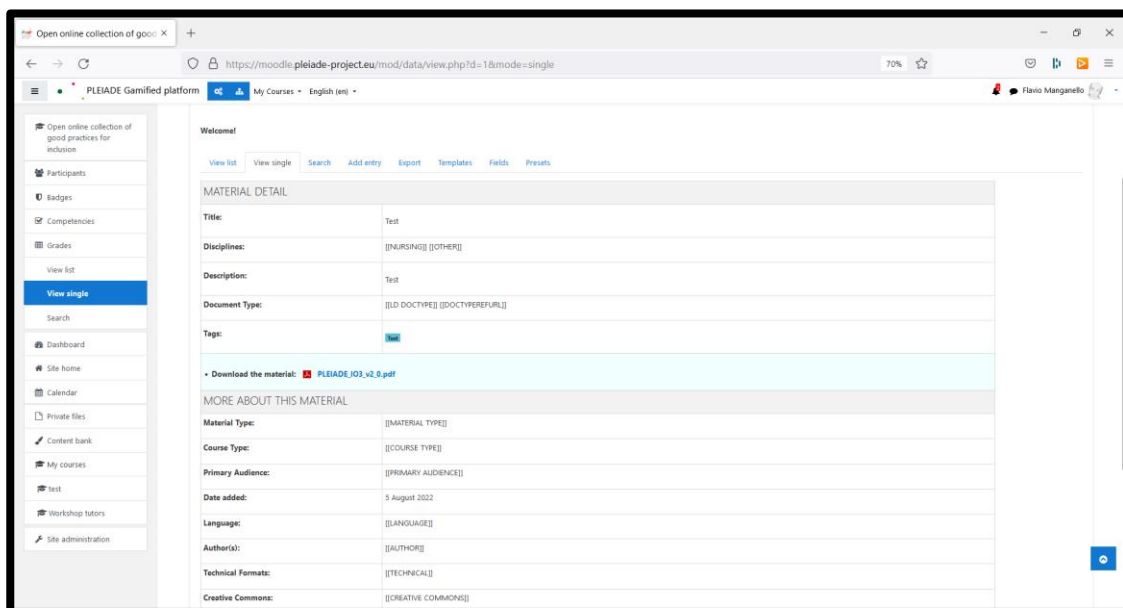


Figure 20: PLEIADE Gamified Platform – Home page of the “Open online collection of good practices for inclusion” database-based course (testing version) – VIEW SINGLE

Open Contents can be uploaded and shared into the database. Although the database is freely and openly accessible, **an account is needed for adding resources to the database**. This aims to ensure a level of control and quality on the resources inserted. Creating an account into the PLEIADE Gamified Platform is free.

Each Open Content stored into the Open Contents - Shared Database in the Gamified Platform is properly described with metadata. Open Contents have their own metadata sheet, showing title, discipline(s), description, tag(s), material type, primary audience, data added, language(s), author(s), technical format, and creative common license.

Open Contents can be searched into the database. Resource search, access and download can be performed as a guest user.

Additional functionalities that *might be* enabled are:

- It is possible to rate database records within the Open Contents - Shared Database. These ratings are then aggregated to produce an average of ratings. This is the mean of all the ratings given. It is especially useful with *peer rating*, when there are a lot of ratings being made. Ratings can be viewed and submitted *only* by authenticated users.
- Authenticated users are able to comment on database entries.

10 Conclusions

In this document, we have described the process behind the implementation of the PLEIADE Gamified Platform, from the beginning of the activity to the deployment of the final release. The first version of the Gamified Platform was ready for the start of the BTAs (end of month 8 / start of month 9 of the project). Specifically, the official release date was scheduled for April 30, 2021. The final version was scheduled to be released at the end of month 24 of the project (i.e., August 31, 2022). The Gamified Platform can be reached online at the following URL: <https://moodle.plejade-project.eu/>.

As described at the beginning of this document, the main aim of the Gamified Platform is fostering motivation, participation, interaction, and peer collaboration in Teacher Professional Development (TPD) settings. Moreover, as we have explained, the Gamified Platform is intended to enable such processes mainly through the design of specific actions of gamification and self-regulated learning promotion (i.e., meta-reflection on the 4Cs framework), while adopting analytics (i.e., the 4Cs Dashboard and the Moodle analytics system) to monitor the whole processes. These peculiarities of the platform, which represent its added value, are also a challenge, because – so conceived - the platform embeds several characteristics of innovation in respect to what is currently offered in TPD.

As we have discussed in this document, with respect to the design and development of the Gamified Platform, the process was based on adapting and customizing an already existing open-source platform (i.e., Moodle). Specifically, we have described the process that brought us to consider Moodle as a valid candidate to act as a technological basis for the implementation of the Gamified Platform in the context of the PLEIADE Project.

In this sense, the process of requirements’ definition in our project was an activity in which three dimensions were strictly interrelated: 1) our knowledge of the Moodle platform, 2) the user needs analysis ran under IO1 and 3) specific consultations with the designers of the BTAs (authors of IO1). Particularly, we adopted User Stories to describe the requirements. We started by defining a theoretical reference model (i.e., the four conceptual dimensions, see Section 5), which was functional to the specific needs of the project. In particular, the following dimensions were considered: 1) tools for synchronous audio/video communication, 2) collaborative-oriented and teacher-appropriate gamification tools, 3) mechanisms and tools for promoting self-regulated learning (SRL) strategies and personalization, and 4) Learning Analytics applications to track networked knowledge sharing practices and underpin the above functions. Based on these theoretical premises, we have identified six main logical processes

(i.e.: user account and basic functionalities; courses; communication and collaboration; gamification and motivation; self-regulated learning and personalization; assessment, self-assessment, and tracking) and then declined in their related functionalities.

We then have described the setup of the platform. More specifically, we have briefly documented the activities of 1) adaptation and customization, 2) testing and debugging, and 3) deployment and maintenance. After that, we have presented the tools needed to enable into the platform the following dimensions: 1) online synchronous audio/video communication delivery, 2) gamification and motivation, 3) self-regulated learning and personalization, and 4) Learning Analytics. Furthermore, we have presented the two main functionalities implementing analytics in the Gamified Platform (i.e., the 4Cs Dashboard and the Moodle Learning Analytics system).

Then, we have presented the activities that took place to close this IO3, particularly the revision of the Gamified Platform that run synergically with IO1 and the implementation of the BTAs, and was finalized from M22 and M24 of the project. The Gamified Platform in its final version is produced as a web-based application as a public resource, and it will remain available for (at least) 24 months after the project ends. As we have discussed, this refinement process has been nourished by two basic sources of information: (1) **data and feedback collected during and after the BTAs**, and (2) the **valuable feedback from the the PLEIADE project evaluator, Prof. Yannis Dimitriadis**.

Finally, we have briefly documented the main functionalities of the Gamified Platform used to support the implementation of the PLEIADE BTAs (Section 9). These include: (a) a **tool for webinar delivery**, called BigBlueButton, allowing webinars, synchronous exchange, and collaboration in small groups among teachers; (b) a **tool for promoting self-regulated learning** (SRL) strategies and encouraging participants to practice sharing behaviours (i.e., the “Dashboard”); (c) **Learning Analytics** applications to track networked knowledge sharing practices and underpinning the above-mentioned Dashboard; (d) a **graphical layout in line with the chosen metaphor** (the design of the BTAs entails the adoption of a space journey narrative and related metaphor). For each of these features, we then explained in detail the main changes made during the BTAs and the rationale behind such changes. Particularly, we have described the main characteristics of the revised version of the platform, with specific focus on the **“Open online collection of good practices for inclusion”** (Section 10.5). We have described that during the enactment (IO5), the Gamified Platform will host selected designs and related learning resources in an openly accessible area (that is, the “Open Online Collection of Good Practices

for Inclusion” database-based course). Currently, the database configuration is provisional. The final version will be agreed with IO5, based on specific needs.

10.1 Future prospects

(1) Identification of possible “tangible” outputs for integration with IO6.

Particularly, the possibility of exporting the BTA course (with the appropriate Moodle function, producing a .zip file) will be explored, having, of course, purged it of elements and information related to participants. In this way, the course can be "imported" into other instances of Moodle, ensuring the sustainability of the project outcome beyond PLEIADE project.

(2) BBB and simultaneous translation. The solution adopted in the context of BTAs proved to be very useful and functional, although a bit complex to implement and manage. Particularly, when there was the need to host the joint **SLERD-PLEIADE** event in the context of the second online SJSTE, it was preferred to use ZOOM since natively equipped with this functionality. However, upcoming developments in the BBB platform would seem to have solved the problem on this aspect - addition of separate audio channels for translations, with also addition of closed captions. Furthermore, in the release of **Moodle 4.0, BBB has become the embedded solution (as activity) for web conferencing.** For future instances of the Gamified Platform, therefore, we highly recommend relying on Moodle 4.0 and using BBB in its integrated version.

11 Appendix 1 - Gamified Platform User Manual - v 1.0.0 (2021-04-27)

The User Manual is also available at the following URL:

<https://docs.google.com/document/d/1nFxjYY6xq5gr10mtqH20iWqiL4ZCRxND30UtlcuK-Zo/view>



Project reference number: 2020-1-IT02-KA201-080089

PLEIADE Gamified Platform

User Manual

v 1.0.0 (2021-04-27)

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1 Introduction

Dear participant,
 this guide will provide you with some pointers for using the course’s platform. The learning platform will be used throughout the course, and it’s important that you learn to access its many functionalities.

This document is to serve as a detailed technical guide, and we will refer you to its sections during the course itself. If you have trouble

understanding the guide, or if you have questions not addressed in this document, you can contact **Flavio Manganello** at manganello@itd.cnr.it or post a question in the helpdesk forum available within the course.

Please note that, while you will be able to access the platform in multiple languages (i.e., English, Greek, Bulgarian, and Italian, see Section 11.2), this guide will use the English version as reference.

2 Login and Logout

2.1 Login to the platform

It is necessary to authenticate before accessing the platform. Click on the **Log in** link in the upper-right corner of any page to load the PLEIADE login form (below).

To access the platform:

- Enter username (or email address) and password in the login fields (1).
- Click on the **Log in** button (2).



If successful, the login action automatically brings the user to their personal Dashboard (see Section 3 for a detailed overview of this tool).

To reset the assigned password, click on the **Forgotten your username or password?** link (3).

2.2 Logout



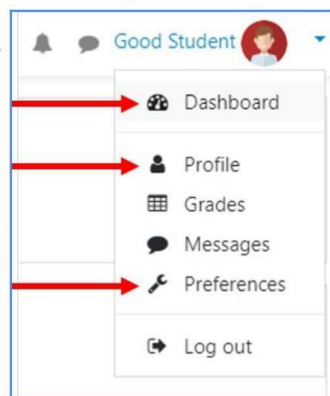
To sign off the platform:

- click on user menu in the upper-right corner of any page;
- click on the **Log out** link in the dropdown menu

3 Dashboard, User Profile and Preferences

Logged-in users can access a number of useful settings from the User menu in the upper-right corner of the page:

- **Dashboard** is a customisable page for providing direct links to their courses and activities within them, such as unread forum posts and upcoming assignments.
- **Profile** and **Preferences** contain links to further pages allowing users to edit their information and preferences, view their forum/blog posts, check any reports they have access to, set notification and message settings and many other actions.

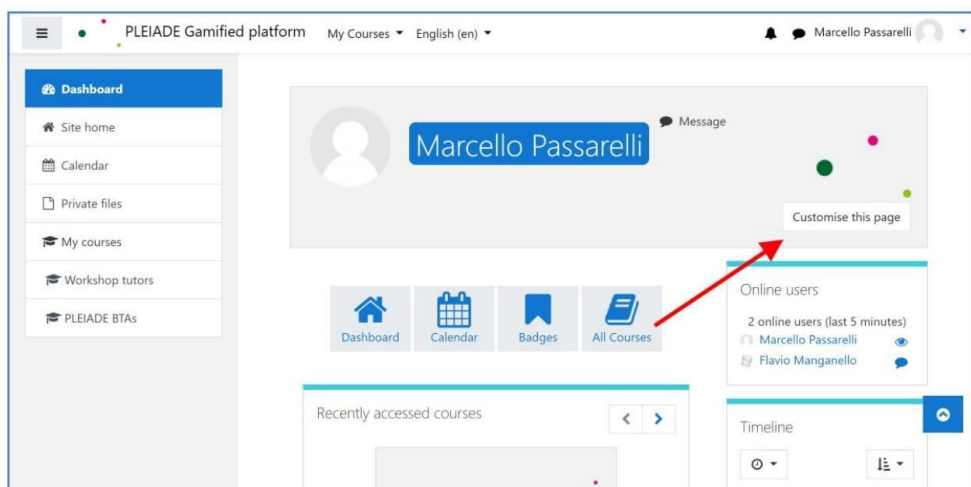


3.1 Dashboard

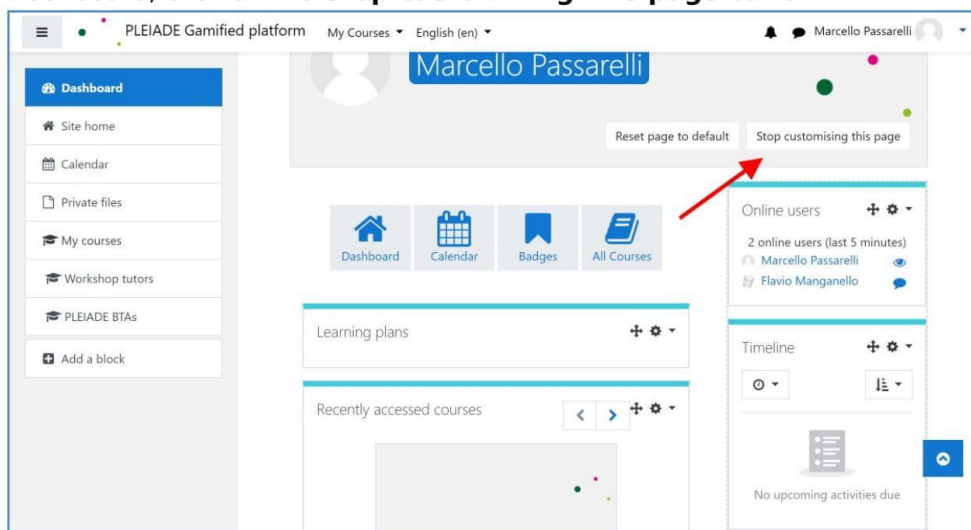
By default, Dashboard shows:

- a list of all the courses in which a user is enrolled or has an assigned role (**Course overview** block);
- an overview of the user’s schedule and deadlines (**Timeline** block);
- a list of future Course events in a summarized list (**Upcoming events** block).

It is possible to personalize the Dashboard (to add, remove, move or hide blocks) by clicking on the **Customise this page** button:



To save the current status of the dashboard blocks and return to the Dashboard, click on the **Stop customizing this page** button.



To bring the Dashboard back to its default status, click on the **Reset page to Default** button.

3.2 User Profile & Preferences

The user Profile page contains, among others, the following informations:

- **User details:**
 - the user’s email address;
 - a direct link to the Edit profile page;
- **Privacy and policies:**
 - a summary of the project’s data retention policies

● **Miscellaneous**

- a list of all forum posts and discussions created by the user;
- the user’s earned certificates;
- the user’s blog entries.

The Preferences page gives users access to various settings they might wish to edit, like:

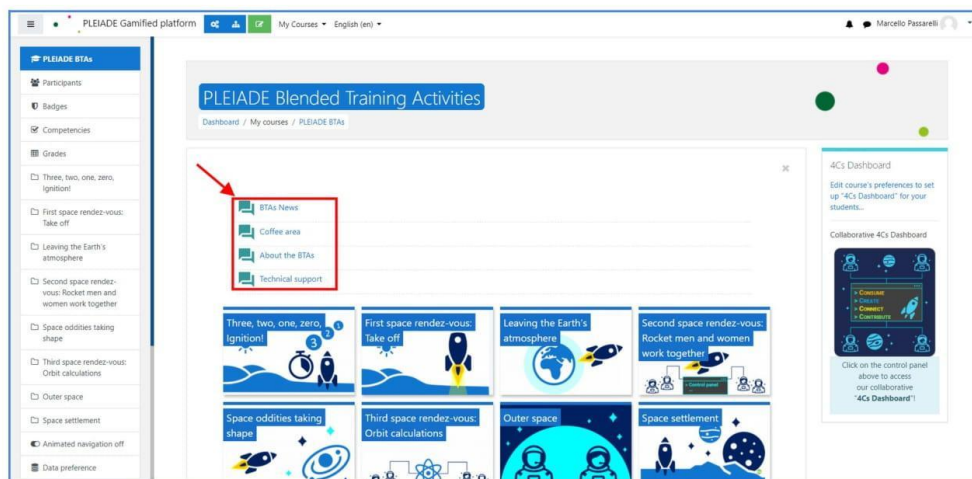
- profile informations;
- currently set password;
- preferred language;
- forum preferences;
- notification settings;
- blog preferences

IMPORTANT: by default the platform server is based on the Europe/Rome time zone. It is possible to change these settings by entering the user profile (see **Section 11** of this guide [How do I change my time zone?](#)).

4 Forum

Forums allow participants to hold asynchronous discussions among them on various topics.

To access a forum in the platform, click on the Forum title in the homepage of the course.

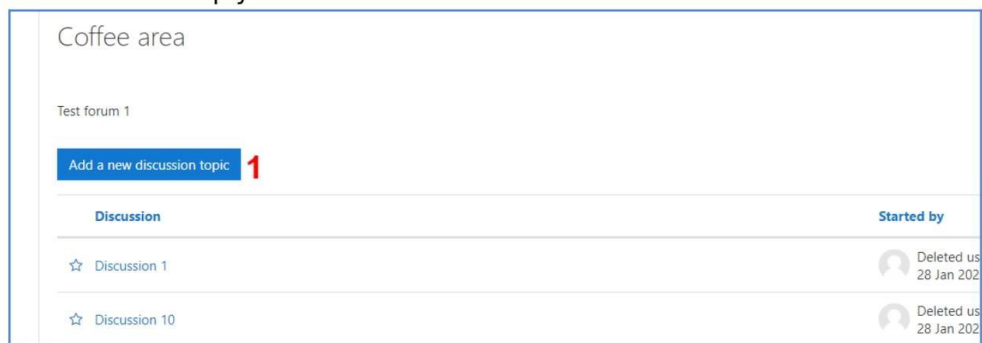


Note that the platform will have four ‘general’ forums, which will be used throughout the course (see below). These are:

- the BTA news forum, which you should regularly check to keep updated on important course-related information;
- the Technical support forum, which is the place to ask for help regarding issues with the platform, the webinar platform, or other technical tools employed during the course;
- the ‘About the BTAs’ forum, which is a space you can use to reflect with your colleagues about the learning process;
- the Coffee Area, which is a space for informal discussion, including discussion on topics not related to the BTAs.

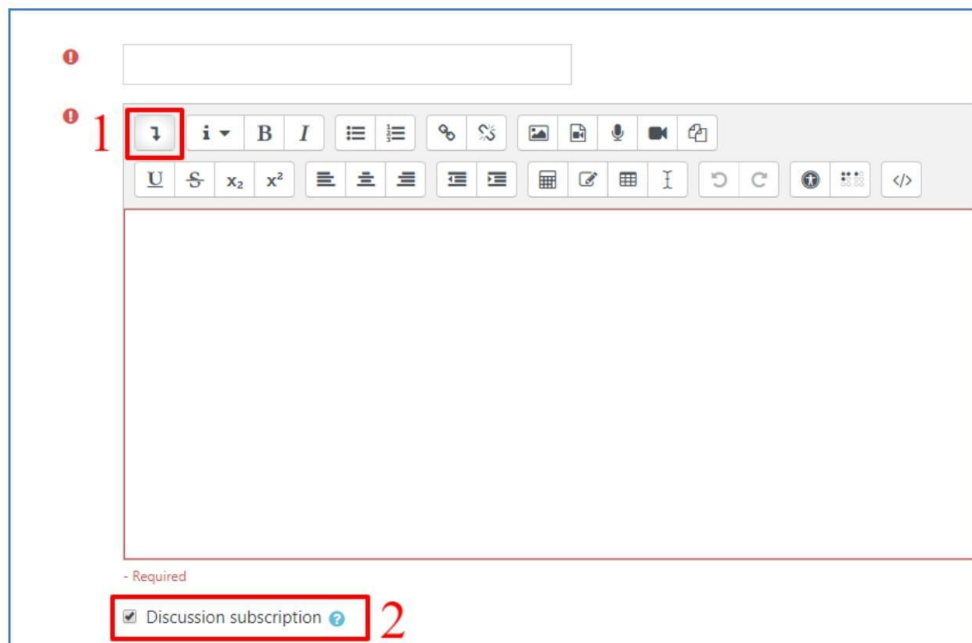
In addition to these, you will find more forums accessible from each specific course module, which will be the place where you’ll do the main module activities.

When you click on a forum, previously started discussions are listed and available to all users. Clicking the button “add a new discussion topic” (1, below) will let you post a new discussion thread (see Section 4.1). Clicking on a discussion title (2, below) will open it and allow you to reply to it. Is it also possible to subscribe to discussions (i.e. be notified of new posts) by clicking the envelope beside them (4, below). You can also subscribe to the whole forum by clicking on the gear icon (3, below) and selecting “Subscribe to this forum”. You will then be notified whenever a new discussion or reply is added to the forum.



4.1 Start a new forum discussion

To start a new thread (1), click on the **Add a new discussion topic** button (1 in the image above) to access the New Discussion Topic panel.



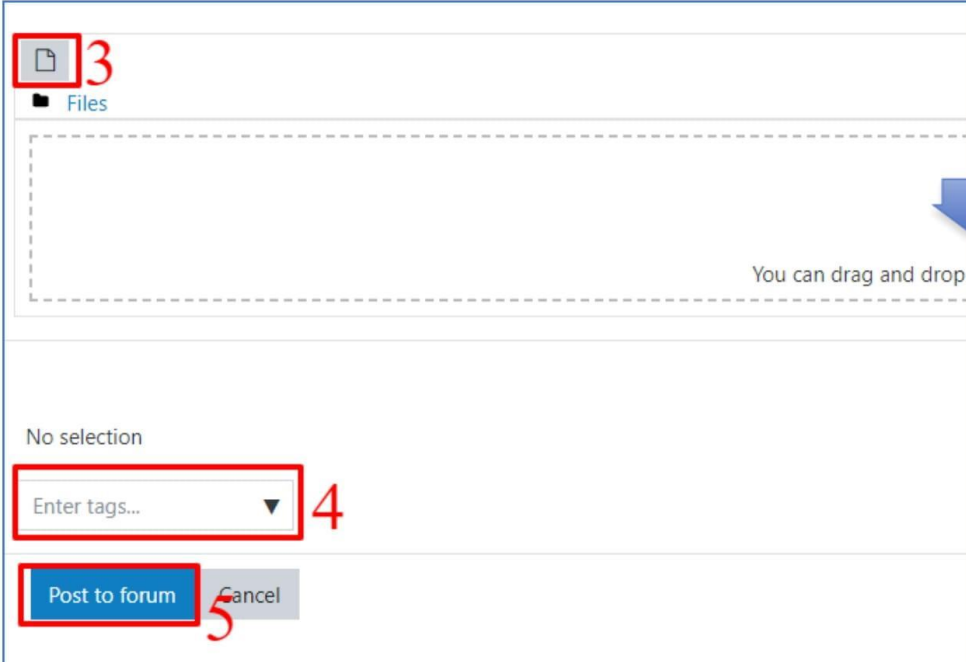
Both a subject and a message are required. Try to keep the subject short, but informative on the message contents. Make sure that your discussion is in-topic for the forum you are posting it in.

The message text field has some simple formatting options for changing font style and size, and add lists, links or multimedia files. You can access more advanced formatting options by clicking the downward arrow (see 1, above).

By clicking on the ‘advanced’ button, just under the text editor, you’ll be able to access additional options.

For example, it’s possible to subscribe to your post (see 2, above). If you do, you will be notified whenever someone posts a reply to your discussion.

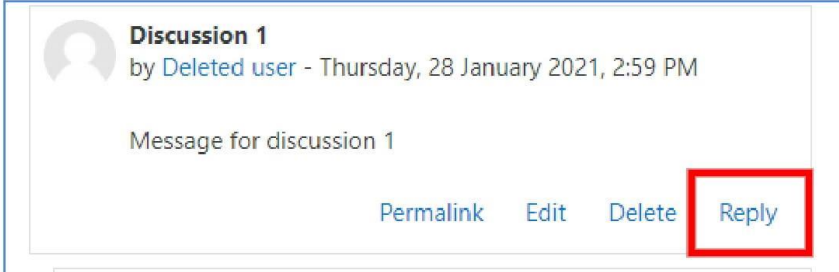
You can also add attachments to your discussion by opening the file picker (3, below) or by dragging and dropping files to the area just beneath it. Using the file picker, you can upload a file from your device, retrieve a file using an URL, or select one file you already uploaded on the platform. You can additionally add tags to your post (4, below) to make it easier for other participants to find your discussion. Both attachments and tags are optional and accessible only after clicking the ‘advanced’ button. When you are ready to post your discussion, click the button labeled “Post to forum” (5, below). Your post will now be visible to all other participants.



The screenshot shows a forum post creation interface. At the top left, there is a file upload icon with a red box around it and the number '3' next to it. Below this is a 'Files' section with a dashed border and a blue arrow pointing to the right, with the text 'You can drag and drop' below it. Below the 'Files' section, there is a 'No selection' label. Below that is a text input field with the placeholder 'Enter tags...' and a dropdown arrow, with a red box around it and the number '4' next to it. At the bottom, there are two buttons: 'Post to forum' (highlighted with a red box and the number '5') and 'Cancel'.

4.2 View and reply to discussions

When you open a discussion, you can add a reply to it (see below).



The screenshot shows a discussion post. At the top left, there is a user profile icon. To its right, the text reads 'Discussion 1' followed by 'by Deleted user - Thursday, 28 January 2021, 2:59 PM'. Below this, the text reads 'Message for discussion 1'. At the bottom right, there are four buttons: 'Permalink', 'Edit', 'Delete', and 'Reply'. The 'Reply' button is highlighted with a red box.

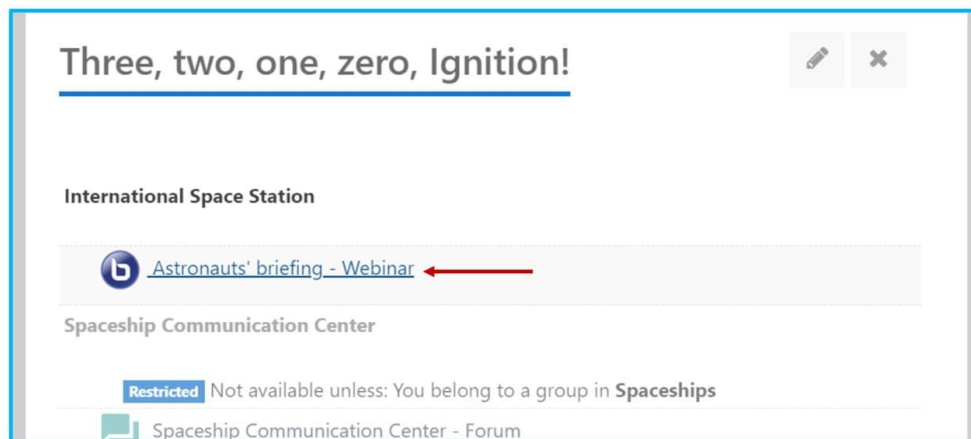
The form for adding a discussion reply is identical to the one for adding a discussion post. However, your reply won't be shown on the list of discussions, and will only be visible when a participant views the discussion you are replying to.

5 Webinar

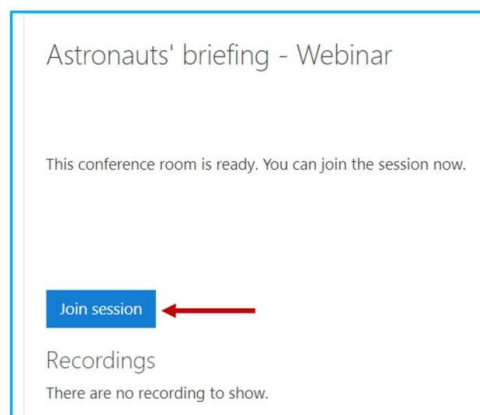
5.1 Accessing a webinar

Webinars will be delivered directly from inside the platform through a dedicated plugin.

To access a Webinar in the platform as a crew member, click on the Webinar title in the homepage of the course.



You will be directed to the Webinar page. Click on 'Join session' to enter the Webinar room. This will open a new browser tab.



Before accessing the Webinar room it is possible to choose how to join:

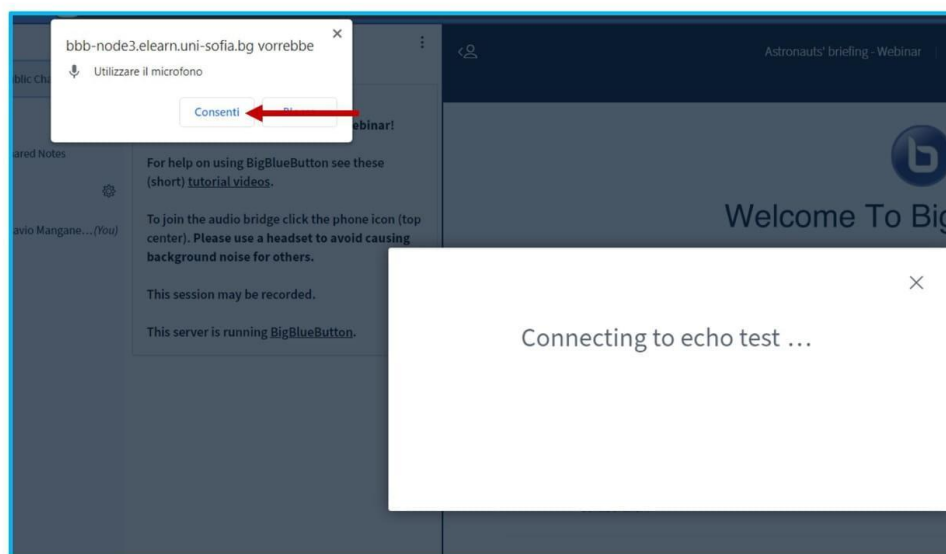


To be able to actively speak during the Webinar, click on the **Microphone** icon.

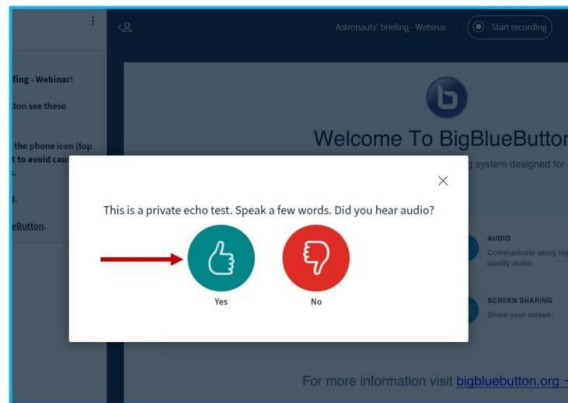
To only enter as a listener, click on the **Listen only** headset icon.

If you chose to activate your microphone, an audio test will be offered:

If you are using the Webinar functionality on your device for the first time, while you are connecting to the echo test, your browser may ask you for permission to use the microphone. Please allow that permission.



To test your audio connection, speak into the microphone: if you hear your voice back then everything has been set-up correctly, and you can continue by clicking on the green thumbs-up button (Yes). Other participants in the Webinar room will not hear you at this stage.



5.2 Webinar interface



The main default screen of a platform webinar is composed of three main parts:

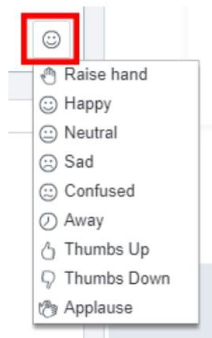
- A list of connected participants (on the *left* in the image below);
- The presentation screen (*center*);
- A public chat (*right*).



The **Users** panel (1 in the image above) lists all the Webinar participants' names along with a series of icons useful to understand what action each user is able to do, and their roles:

	<p>Moderator (can activate and deactivate audio & video for other users, select a presenter among the participants, make other users moderators...)</p>
--	--

	<p>Presenter (has full access to the presentation screen; only one participant can be presenter at a time)</p>
	<p>User with Video and Audio activated. All currently active video streams are visible in the Webcams section (3 in the image above)</p>



Participants can use the Emoji Tool (2 in the image above, and on the left) to update their status icon. This functionality allows users with deactivated microphones to make their voices heard by selecting one of the available icons, that will appear on the left of their name:



Particularly important is the **Raise hand** icon, that can be used to ask a moderator for the right to speak.

The **Presentation** panel is the main section of the Webinar module. All the documents and slides shared by the **Presenter** will be shown here.

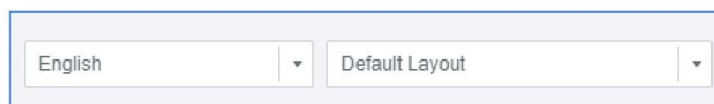
The **Chat** panel (5) allows all the participants to share thoughts, comments and questions about the current presentation.



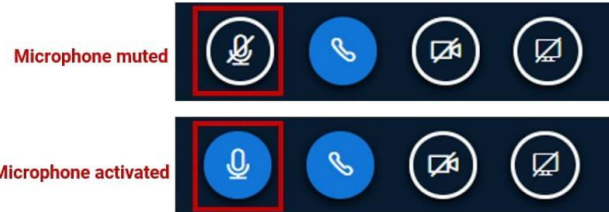
It is possible to download the content of the chat as a .txt document. To do this, click on the **Options** tab in the Chat panel and then click on the **Save chat** button in the Chat Options.

At the top middle of the screen (6) are grouped the actions for activate and deactivate microphone, audio and webcam.

The dropdown lists in the bottom-right corner of the window (7) allow the user to select the interface language for the webinar module and the preferred graphic layout. For best enjoying the Webinar, it is advised to select **English** and **Default Layout**:



Depending on the Webinar settings, you may find when you join the room that your microphone is muted or unmuted. You can mute and unmute yourself by clicking on the microphone button



Additionally, you can always switch between Microphone mode and Listen only mode.

Click the Telephone shape icon to switch to Listen only mode:



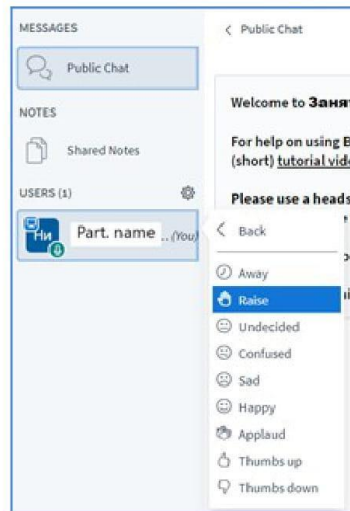
Click on the Headset shape icon to switch to the Microphone mode:



5.3 Participation in a BBB session

Please keep to the following rules during the session:

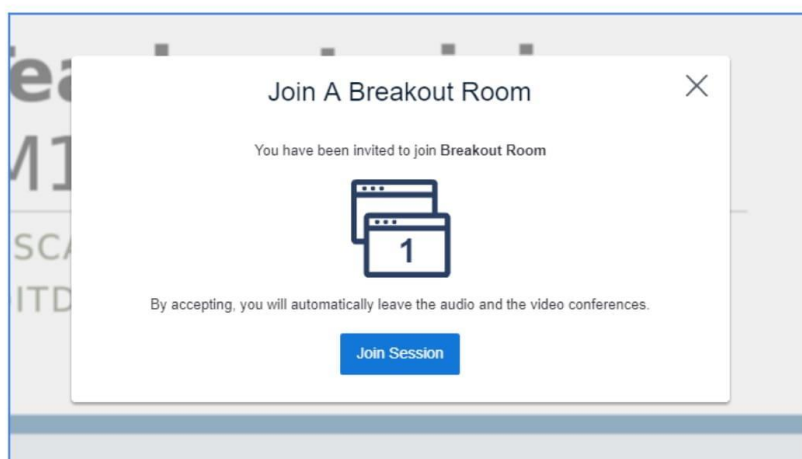
1. Mute your microphone and camera in order to not interrupt the presenters.
2. If you'd like to comment on something, please use the public chat.
3. If you'd like to join the conversation, please 'raise your hand' changing your status.



4. If the presenter invites you to speak, unmute your microphone and camera. After you finish the conversation, please mute them off again.
5. You can use the private chat feature to connect privately with another participant in the session. Select the name of the person from the list and with the right button of the mouse select the option to start the private chat.

5.4 Breakout rooms

During a webinar activity the moderator may decide to split the participants into separate groups called breakout rooms. To accept an invitation to join a breakout room, click on the blue **Join Session** button in the popup alert that will appear on screen:



When requested, perform the audio test to enter the room, that will open on a separate tab:



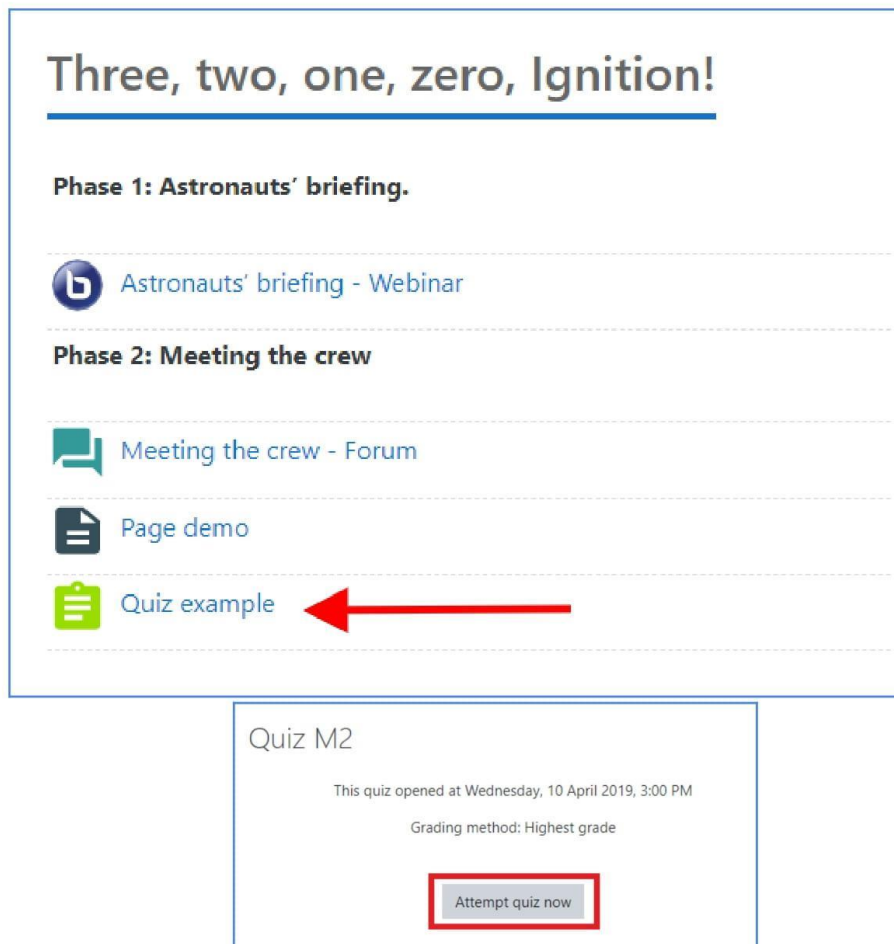
Breakout rooms work exactly as the main instance of the webinar, with the exceptions being:

- documents shared in the Presentation panel will only be visible to members of the group
- chat messages will be read only by members of the group

6 Quiz

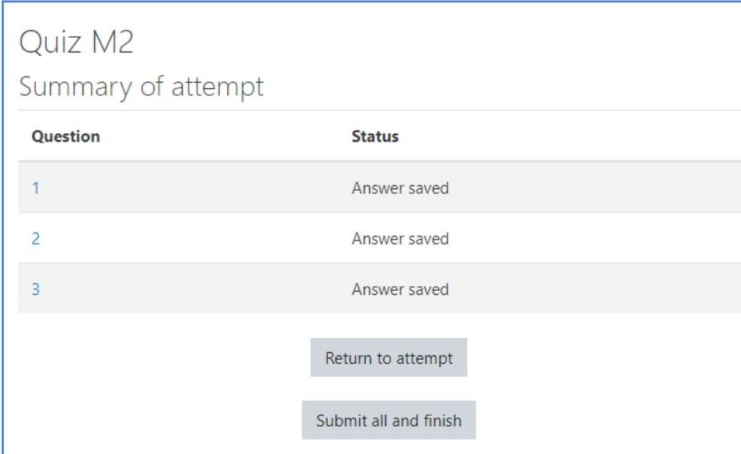
The Quiz activity module allows the teacher to design and build quizzes consisting of a large variety of Question types, including multiple choice, true-false and short answers.

To access a quiz on the platform, click on the Quiz title in the homepage of the course.



To start taking the quiz, click on the **Attempt this quiz now** button.

Once all questions have been answered, click on the blue **Finish attempt** button. This will present the user a summary of the current attempt, as shown in the image below:



Quiz M2
Summary of attempt

Question	Status
1	Answer saved
2	Answer saved
3	Answer saved

Return to attempt

Submit all and finish

To edit the answers click on the **Return to Attempt** button.

To confirm your answers and submit your quiz, click on the **Submit all and finish** button (a confirmation prompt will be displayed).

The next page shows a detailed summary of the results, including the final mark and corrections to wrong answers:

Started on	Tuesday, 16 April 2019, 3:51 PM
State	Finished
Completed on	Tuesday, 16 April 2019, 4:27 PM
Time taken	36 mins 3 secs
Marks	2.00/3.00
Grade	6.67 out of 10.00 (67%)

Question 1 Correct Mark 1.00 out of 1.00 Flag question	<p>Which of the following colors is NOT part of a rainbow?</p> <p>Select one:</p> <p><input type="radio"/> a. Red</p> <p><input type="radio"/> b. Yellow</p> <p><input type="radio"/> c. Orange</p> <p><input checked="" type="radio"/> d. Black ✓</p>
	<p>Your answer is correct.</p> <p>The correct answer is: Black</p>
Question 2 Correct Mark 1.00 out of 1.00 Flag question	<p>Earth is flat: true or false?</p> <p>Select one:</p> <p><input type="radio"/> True</p> <p><input checked="" type="radio"/> False ✓</p>
	<p>Correct!</p> <p>The correct answer is 'False'.</p>
Question 3 Incorrect Mark 0.00 out of 1.00 Flag question	<p>This song by Bing Crosby is the world's best-selling single with estimated sales in excess of 50 million copies worldwide. Its title is...</p> <p>Answer: <input type="text" value="White Xmas"/> ✘</p>
	<p>The correct answer is: White Christmas</p>

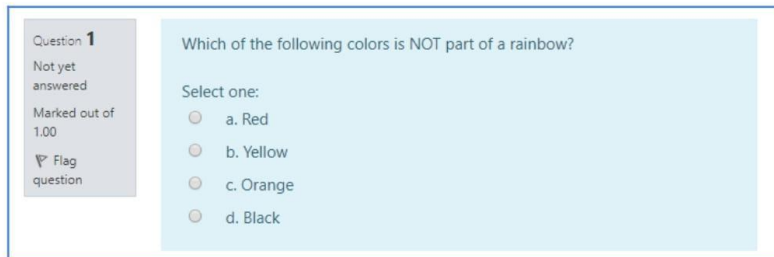
The platform includes different types of questions:

- Multiple Choice
- True or False

● Short answer

Multiple Choice (only one correct answer)

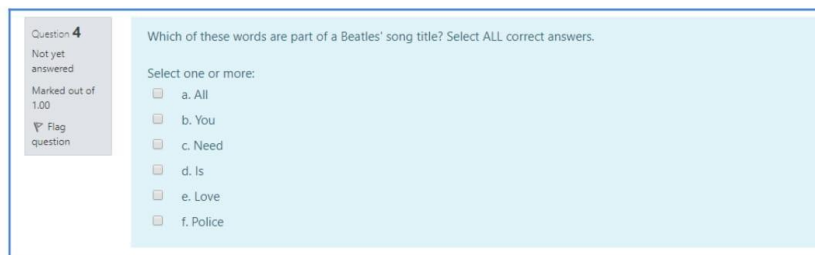
These questions allow one and only one answer to be chosen by selecting the radio button next to the answers.



The screenshot shows a question card for 'Question 1'. On the left, it indicates 'Not yet answered', 'Marked out of 1.00', and a 'Flag question' button. The main area contains the question: 'Which of the following colors is NOT part of a rainbow?'. Below the question, it says 'Select one:' followed by four radio button options: 'a. Red', 'b. Yellow', 'c. Orange', and 'd. Black'.

Multiple Choice (more than one correct answers)

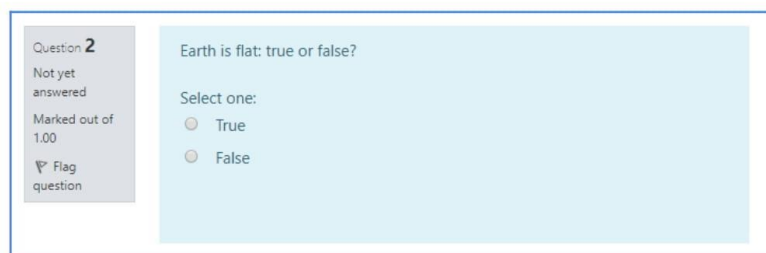
The only way to get this right is to pick ALL the correct answers, by clicking on the check boxes next to them.



The screenshot shows a question card for 'Question 4'. On the left, it indicates 'Not yet answered', 'Marked out of 1.00', and a 'Flag question' button. The main area contains the question: 'Which of these words are part of a Beatles' song title? Select ALL correct answers.'. Below the question, it says 'Select one or more:' followed by six checkbox options: 'a. All', 'b. You', 'c. Need', 'd. Is', 'e. Love', and 'f. Police'.

True or False

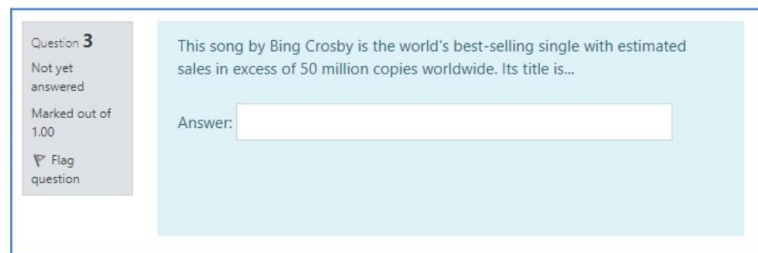
A participant is given only two choices for an answer in this kind of question: True or False.



The screenshot shows a question card for 'Question 2'. On the left, it indicates 'Not yet answered', 'Marked out of 1.00', and a 'Flag question' button. The main area contains the question: 'Earth is flat: true or false?'. Below the question, it says 'Select one:' followed by two radio button options: 'True' and 'False'.

Short Answer

To reply to a Short Answer question, type a word or a brief phrase in response to a question in the provided text field. Answers must match exactly the expected solution and are NOT case sensitive (i.e. **WHITE CHRISTMAS** and **white christmas** are both correct answers to the example below because the expected solution set by the tutor is “White Christmas”, while **White Xmas** is not a valid answer).



Question 3
Not yet answered
Marked out of 1.00
Flag question

This song by Bing Crosby is the world's best-selling single with estimated sales in excess of 50 million copies worldwide. Its title is...

Answer:

7 Assignment

The assignment activity provides a space into which participants can submit work for grading and feedback. In an assignment, you may be asked to submit one or several files and/or to type text essays.

Assignments can be individual (and each participant will have to submit them for the activity to be marked as completed) or group assignments (only one member of the group will have to perform the submission, and this will mark the activity as completed for all group members). Assignments can have deadlines and cut off dates.

7.1 Submitting an assignment

To begin submission of an assignment, go to the assignment page and click “add submission”.

PLEIADE Gamified Platform User Manual v1.0.0

Group	Default group
Submission status	Nothing has been submitted for this assignment
Grading status	Not graded
Last modified	-

Submission comments

[Add submission](#)

You have not made a submission yet

Depending on the type of assignment, you will be asked to either upload one or more file(s), or to type some text in an open field. The picture below shows a text assignment example. When you finish working on your assignment, click “Save changes”.

Collaborative Assignment M3 (copy)

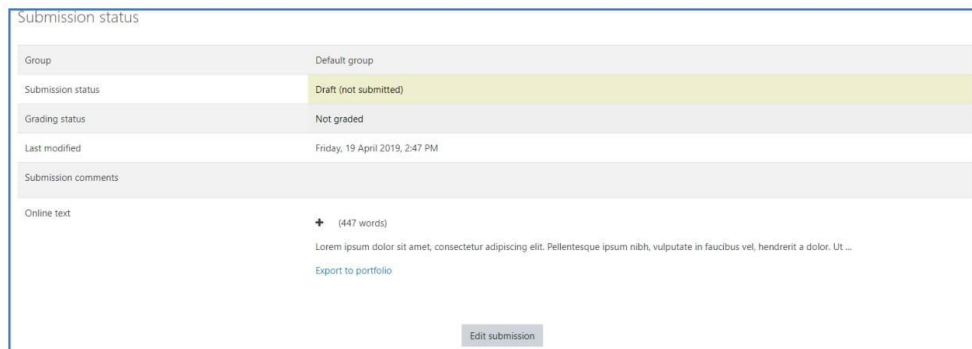
Collaborative Assignment M3

Online text

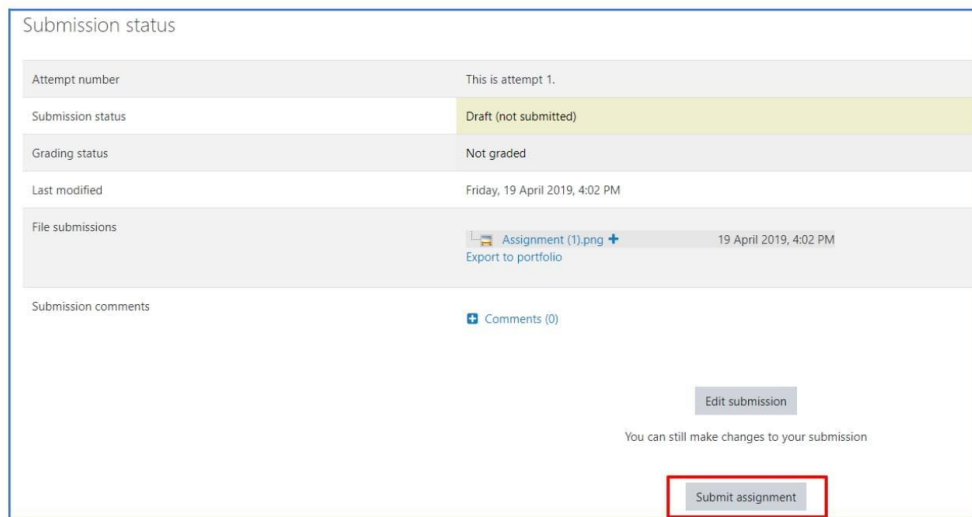
[Save changes](#) [Cancel](#)

After saving your draft, you will be shown a summary of your draft. You can still edit your draft, by clicking “edit submission”. **Your work has not yet been submitted!**

PLEIADE Gamified Platform User Manual v1.0.0



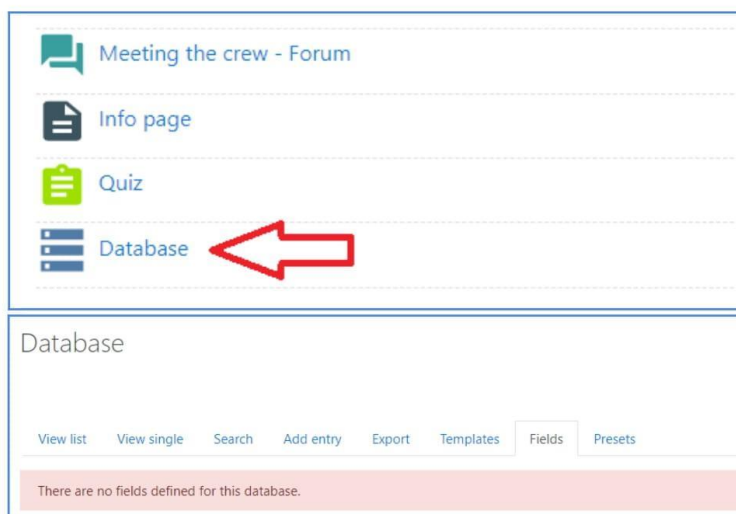
To submit your work, click instead “Submit assignment”.



8 Database

The database module allows the participants to build, display and search a bank of record entries about a given topic. The format and structure of these entries can include images, files, URLs, numbers and text amongst other things.

To access a database in the platform, click on the Database title in the homepage of the course.



It is possible to use the provided links and tools to perform a number of actions:

- **View list:** view several items at a time;
- **View single:** view only one item at a time;
- **Search:** search the entries by keyword or contributor;
- **Add entry:** add an item to the database (see image below)

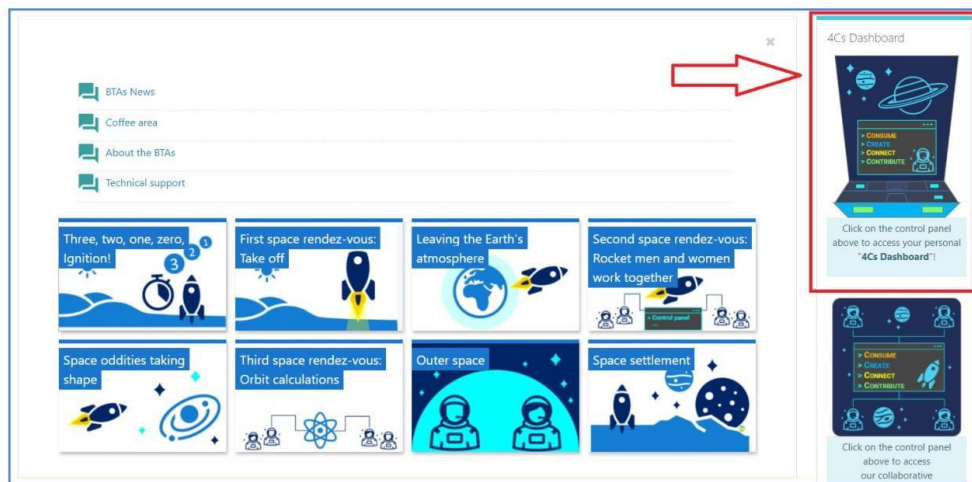
9 4Cs Dashboard

Starting from the second intensive event (Module 4), we will refer to the 4Cs framework for conceptualizing the learning process. In the 4C framework, learners' actions are divided in 4 categories: *creating*, *connecting*, *contributing*, and *consuming*.

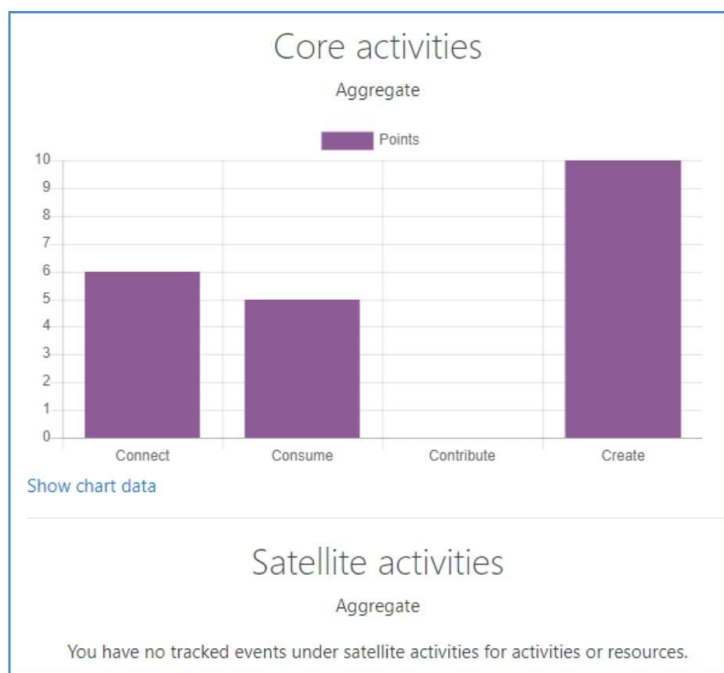
The definition and application of these categories will be a fundamental part of the course, and will not be explained here. However, do note that your actions in the platform will be tracked and classified according to the framework. Therefore, during the course you will be provided, at all times, a measure of how much you are creating, connecting, contributing, and consuming. Additionally, you will have a measure of how much *the whole cohort of participants* is acting according to the 4C framework.

To access your *personal* 4C dashboard, click on the “4Cs Dashboard” section in the platform right sidebar.

PLEIADE Gamified Platform User Manual v1.0.0



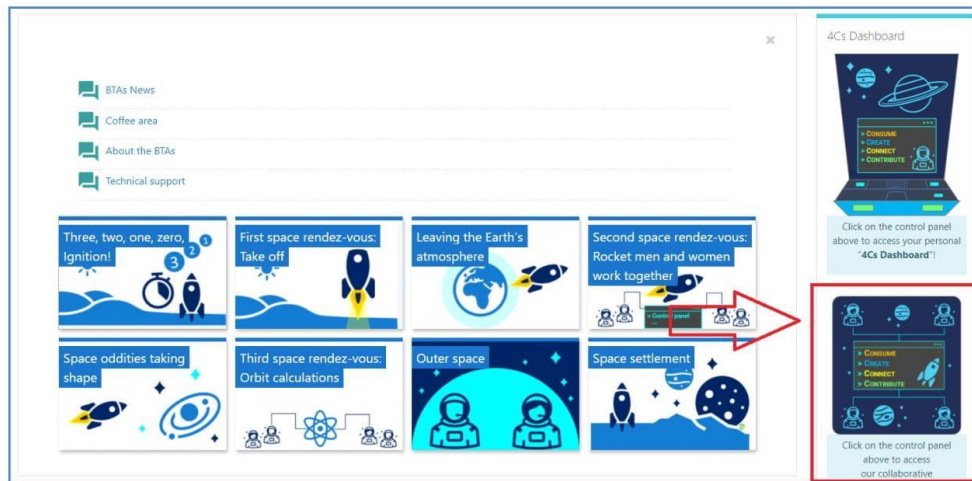
Clicking on the section will open the report page, which will provide you an aggregated visualization of your performance in each category of the 4Cs, including all course activities (i.e. both core and satellite events).



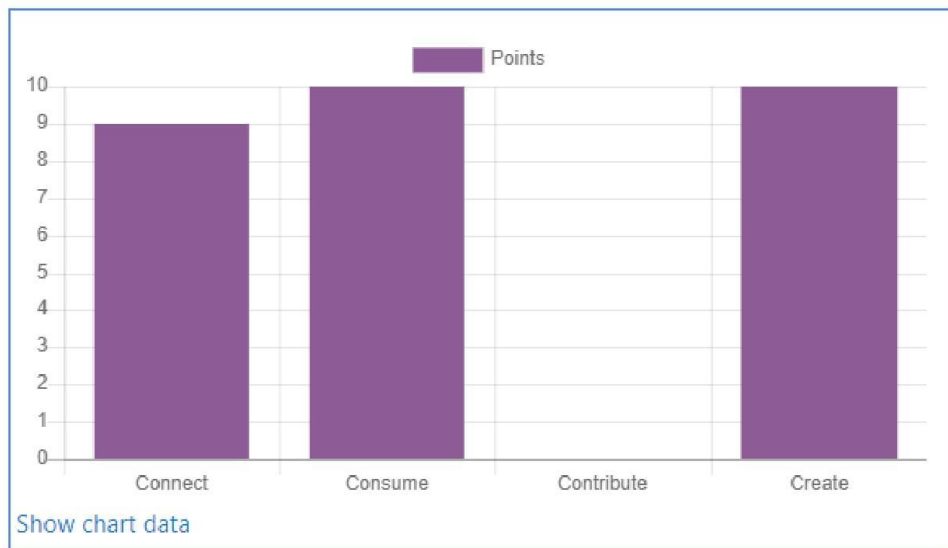
In this graph, the size of each bar in the chart represents how much you enacted each category of action during your course experience thus far. Remember that certain behaviours (e.g., posting on a forum) will naturally require less effort than others (e.g., creating and sharing a new learning

material). All actions are weighted according to the effort they require. Therefore, it may require multiple forum posts to match the score gained by creating and sharing a single material.

To access the collective 4Cs summary for the whole cohort, click on the “Collaborative 4Cs dashboard” in the Sidebar.



In this dashboard, similarly to your personal one, you can access a summary of the classroom score for each category and a visualization of the relative enactment of each category of action.

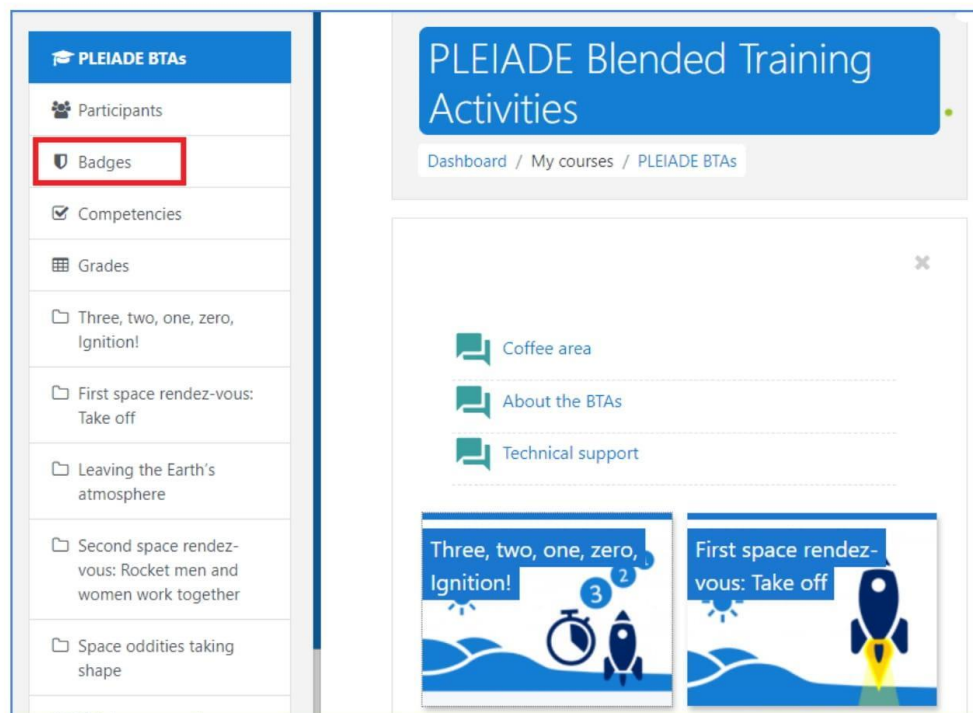


For each bar you can view the chart data. Also, you can view the detail for each of the 4Cs.

Show our collaborative connect points
Show our collaborative consume points
Show our collaborative contribute points
Show our collaborative create points

10 Badges

The platform implements badges. These represent achievements you reached by performing specific actions. Badges are awarded after specific events in the PLEIADE BTAs, and you will be notified when the opportunity to earn a badge arises. To see your badges, click on the “Badges” section in the main menu.



This will let you access a page in which you will be shown the badges you earned.

11 Quick Reference

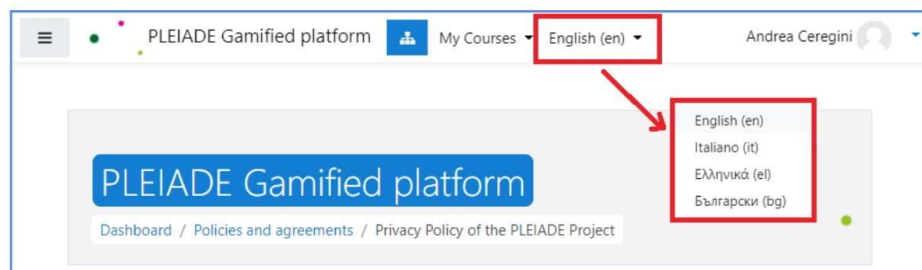
11.1 How do I change my time zone?

In order to avoid confusion around activities that starts at a given hour (i.e. Webinar) it is very important to set the correct time zone.

To do this:

- Access your profile page and click on **Edit profile**;
- Set the timezone by selecting the correct value in the **Timezone** drop-down menu (e.g. Europe/Sofia)
- Click on the blue **Update profile** button to save the change.

11.2 How do I change interface language?



Most of the content of the PLEIADE gamified platform is available in four different languages: English, Italian, Bulgarian, and Greek.

To change the currently set language:

- click on the language selection menu in the upper-left corner of any page
- select the preferred language from the dropdown menu

12 Appendix 2 - Joining a webinar

How do I join Webinars in the PLEIADE BTAs as a crew member?

To access a Webinar in the platform as a crew member, click on the Webinar title in the homepage of the course (Fig. 1).

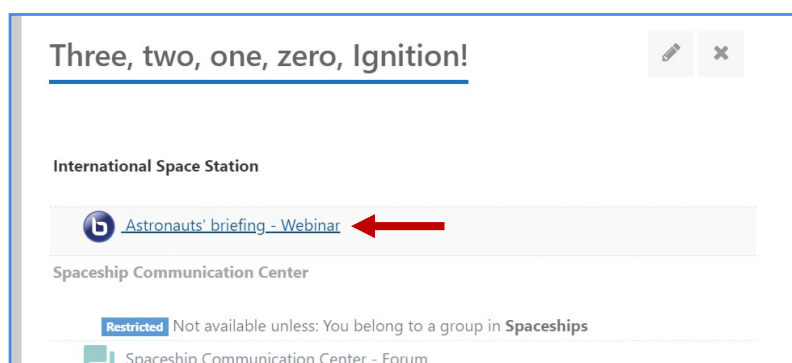


Fig. 1

You will be directed to the Webinar page. Click on '**Join session**' to enter the Webinar room (Fig. 2). This will open a new browser tab.

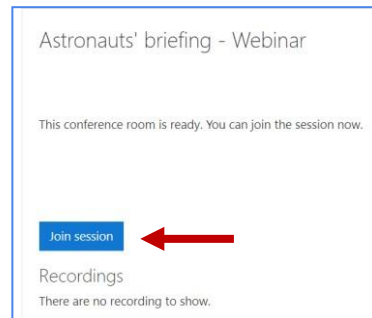


Fig. 2

If you are using the Webinar functionality on your device for the first time, while you are connecting to the echo test, your browser may ask you for permission to use the microphone (Fig. 3). Please allow that permission.

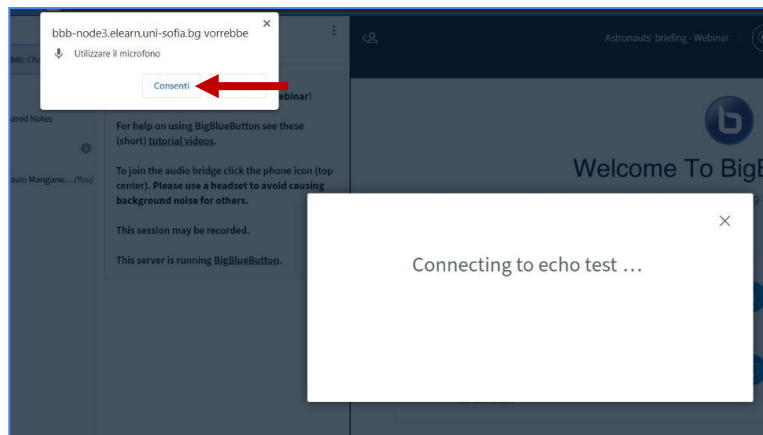


Fig. 3

After joining the Webinar room, you will be prompted to choose a method of joining the Webinar (Fig. 4) - with Microphone or Listen only. To be able to actively speak during the Webinar, click on the **Microphone** icon [1]. To only enter as a listener, click on the **Listen only** headset icon [2].

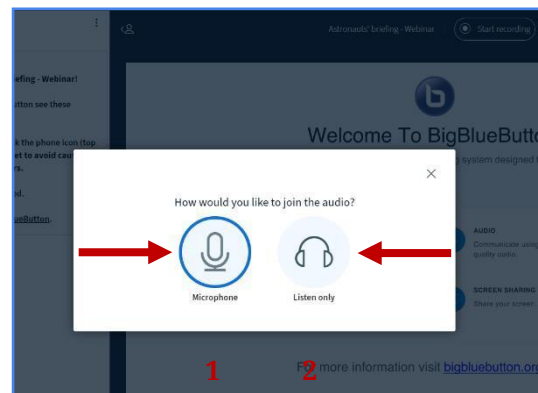


Fig. 4

To be able to actively speak during the Webinar, click on the **Microphone** icon [1]. To only enter as a listener, click on the **Listen only** headset icon [2].

If you chose to activate your microphone, an audio test will be prompted (Fig. 5).

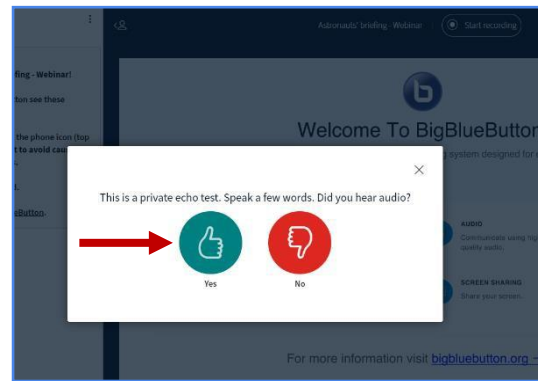


Fig. 5

To test your audio connection, speak into the microphone: if you hear your voice back then everything has been set-up correctly. Please choose the green thumbs-up button (Yes) to continue. Other participants in the Webinar room will not hear you at this stage.

Then you will see a notification on your screen, confirming that you have joined with audio successfully (Fig. 6).

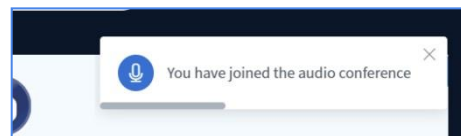


Fig. 6

Mute and unmute yourself

Depending on the Webinar settings, you may find when you join the room that your microphone is muted or unmuted. You can mute and unmute yourself by clicking on the microphone button (Fig. 7).

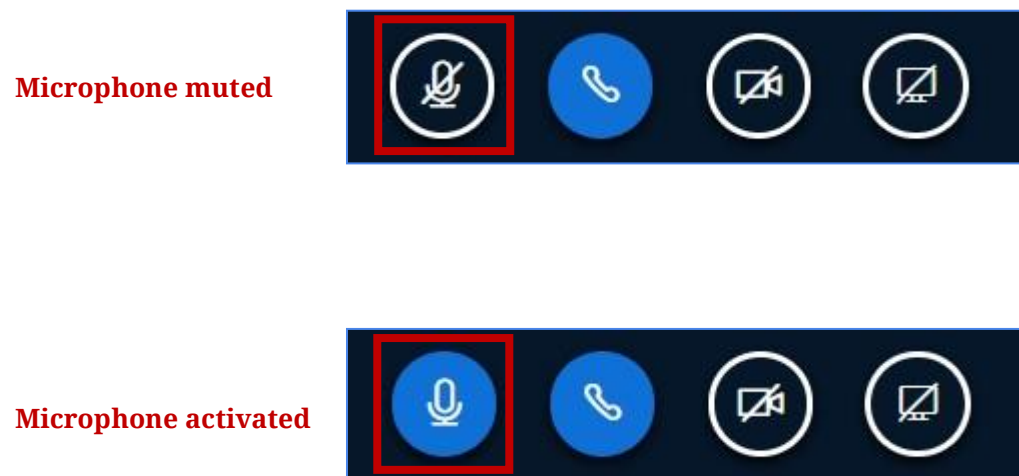


Fig. 7

Switch between Microphone and Listen only

If you did not select the Microphone at the beginning, it does not matter. As you can always switch between Microphone mode and Listen only mode.

Click the Telephone shape icon to switch to Listen only mode (Fig. 8).

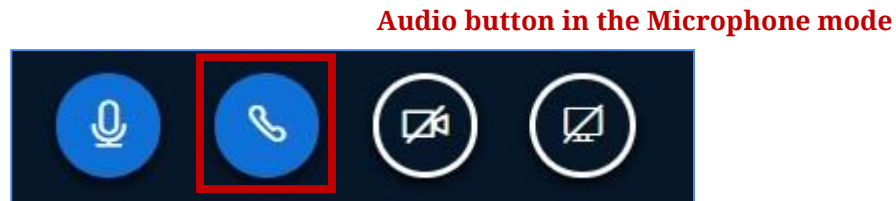


Fig. 8

Click on the Headset shape icon to switch to the Microphone mode (Fig. 9).

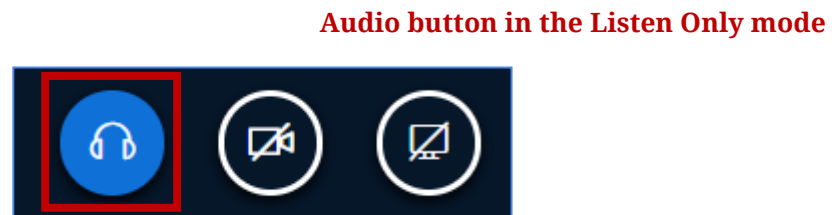


Fig. 9

13 Appendix 3 - Simultaneous Interpretation ENG > ITA

Simultaneous Interpretation of the plenary sessions in BigBlueButton (from English into Italian)

During the plenary sessions, you will be able to listen to the simultaneous translation into Italian. To do this, you will need to open two BigBlueButton rooms at the same time, in two different browser tabs (see Fig. 1).

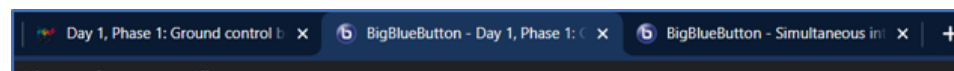


Fig. 1

One room (Room A in Fig. 2) will be the main one, where the English plenary will take place, and this room will change from time to time. The other room (Room B in Fig. 2) will be the one where you can listen to the audio translated into Italian, and it will always be the same for the entire duration of the SJSTE.

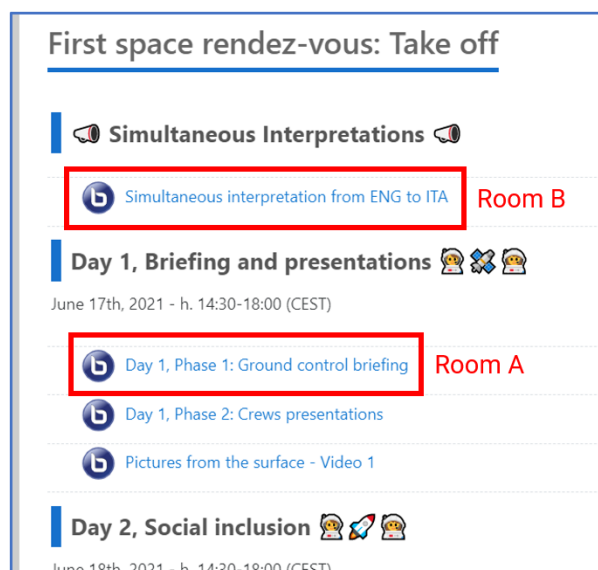


Fig. 2

Please follow the steps described below carefully. We strongly recommend using the Chrome browser (we have successfully tested this scenario with the aforementioned browser).

1. Click the link to the BBB plenary room in English you want to enter (for example, Room A in Fig. 2). We advise you to always have the main room (the one in English) open in the foreground. Here the speakers will project their slides. In this way you can follow the presentation and interact in the main text chat.
2. In the next page, click the blue **“Join session”** button, as usual, to enter the room. This will open a new browser tab. Click on **“Listen only”** when prompted (see Fig. 3).

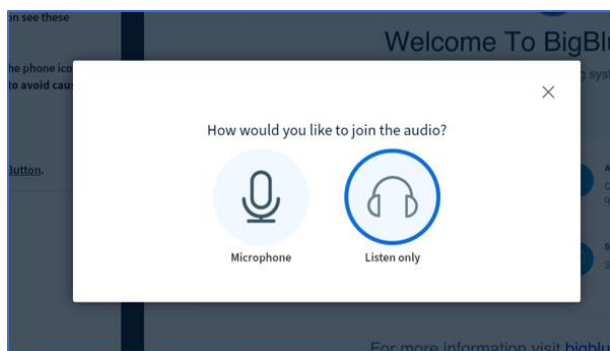


Fig. 3

3. Now be very careful, as this step is critical to mute the English audio in this room. In the bottom bar, click the **“Leave audio”** button - the one whose icon is in the shape of headphones.

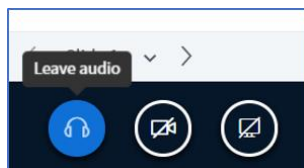


Fig. 4

As a result of this action, you should now see the bar as shown in Fig. 5.

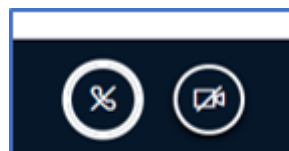


Fig. 5

4. Now use the browser tabs to navigate back to the course page (see Fig. 6). Particularly, in this example you will click the tab “Day 1, Phase 1: Ground...”.

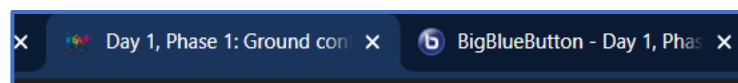


Fig. 6

Click “First space rendez-vous: Take off” (see Fig. 7), or use the back button of the browser, to navigate back to the main course page.

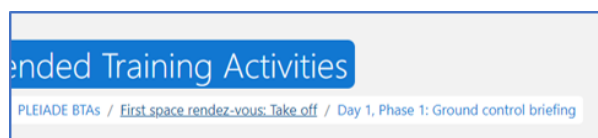


Fig. 7

5. It is time to enter the room where the simultaneous translation into Italian will take place. You will leave this room open in the background. Click “**Simultaneous interpretation from ENG to ITA**”, then click Join session in the next page. This will open a new browser tab. Click on “**Listen only**” when prompted (see Fig. 3). Now use the browser tab to move to put the English room in foreground.

14 Appendix 4 - Simultaneous Interpretation ENG > BUL

Simultaneous Interpretation of the plenary sessions in BigBlueButton (from English into Bulgarian)

During the plenary sessions, you will be able to listen to the simultaneous translation into Bulgarian. To do this, you will need to open two BigBlueButton rooms at the same time, in two different browser tabs (see Fig. 1).

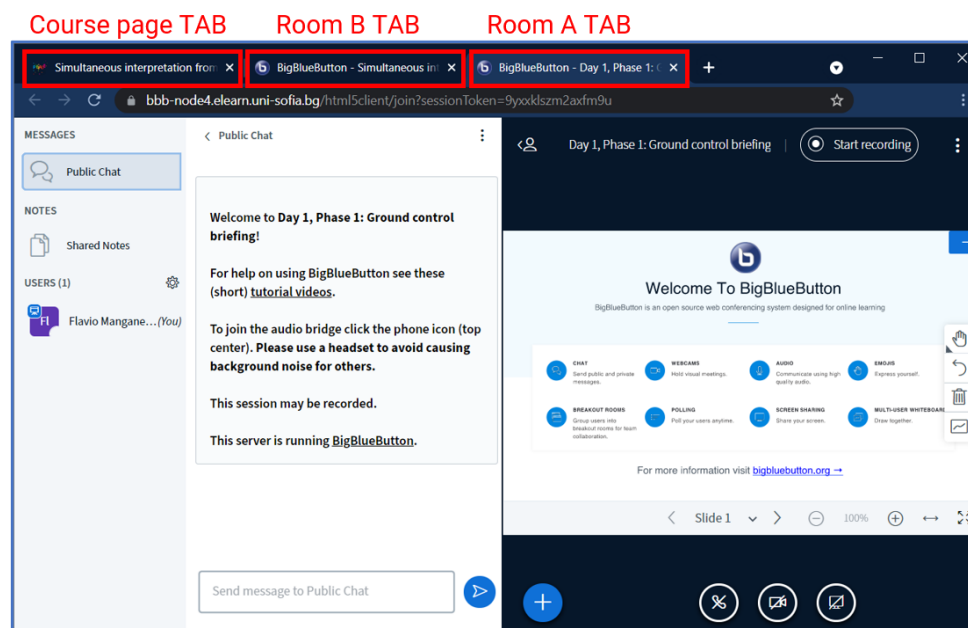


Fig. 1

One room (Room A in Fig. 2) will be the main one, where the English plenary will take place, and this room will change from time to time. The other room (Room B in Fig. 2) will be the one where you can listen to the audio translated into Bulgarian, and it will always be the same for the entire duration of the SJSTE.

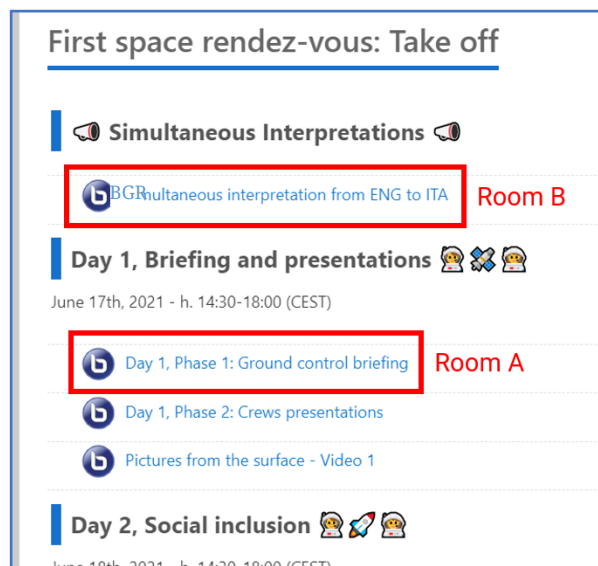


Fig. 2

Please follow the steps described below carefully. We strongly recommend using the Chrome browser (we have successfully tested this scenario with the aforementioned browser).

1. Click the link to the BBB plenary room in English you want to enter (for example, Room A in Fig. 2). We advise you to always have the main room (the one in English) open in the foreground. Here the speakers will project their slides. In this way you can follow the presentation and interact in the main text chat.
2. In the next page, click the blue “**Join session**” button, as usual, to enter the room. This will open a new browser tab. Click on “**Listen only**” when prompted (see Fig. 3).

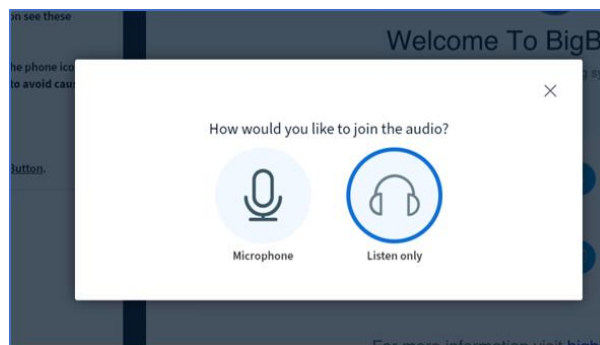


Fig. 3

3. Now be very careful, as this step is critical to mute the English audio in this room. In the bottom bar, click the “**Leave audio**” button - the one whose icon is in the shape of headphones.

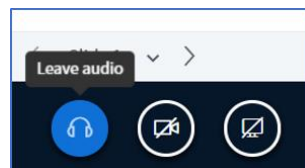


Fig. 4

As a result of this action, you should now see the bar as shown in Fig. 5.

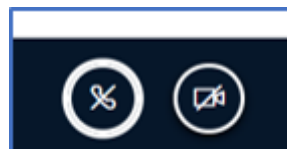


Fig. 5

4. Now use the browser tabs to navigate back to the course page (see Fig. 6). Particularly, in this example you will click the tab “**Day 1, Phase 1: Ground...**”.

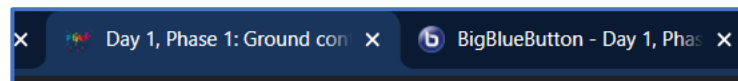


Fig. 6

Click “First space rendez-vous: Take off” (see Fig. 7), or use the back button of the browser, to navigate back to the main course page.

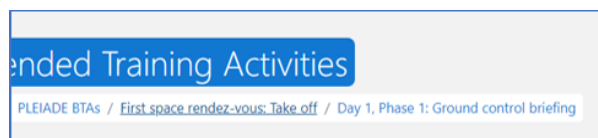


Fig. 7



5. It is time to enter the room where the simultaneous translation into Bulgarian will take place. You will leave this room open in the background. Click “Simultaneous interpretation from ENG to BGR”, then click Join session in the next page. This will open a new browser tab. Click on “Listen only” when prompted (see Fig. 3). Now use the browser tab to move to put the English room in foreground.

15 Appendix 5 - Dashboard preferences

Section	Activity-Resource	Component	Name	Type	Preference	Points
General	BTAs News	forum	Discussion Created	<input type="text"/>	Satellite	0
			Post Created	<input type="text"/>	Satellite	0
	Coffee area	forum	Discussion Created	<input type="text"/>	Satellite	0
			Post Created	<input type="text"/>	Satellite	0
	About the BTAs	forum	Discussion Created	<input type="text"/>	<input type="text"/>	0
			Post Created	<input type="text"/>	<input type="text"/>	0




Technical support	forum	Discussion Created	<input type="text"/>	Satellite	0
		Post Created	<input type="text"/>	Satellite	0
Ground Control Forum	forum	Discussion Created	<input type="text"/>	Satellite	0
		Post Created	<input type="text"/>	Satellite	0
Ground Control Forum [IT]	forum	Discussion Created	<input type="text"/>	Satellite	0
		Post Created	<input type="text"/>	Satellite	0
Ground Control Forum [BG]	forum	Discussion Created	<input type="text"/>	Satellite	0
		Post Created	<input type="text"/>	Satellite	0

			Post Created	<input type="text"/>	Satellite	3
New participants forum	forum		Discussion Created	<input type="text"/>	<input type="text"/>	3
			Post Created	<input type="text"/>	<input type="text"/>	
<hr/>						
Three, two, one, zero, Ignition!	Astronauts Briefing 👤👤👤 May 20th, 2021 - h. ...	label				0
Astronauts' briefing - Webinar	bigbluebuttonbn		Meeting Joined	CONSUME	<input type="text"/>	1
			Recording viewed	CONSUME	<input type="text"/>	

Astronauts' briefing Agenda	resource	Course Module Viewed	CONSUME		1
Astronauts' briefing material	folder	Course Module Viewed	CONSUME		1
Meeting the Crew   May 20th - May 26th, ...	label				
Triangulating the spaceship's position   June May ...	label				
WHEEL OF EMOTIONS	url	Course Module Viewed	CONTRIBUTE		5
Competences map	url	Course Module Viewed	CONTRIBUTE		0

WHEEL OF EMOTIONS	url	Course Module Viewed	<input type="text" value="CONTRIBUTE"/>	<input type="text"/>	<input type="text" value="0"/>
Competences map	url	Course Module Viewed	<input type="text" value="CONTRIBUTE"/>	<input type="text"/>	<input type="text" value="0"/>
WHEEL OF EMOTIONS	url	Course Module Viewed	<input type="text" value="CONTRIBUTE"/>	<input type="text"/>	<input type="text" value="0"/>
Competences map	url	Course Module Viewed	<input type="text" value="CONTRIBUTE"/>	<input type="text"/>	<input type="text" value="0"/>
WHEEL OF EMOTIONS	url	Course Module Viewed	<input type="text" value="CONTRIBUTE"/>	<input type="text"/>	<input type="text" value="0"/>
Competences map	url	Course Module Viewed	<input type="text" value="CONTRIBUTE"/>	<input type="text"/>	<input type="text" value="0"/>
WHEEL OF EMOTIONS	url	Course Module Viewed	<input type="text" value="CONTRIBUTE"/>	<input type="text"/>	<input type="text" value="0"/>

Competences map	url	Course Module Viewed	<input type="text" value="CONTRIBUTE"/>	<input type="text"/>	<input type="text" value="0"/>
WHEEL OF EMOTIONS	url	Course Module Viewed	<input type="text" value="CONTRIBUTE"/>	<input type="text"/>	<input type="text" value="0"/>
Competences map	url	Course Module Viewed	<input type="text" value="CONTRIBUTE"/>	<input type="text"/>	<input type="text" value="0"/>
WHEEL OF EMOTIONS	url	Course Module Viewed	<input type="text" value="CONTRIBUTE"/>	<input type="text"/>	<input type="text" value="0"/>
Competences map	url	Course Module Viewed	<input type="text" value="CONTRIBUTE"/>	<input type="text"/>	<input type="text" value="0"/>
WHEEL OF EMOTIONS	url	Course Module Viewed	<input type="text" value="CONTRIBUTE"/>	<input type="text"/>	<input type="text" value="0"/>
Competences map	url	Course Module Viewed	<input type="text" value="CONTRIBUTE"/>	<input type="text"/>	<input type="text" value="0"/>

WHEEL OF EMOTIONS	url	Course Module Viewed	CONTRIBUTE		0
Competences map	url	Course Module Viewed	CONTRIBUTE		0
WHEEL OF EMOTIONS	url	Course Module Viewed	CONTRIBUTE		0
Competences map	url	Course Module Viewed	CONTRIBUTE		0
Naming the Spaceship    June 3rd- June ...	label				
Naming the Spaceship	assign	Assignment Submitted	CREATE		0

Spaceship Communication Center  This is wher...	label					0
Spaceship Communication Center	forum	Discussion Created	<input type="text"/>	<input type="text"/>		0
		Post Created	<input type="text"/>	<input type="text"/>		0
Crew meeting room	bigbluebuttonbn	Meeting Joined	<input type="text"/>	<input type="text"/>		0
		Recording viewed	CONSUME <input type="text"/>	<input type="text"/>		0
First space rendez-vous: Take off	First space rendez-vous: take off - Materials	folder	Course Module Viewed	CONSUME <input type="text"/>	<input type="text"/>	

Simultaneous Interpretations

label

Simultaneous interpretation from ENG to ITA

bigbluebuttonbn

Meeting Joined

0

CONSUME

0

Recording viewed

CONSUME

0

Simultaneous interpretation from ENG to BGR

bigbluebuttonbn

Meeting Joined

0

CONSUME

Recording viewed

CONSUME

Day 1, Briefing and presentations
June 1...

label

Day 1, Phase 1: Ground control briefing

bigbluebuttonbn

Meeting Joined

CONSUME

0

Recording viewed

CONSUME

0

Day 1, Phase 2: Crews presentations

bigbluebuttonbn

Meeting Joined

0

Recording viewed

CONSUME

0

Day 2, Social inclusion
June 18th, 2021 -...

label

Day 2, Phase 1&2&3&5: Plenary Presentations	bigbluebuttonbn	Meeting Joined			0
			CONSUME		0
		Recording viewed	CONSUME		
Day 2, Phase 4: Finding the spaceship’s flag- group work	bigbluebuttonbn	Meeting Joined			0
			CREATE		0
		Recording viewed	CONSUME		
Day 3, Learning design and collaborative learning&...	label				

Day 3, Phase 1&3: Plenary Presentations	bigbluebuttonbn	Meeting Joined			0
			CONSUME		0
		Recording viewed			0
			CONSUME		0
Day 3, Phase 2: Space probe launch	bigbluebuttonbn	Meeting Joined			0
			CREATE		0
		Recording viewed			0
			CONSUME		0
Day 3, Phase 3: Space probe return	assign	Assignment Submitted			0
			CONTRIBUTE		0
Day 3, Phase 3: Space probe return	bigbluebuttonbn	Meeting Joined			0
			CONSUME		0
		Recording viewed			0
			CONSUME		0

Day 4, The space
explorers'
summit 📅 🗺 June ...

label

SLERD conference
Zoom platform

url

Course
Module
Viewed

CONSUME ▼

▼

0

Day 5, Learning from
past
expeditions 🧑 🏆 🧑 ...

label

Day 5, Phase 1&2: Filling
in the mission report
(briefing) - Learning
from past expeditions



bigbluebuttonbn

Meeting
Joined

CONSUME ▼

▼

0

			Recording viewed	CONSUME		0
Day 5, Phase 3: Filling in the mission report	bigbluebuttonbn	Meeting Joined	CREATE		0	
		Recording viewed	CONSUME		0	
Pictures from the surface - Video 3	bigbluebuttonbn	Meeting Joined	CONSUME		0	
		Recording viewed	CONSUME		0	
Travel time: Leaving the Earth's atmosphere	Finalizing the mission report   July 5th -...	label				
Finalizing the mission report	forum	Discussion Created	CREATE		3	

					3
		Post Created	CREATE		
Re-planning, re-tracing the route (part 1)	label				
					
Peer review - Request for feedback	forum	Discussion Created	CONTRIBUTE		3
					3
		Post Created			
Resume activities	bigbluebutton	Meeting Joined	CONSUME		10
		Recording viewed	CONSUME		10

Re-planning, re-tracing
the route (part 2)



label

Plan finalization (A) -
'Interview master' and
'Learning about the
mass'

forum

Discussion
Created

3

CREATE

3

Post Created

CREATE

Plan finalization (B) -
'Desert Island' and 'My
1821 hero'

forum

Discussion
Created

3

						3
		Post Created	<input type="text"/>	<input type="text"/>		
Plan finalization (C) - 'Pulmonary and systemic circulation' and 'Town ghosts'	forum	Discussion Created				3
			<input type="text"/>	<input type="text"/>		
		Post Created	<input type="text"/>	<input type="text"/>		3
Interlude: Space Race! (Group 1)	url	Course Module Viewed				5
			CONSUME <input type="text"/>	<input type="text"/>		

Second space rendez-vous: Rocket men and women work together

Second space rendez-vous: Rocket men and women work together - materials

folder

Course Module Viewed

5

CONSUME ▼

▼

Day 1, Briefing and revised activities presentatio...

label

Day 1: Briefing and presentations

bigbluebuttonbn

Meeting Joined

10

CONTRIBUTE ▼

▼

10

Recording viewed

CONTRIBUTE ▼

▼

Day 2, Astronauts at
work on inclusion
🌟 🌟 🌟 🌟 🌟 Oc...

label

Voting the inclusive
potential - activity
forum

forum

Discussion
Created

6

6

Post Created

6

Teamwork help room

bigbluebuttonbn

Meeting
Joined

6

Recording
viewed

Space Race instruction
video

url

Course
Module
Viewed


5

Gamification help room	bigbluebuttonbn	Meeting Joined	<input type="text"/>	<input type="text"/>	0
		Recording viewed	<input type="text"/>	<input type="text"/>	0
Interlude: Space race! (Group 1)	url	Course Module Viewed	CONSUME <input type="text"/>	<input type="text"/>	0
Interlude: Space race! (Group 2)	url	Course Module Viewed	CONSUME <input type="text"/>	<input type="text"/>	0
Interlude: Space race! (Group 3)	url	Course Module Viewed	CONSUME <input type="text"/>	<input type="text"/>	0
Interlude: Space race! (Group 4)	url	Course Module Viewed	CONSUME <input type="text"/>	<input type="text"/>	0
Interlude: Space race! (Group 5)	url	Course Module Viewed	CONSUME <input type="text"/>	<input type="text"/>	0

Interlude: Space race! (Group 6)	url	Course Module Viewed			0
			CONSUME ▼	▼	
Interlude: Space race! (Group 7)	url	Course Module Viewed			0
			CONSUME ▼	▼	
Interlude: Space race! (Group 8)	url	Course Module Viewed			0
			CONSUME ▼	▼	
Interlude: Space race! (Group 9)	url	Course Module Viewed			0
			CONSUME ▼	▼	
Interlude: Space race! (Group 10)	url	Course Module Viewed			0
			CONSUME ▼	▼	
Interlude: Space race! (Group 11)	url	Course Module Viewed			0
			CONSUME ▼	▼	

Post your Space Race solution here!	forum	Discussion Created	<input type="text"/>	<input type="text"/>	3
		Post Created	<input type="text"/>	<input type="text"/>	3
Day 3. Conquering space and plotting the route 🤝...	label				
Day 3 meeting room	bigbluebutton	Meeting Joined	CONSUME <input type="text"/>	<input type="text"/>	10
		Recording viewed	CONSUME <input type="text"/>	<input type="text"/>	10
Recordings Day3 Introduction to SRL and practice sharing	url	Course Module Viewed			5
			CONSUME <input type="text"/>	<input type="text"/>	

Recordings Day3 The 4Cs dashboard in PLEIADE	url	Course Module Viewed	CONSUME		5
Traduzione simultanea per docenti italiani	bigbluebuttonbn	Meeting Joined	CONSUME		0
		Recording viewed	CONSUME		0
		Recording viewed	CONSUME		
Presentazione per docenti italiani (Ore 18:00)	bigbluebuttonbn	Meeting Joined	CONSUME		10
		Recording viewed	CONSUME		10
		Recording viewed	CONSUME		

Day 4, Finding the boundaries of Universe
 ...

label

Finding the SRL barriers - activity forum

forum

Discussion Created

6

CONTRIBUTE ▼

▼

6

Post Created

CONTRIBUTE ▼

▼

6

Teamwork help room

bigbluebuttonbn

Meeting Joined

▼

▼

6

Recording viewed

▼

▼

Activity BBB - separate sessions for Bulgarian teachers

bigbluebuttonbn

Meeting Joined

10

CONSUME ▼

▼

		Recording viewed	CONSUME		10
Gamification forum	forum	Discussion Created			3
		Post Created			3
Days 5/6/7, Playing on board the spaceship 🚀🚀...	label				
Game presentation	bigbluebuttonbn	Meeting Joined	CONSUME		10
		Recording viewed	CONSUME		10

Presentazione del gioco (Italiano)	bigbluebuttonbn	Meeting Joined			10
			CONSUME		10
		Recording viewed			
			CONSUME		
I4Ts Game help room (Tangible / paper game)	bigbluebuttonbn	Meeting Joined			60
			CREATE		60
		Recording viewed			
			CREATE		
I4Ts Game help room (Digital game)	bigbluebuttonbn	Meeting Joined			60
			CREATE		60
		Recording viewed			
			CREATE		

Day 8, Another universe
& Call for adventure!

label

eTwinning & Call for
Adventure

bigbluebuttonbn

Meeting
Joined

CONSUME

10

Recording
viewed

CONSUME

10

Any day, Creative
Commons and Pictures
from the Su...

label

Introduction to Creative
Commons - 16'20"

url




Course
Module
Viewed

CONSUME

5

Pictures from the Surface video 1 - 34"	url	Course Module Viewed			5
			CONSUME		
Pictures from the Surface video 2 - 3'23"	url	Course Module Viewed			5
			CONSUME		
Avgoulea-Linardatou school presentation	url	Course Module Viewed			5
			CONSUME		
SJSTE Evaluation form	url	Course Module Viewed			5
			CONSUME		
Feedback on designs produced playing with the I4Ts game	bigbluebuttonbn	Meeting Joined			10
			CONSUME		

			Recording viewed	CONSUME		1
	I4T game re-design forum	forum	Discussion Created			3
			Post Created			3
<hr/>						
Space oddities taking shape	Forming the crews 👤📱👤 Form the international a...	label				
	Call for Adventure!	forum	Discussion Created			3
			Post Created			3

Exploring the unexplored    A space for plann... (copy)

label

International activities forum

forum

Discussion Created

3

Post Created

3

National activities forum

forum

Discussion Created

3

Post Created

3

Meeting space

bigbluebutton

Meeting Joined



10

Recording viewed

10

A space for when you need to communicate with your...

label

Satellite events   A series of webinars (in...

label

Satellite Events material

folder

Course
Module
Viewed

5

News and comments about the satellite events

forum

Discussion
Created

3

Post Created

3

Satellite Events
Recordings

label

Satellite event 1 -
December 13th, 2021 -
Приобщаващо
образование чрез
LearningApps.org -
Bulgarian (copy)

url

Course
Module
Viewed

5

CONSUME ▼

▼

Satellite event 2 -
December 16th, 2021 -
Inclusive Learning via
LearningApps.org -
English

url

Course
Module
Viewed

5

CONSUME ▼

▼

Satellite event 3 -
January 15th, 2022 -
Strumenti Low e no
cost per la didattica
inclusiva - Italian

url

Course
Module
Viewed

5

CONSUME

Satellite event 4 -
January 21st, 2022 -
Empowering an
inclusive learning
community for the 21st
Century's skills - Greek

url

Course
Module
Viewed

5

CONSUME

Satellite event 5 -
January 21st, 2022 -
Обучение ...

label

Satellite event 6 -
February 15th, 2022 -
Listening to student
voices on cultural
diversity - English

url

Course
Module
Viewed

5

CONSUME ▼

Satellite event 7 -
February 24th, 2022 -
Games and
Gamification for
Inclusion - English

url

Course
Module
Viewed

5

CONSUME ▼

Satellite event 8 -
March 1st, 2022 - Il
ruolo delle tecnologie
per una scuola inclusiva
e partecipativa

url

Course
Module
Viewed

5

Measures for
enactment (Italian)

resource

Course
Module
Viewed

CONSUME ▼

▼

5

Measures for
enactment (Bulgarian)

resource

Course
Module
Viewed

CONSUME ▼

▼

5

Measures for
enactment (Greek)

resource

Course
Module
Viewed

CONSUME ▼

▼

5

Measures for
enactment (English)

resource

Course
Module
Viewed

CONSUME ▼

▼

5

CONSUME ▼

▼

	Enactment BBB room – to be used for teachers' meetings of joint synchronous sessions in international enactment	bigbluebuttonbn	Meeting Joined			10
				CONSUME		10
			Recording viewed	CONSUME		10
	Enactment questionnaires	assign	Assignment Submitted	CREATE		10
Mission Control Center	Gamified Platform User Manual	url	Course Module Viewed	CONSUME		5

Blended Training Activities (BTA) Guide	url	Course Module Viewed	<input type="text" value="CONSUME"/>	<input type="text"/>	5
Tech Pills  	label				
How do I join Webinars in the PLEIADE BTAs as a crew member?	page	Course Module Viewed	<input type="text" value="CONSUME"/>	<input type="text"/>	5
How do I manage my subscriptions to forums and topics?	page	Course Module Viewed	<input type="text" value="CONSUME"/>	<input type="text"/>	5
How do I submit a crew assignment?	page	Course Module Viewed	<input type="text" value="CONSUME"/>	<input type="text"/>	5
Interpretazione simultanea in italiano	page	Course Module Viewed	<input type="text" value="CONSUME"/>	<input type="text"/>	5

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