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LIST OF ABBRIVATIONS

Abrv.	Description
D	Deliverable
HUD	Head Up Display
WP	Workpackage

EXECUTIVE SUMMARY

Deliverable D3.4 specifies the first versions of the different user interfaces for the BEACONING platform. In BEACONING we use a co-creative and agile development method. Therefore, this design specification document is to be considered as a living document that will be changed according to the user feedback. It aims at merging the list of functionalities defined for the prototype application along with the ergonomic and visual requirements.

The deliverable presents a set of reference mockups that will be cut into pieces by the graphics team and integrated by the developers. The resulting prototype will be used for the second iteration of user requirements. By playing with the interfaces, the different stakeholder groups will be actively involved in the development processes and therefore give them the opportunity to directly contribute to the development of a solution that can be personalised for different user needs. The main focus in this deliverable is the specification of the user interfaces for the two stakeholder groups ‘teachers’ and ‘students’.

The deliverable is structured in four chapters. The first provides an overview of objective and approach. Chapter two describes the interfaces for the students whereas chapter three focuses on the interfaces for the teachers. Chapter four concludes and describes the next steps.

1 INTRODUCTION

The lean management approach recommends avoiding waste and being permanently in a position to be reactive/adaptive to the market. These recommendations are of great importance in our fast evolving and highly competitive/globalized market: at any moment when a company is developing a product, a competitor might release a similar product before the company does. As such, they set a new state of the art on the market that needs to be taken into consideration in any development. It is also very common that the technological state of the art or just the fashion or the mood of the customer do evolve over the course of a long project.

For the BEACONING Project, the prototyping approach was built upon the core of the user experience: playing a quest. This would enable the collection of early feedback that would influence the specifications. As such, the prototype is a part of the specification process.

This document lists the different interfaces of the prototype, as well as key functionalities associated with each of them. The screens provided in this document are from the very first iteration of the prototype. The specifications might be subject to adaptation, following feedback from the development and piloting teams. As the design process progressed and feedback on the first prototype were received, some design specifications were revised and are partly in discrepancy with the images shown in this document. In such cases, the written specifications should be taken as having a priority over the images.

1.1 ROLE OF THIS DELIVERABLE IN THE PROJECT

This deliverable aims to merge the list of functionalities defined for the prototype application along with the ergonomic and visual requirements, so that it can impact positively to its target audience.

This list of functionalities will produce a set of reference screens that will be used by:

- The graphics team to create further screens during the development process;
- The graphics team to extract the key elements for a set of technical graphic resources that can be used by the developers to build real applications with real functionalities;
- The developers, as a reference for building exactly the same screens in the final product;
- The graphics and the developers' team, as a general guideline reference to be able to create minor screens in autonomy.

1.2 APPROACH

The interface specifications were built based on the requirements list retrieved from user stories (user stories are actions that a user wants to be able to do or elements s/he can see in the application). The user stories were grouped into logical units.

A logical unit is a place from which the information displayed and actions that can be done are a natural to fit together. The general concept behind this is that the action in reaction of any information should always be doable in a minimum number of clicks and ideally within the same interface environment not breaking the continuity.

The next step is to translate the user stories into a screen organization. The best approach is to have one logical unit matching one screen, constraint by not overloading the screens, which may lead to shuffle the user stories into more screens or to place them in subcomponents

(popups/dropdown menus/panels/secondary screens). This screen organization usually ends up on what we call a wireframe and allows us to produce a screenflow of the application (a series of logical unit - screens - chained together in a logical way).

The final phase is to shape these wireframes and colorize them so that the visual appearance:

- Supports the instinctive understanding of the logical unit functionalities;
- Respects the graphical charter (consistency/supporting the application mission/appeal to the target audience).

The final result is the set of reference mockups that will be cut into pieces by the graphics team and integrated by the developers. This will produce a prototype application that the stakeholders can review and provide feedback on. It can also be shared to end users to get even more meaningful feedback for amending and expanding the product course of development.

As a final note, the screens of the prototype presented in this document only cover the “outgame” part for the students’ and teachers’ roles. The prototype screens located inside the game experience are covered inside the game design document (D3.5).

1.3 STRUCTURE OF THE DOCUMENT

The BEACONING Project will provide interfaces for different types of users: students, teachers, parents, learning designers, game designers, as well as BEACONING administrators. The current prototype focuses on key screens of the student and teachers experience centred around starting, playing, and finishing a lesson path.

The deliverable is structured as follows:

Chapter 1 presents the approach taken and how this deliverable will be used by the partners.

Chapter 2 describes the key screens of the prototype related to the student experience.

Chapter 3 describes the key screens of the prototype related to the teacher experience.

2 INTERFACE DESIGN SPECIFICATIONS: STUDENTS

At the heart of the BEACONING experience is the moment when a student learns and experiences.

We have chosen to place this experience at the core of the BEACONING prototype. The prototype screens for the students are therefore showing:

- When a student logs in and sees that s/he has been assigned a new quest that s/he can play. This represents the **Home screen**. This screen is placed in what we designate as the outgame experience;
- When a student can browse through different available playable quests and chooses one from his **office spaces**. This screen is also placed the outgame experience;
- Once the student has chosen to start a given quest s/he enters the ingame experience;
- The ingame screens are described and covered into the Game Design Document, but some key components and functionalities that will need to be presented in the ingame will be actually related to the outgame functionalities and will therefore be described in this document: the **generic HUD (Head Up Display)** interface elements.

The ingame experience shows the player performing missions, through a gameplay situation, and are presented in a form of a quest in a fictional world. This gameplay experience will be interrupted by challenges whose content will be defined by the teacher and by exercises related to the learning topic defined by the teacher.

The player will control a character and move it in near futuristic environments, and also talk to non-playing characters who will assign them tasks and missions.

This ingame is very immersive and to stay aligned with this it was decided that the outgame screens designed for the students should also be immersive and related to the narrative told by the ingame.

Therefore, the outgame menus would also be representing environments related to the narrative, but from another perspective to make navigation and information presentation easier in the outgame interfaces.

The narrative describes the player as being a part of a world scale agency working to improve living conditions on earth and helping people resolve problems. This agency has got a big headquarters and it is from here that most of the player's quest would start as they would usually receive their briefing and assignments in the briefing room located in this building.

Based on this approach, the outgame menus will represent different views or rooms from these headquarters. This will ensure a full logical continuity between the ingame and the outgame.

2.1 THE HOME PAGE

a - Main functionalities

The home page is the first screen that the student reaches after logging in, therefore the home page is mostly a call to action providing information to the student to help them decide where else in the application to go next.

- **Office space.** The first (and the main) destination possible to reach in the interface is the **office space**, where s/he can **choose and start a quest/lesson path** assigned by his teacher. Clicking on the office space button opens the office space building;
- **The classroom.** The second possible destination is the place where s/he can meet their teacher and fellow students, dialog with them, and check overall progress towards objectives set for the class and groups: the **classroom**. Clicking on the classroom button opens the classroom screen;
- **The library.** The third possible important destination is the place where the player will be able to consult all the pedagogical content and information useful for thier learning and evolution inside BEACONING: **the library**. Clicking on the library button opens the library screen;
- **The player profile.** The final important place for the player is where s/he can consult their objectives and progress in addition to modifying personal data and settings: **the player profile**. Clicking on the player profile block opens the player profile screen.

These are the four key elements and must be placed in outstanding parts of the interface, so that the player can identify them quickly. It is also very important that additional (but not presented in an overwhelming way) contextual information must be provided on each of these parts, so that the player can easily decide where s/he wants to go next on the screen.

Clearly, the office space is the most important destination and very likely the one that the player will want to visit first and most often. The access to this other interface must therefore be placed in the middle of the screen and/or at the top if in a menu list.

The access to the classroom and/or the library can be considered as more supportive to the main action of doing lesson paths/quests, so logically they must be placed not far (and connected if possible) to the access of the office space. There size and highlighting must however clearly indicate that they are less important than the access to the office space.

The player profile comes fourth in importance as the player would go there a bit less frequently to check their long-term progress/status. The player profile block is usually represented as a block featuring an avatar thumbnail (a placeholder if no avatar was defined or the player defined avatar in case s/he configured the avatar) and the name of the player as it appears in the application along with the information of which overall level the player has reached.

For design purposes, the first three main functionalities are placed in the centre of the screen and are represented as clickable buildings on the background representing the headquarters group of buildings where the character is working in the narrative. The goal is to let the player understand that if s/he clicks on the building s/he will then move inside one room of it.

b - Peripheral and informative functionalities

In addition to the main functionalities of the page, peripheral functionalities will be featured on the screen.

Call to actions will be added near the office, the classroom and the library. These call to actions are meant to detect if something of interest to the player happened in these sections, raising their attention and help them to choose where to go next.

If one or several new quests are assigned to the player by the teacher, a notification or marker placed near the office space should raise the player's attention and let them know that they can go there to see what is new. In addition to this, the player can see their current % of progress in the currently ongoing quests so that they are encouraged to continue and finish the ongoing quests.

If any classmate or the teachers are online at the moment s/he is connected, the player will see a marker near the classroom to raise their attention (player awareness).

If new content was added by the teacher inside the library, a marker placed near the library will notify the player of how much content was added since their last visit to this page.

In addition to the call to actions, a quick **chat thread** is placed on the screen. The chat thread is a conversation room where all students and the teacher can communicate. The number of people active in the chat will be listed near this chat window. A button near or on the chat thread will allow opening the full chat window with more chat functionalities. To save space on small screens (especially on mobile), the chat thread can be hidden/retracted as a side panel.

A **news feed bar** will be displayed at the bottom of the screen (to benefit from the full screen width and display as much text on one line as possible), where informative text from the teacher or from the BEACONING teams will alternate.

Below is a sample screen on how these specifications were translated into a mockup for the Beaconing prototype (Figure 1).



Figure 1. Mockup for the Beaconsing prototype – Home Screen

NB: the screen will be amended and iterated upon the prototype reviews and new features will be added.

2.2 THE OFFICE SPACE

The **office space** will be the second most visited place in the student's outgame interface. It is from this place that the students will see which quests were assigned to them. This screen shall motivate them to continue and finish currently active quests, in addition to stimulating them to start new quests.

a - Main functionalities

The main purpose of the **office space** is to expose the list of quests that the student can play with and provide them with the information to help decide which quest s/he wants to play.

The first principle is that if the student already started a quest, but did not complete it, the interface should encourage him/her by any means to complete the quest. If a quest is incomplete, it shall be presented distinctively from the other quests with specific markers/colours. It shall also be presented in an outstanding position.

The second principle is that if a new quest was assigned to the student, it shall also be presented in a noticeable way. A new quest is definitely an important piece of information in the decision making process of the student.

Once the student integrated the "finishing" and "new" stimulus, a set of information specific to each quest will be presented to the student to help them decide which quest s/he would like to play. During that process the student will also consider the "to continue" and "new quests" options.

A quest will be described with a lot of details that will help the student in the decision making process. But not all details can be exposed. The best practices suggest to present at the first level the key distinctive information and leave for a second level the other information.

Concretely, this means that the most distinctive information should be directly available on the interface without requiring any interaction to disclose them. The secondary information should be available by a simple interaction. For example, a tap will expand a tab. Another tap would hide the same tab. It could as well be information displayed in a permanent panel on the side of the screen (the content would be changing depending on which quest is selected).

The primary information would be: title of the quest; teacher (in case the student is attending several classes); STEM topic covered (a colour code can be used here); subtopics; difficulty level (colour code or simple rating); location based components (an icon); collaborative quest icon (if the quest is collaborative); estimated time needed or progress bar in case of a completed or ongoing quest.

The secondary information would be: teaser summary of the quest; time spent in the quest; rewards; locations involved (in case of a location based quest); more detail on the topic covered; library content (locked or not) or forum content connected to the quest;; detail of the skills and competencies covered by the quest; create/see a group (according to the permissions); status of the group.

An action button shall be exposed to stimulate the player to start the quest of his choice: (1) start in case of a not yet played quest; (2) resume in case of an ongoing quest; or (3) replay in case of an already done quest.

b - Peripheral and informative functionalities

In addition to the main functionality of choosing and playing a quest, the interface can offer functionalities to help students making their choice or motivating them to progress.

First of all, the full avatar of the player can be displayed to show what is going to happen when starting a quest, and how it will impact them and their character. This will set them as the hero of the quest and will motivate them.

To set a long term self-development perspective, a progress bar can be introduced for each of the 4 STEM topics, representing the overall mastery level on each STEM topic. If the player selects a quest, these progress bars could be highlighted to reflect which STEM topic mastery is going to progress and by how much after succeeding in mastering the quest.

The chat panel can be displayed in the right side of the home screen as a sliding panel.

c - Groups

Some specific quests will be collective quests. This means that, to be able to progress, the students will form a group and will have to pass the gates simultaneously. The challenges to pass the gates would be either the same challenges for everyone (and then they have to work in group to solve the challenges) or a different aspect of the same challenge for each element of the group, and the set of individual answers the solution for the challenge.

This type of quest will require the students to join in groups. The teacher would decide, when designing the quest, if the groups are predefined or the students can freely join into groups based on a template defined by the teacher.

If the teacher has previously set the groups, then the student can only consult with members in their group; the group members, their levels and avatars; and contact them in a facilitated way. They can also eventually consult members of the other groups and contact them but only as secondary information.

If the teacher has set free grouping, then the students will be allowed to join groups already created by other students or create their own groups and send invites. One option to send invites could be to send automatic invites to people of the class with similar/complementary profiles (point of interests/mastery level in competencies, etc).

Accessing this information, organized in tabs, would be possible by pressing the + button on the information panel of a quest.

Below is an example of a preliminary screen developed to introduce the office space of the student (Figure 2).



Figure 2. Mockup of the office space of the student

d - Result screen

After playing a quest, a student needs to receive feedback on their overall performance across all the challenges of that quest. It is also the time to know exactly in which area they progressed and in which area they could improve. The result screen is meant exactly for this. It shall be both an opportunity to go over what happened and deduct from it what to do next.

The actions of the player must therefore be placed on a short term perspective of evaluation for what s/he just did and to appraise their pure performance. But more importantly is to place their short term performance concerning a long term/long run objective.

It is therefore very important to show to the player a clear and gradual way of their progress in the mastery of the skills/competencies involved in the lesson plan, as well as the STEM topic and the overall progress.

The performance of the rest of the class can also be consulted from an additional button.

If the quest was a collaborative quest, then the progress of the other team member can be consulted with more details.

The text presented as a header of the result screen popup should be very rewarding and encouraging for the player, emphasizing any little progress. Additionally, if the player replayed the quest and achieved a better result, a specific message or image will be presented (highscore) to mark that they improved upon their previous result.

The features are displayed for the player avatar (represented fully or partially), so that the congratulations and progress can be immediately associated to the player themselves for even more satisfaction.

The colour of the popup will be themed corresponding to the STEM topic of the quest, so there is no doubt about which STEM area the player is playing with and where he is progressing.

If the player unlocked one or more achievements while playing the game, the result screen should summarize them (a tooltip over the challenge allows getting more details on the achievement).

A replay option should allow the student to play the quest again, while an exit option should allow them to go back to the office space menu. If the player wants to consult their profile screen, s/he can click on the profile button, which will move them to the player profile screen.

Announcing the results is an important moment, highlighting where the player achieved something and progressed. It provides a great satisfaction to players. This is the best moment to propose to the player to share his BEACONING experience to other people in his social network.

It is important to note that this result screen (Figure 3) is placed outside of the quest/challenge experience (= in the outgame) because the inside of the quest is dedicated to play and experience, while the outgame is rather aimed at planning and progressing. Logically, the result screen is therefore placed in the outgame. In addition to this the result screen acts as a gateway to other places in the outgame (while the ingame part is actually over), so it is better to place it in the outgame.



Figure 3. Mockup of a completed challenge result screen

3 INTERFACE DESIGN SPECIFICATIONS: TEACHERS

Even though students are a key user of the BEACONING platform, students are only one of the system stakeholders. To correctly drive them through the learning process they require teachers.

For a student to be able to play a quest within a lesson path, a teacher must have assigned it to them and configured it. We therefore deemed it important to represent the flow conducting to the moment where a teacher can assign a quest to a student and what a teacher can do after a student finished playing a quest.

- The first page, a teacher would go through is the **dashboard page**. From there they can start and monitor an ongoing quest, check the profile and the progress of their class;
- If willing to assign a quest to a class, the teacher would firstly go through a **selection of subject and topics** to find the lesson they want to administrate
- After finding the lesson that they want to administrate, they can **review it in detail and decide to assign it to the class**.
- Ultimately, the teacher also wants to monitor the **progress of their class and of each of their students**.

On the graphical appearance, an appealing yet less gamified interface has been created for the teachers. The main reason for this is that the main interest of the teachers is not to have fun (although it is acknowledged that even the teachers must have fun with the experience), but rather to be time efficient. Teachers will have a lot of data to manage during their experience and they will monitor several classes and several students per class. As a consequence, the interface must be very simple (if not even schematic) and easy to read so that the navigation is as smooth and intuitive as possible.

For these reasons, it was decided to rely on a flat design basis for the teacher's interface. Flat design allows instant readability and very easy recognition of navigation areas through icons. The same colour scheme as for students will be used.

N.B: the screens of the teachers were featured in a very simple way in the prototype as the focus was mostly put on the student experience. We still wanted the teacher's screen to be present so that we could start to gather feedback on the graphical charter.

3.1 THE DASHBOARD

a - Main functionalities

The dashboard (Figure 4) is the first screen that the teacher enters after logging into BEACONING. In the same fashion as for students, this screen aims to be a gateway to other places of the application. It must therefore offer both gate points, as well as information to help the teacher decide where to go next.

Firstly, it is from the dashboard that the teacher can supervise their class: **check student activities, check overall progress, and check individual progress**, in order to decide what will be the next action to undertake for the class or the student.

Secondly, the teacher might then decide to **see the progress of the students in a quest** that they assigned to them recently. They can also decide to **assign them a new quest**.

The teacher also needs to **support his class with pedagogical content and/or information**. They will do that via the Forum/library accesses.

Finally, the teacher will need to administrate his classroom: **add students, create group entities.**

The two activities that the teacher will clearly be more involved in will be the quest monitoring/creation and the class/students monitoring. These two icons shall therefore be at the centre of the screen and the most visible.

The classroom/student monitoring functionalities are numerous and will be located on another screen.

Each assigned and ongoing quest will be represented as one quick access entry on the dashboard screen, so that the teacher can enter it easily. At the end of the line of ongoing quests, an icon will be positioned to create and assign a new quest, so that the teacher can also access a fast way to assign a new quest to his class.

On the right side of the screen, there will be a panel listing all the students belonging to the class. The panel will disclose (for each student):

- The name of the student;
- Their overall progress on all the assigned quests;
- Whether they are online or not and which quest they are playing (if they are);
- If the teacher clicks/touches the name of the student a sub panel will expand and show details of progress in each of the assigned quests (if assigned to several quests).

From this panel the teacher will be able to:

- Open the full classroom space;
- Open a contact channel with a specific student;
- Open the profile page of a specific student.

If the teacher wants to create/edit the groups or add/edit students, they can also access these functionalities from this panel.

The teacher will be able to access the library space (to upload/manage pedagogical content) and the forum space from simple buttons placed on the interface. These buttons should be placed in a visible way as they are main functionalities, but with a secondary visual importance compared to the quest related buttons.

The teacher can access their own personal profile page through a block located at the top right corner of the screen. This block features one thumbnail image taken from their profile/their name and their role in BEACONING.

b - Peripheral and informative functionalities

For the ongoing quests the overall % of progress of students playing that quest will be shown.

The teacher will have a news feed bar available on their interface that will show news from the BEACONING team. If the teacher wants to send their own notifications or messages to their class, they can do it from this bar, and track in realtime what their students can see though the newsfeed.

Finally, the teacher can also access the quick chat thread tab as for the students.



Figure 4. Example of a preliminary prototype dashboard

3.2 ASSIGN A QUEST: SELECT A MISSION

The main activity in BEACONING is to play lesson paths grouped in narrative units. The overall components (lesson path + narrative) are called quests. Quests are meant to be standalone but often several will be created around a specific STEM topic.

A group of the quests related to a specific STEM topic will be called a mission. To complete a mission it will be required to complete all quests/lesson paths belonging to this mission.

As a consequence the first action that a teacher will undertake would firstly to go through a STEM topic selection (Figure 5), as well as a STEM subtopic selection (Figure 5). From there they will access a list of available missions. Each mission's interest and parameters will be presented from a pedagogical point of view

The key information to be displayed for the missions are:

- STEM topic it belongs to;
- STEM subtopic it belongs to;
- Difficulty level;
- Number of quests inside the mission;
- Skills and competences involved;
- Pedagogical context and objective of the mission.

If the teacher selects one specific mission, they will then enter a screen providing more details about the quests of the mission



Figure 5. Example of STEM topic selection



Figure 6. Example of STEM subtopic selection

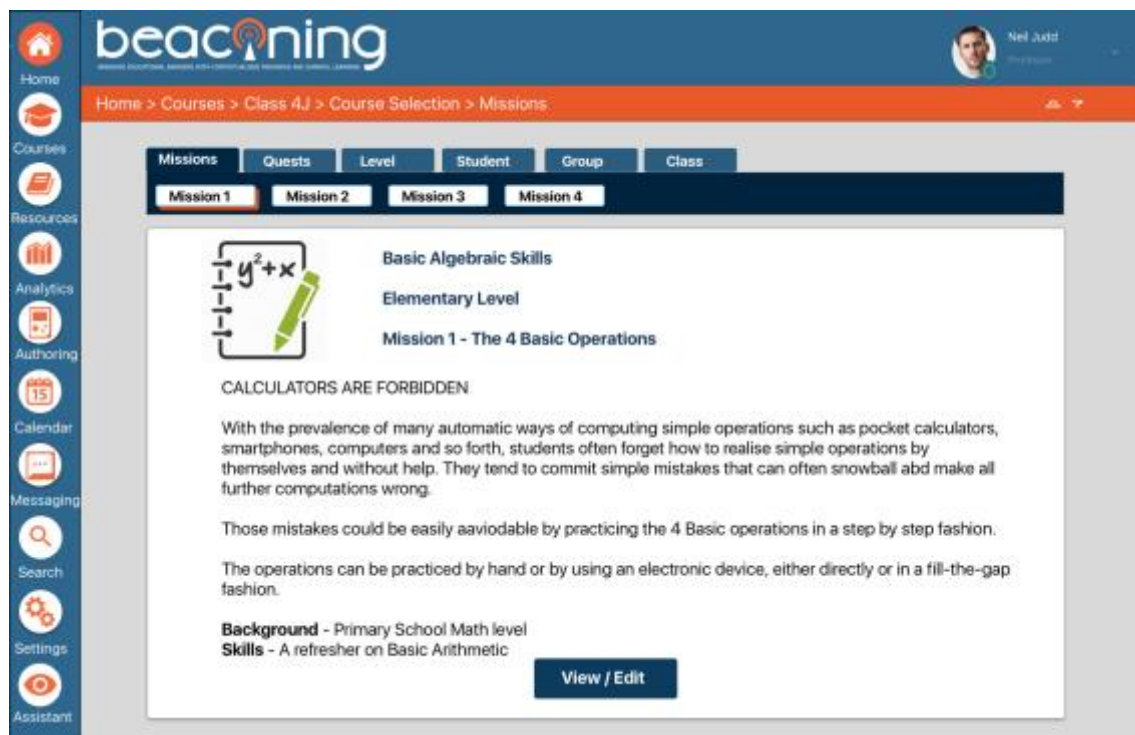


Figure 7. Mockup of a mission creation screen

3.3 ASSIGN A QUEST: SELECT A QUEST

Once the teacher has selected a mission, they will access a sub-screen showing the details of the mission, as well as the quests composing the missions.

The main parameters of the mission are summarized. The teacher can browse between the different quests details to choose which quest he wants to see more in detail. The key information to be displayed for each quest is (Figure 8):

- STEM topic it belongs to;
- STEM subtopic it belongs to;
- Mission it belongs to;
- Difficulty level;
- Length;

- Collaborative quest?
- Quest with geo-localized components?
- Average duration of the quest;
- Detail about the narrative featured with the quest;
- Detail about the challenges featured in the quest.

If the teacher selects one specific quest, they will then enter a screen providing more details about the quest.



Figure 8. Mockup of a quest creation screen

3.4 ASSIGN A QUEST: VIEW AND EDIT A QUEST

Once a quest has been selected, the teacher is able to review in full details the quest, as well as edit its parameters. They can decide to assign the quest without editing anything.

As the information about a quest and its content are largely extended, the content of a quest will be spread over different tabs.

The first tab provides an overview of the quest from the pedagogical point of view. It is aimed at the teacher itself.

The second tab will present the pedagogical content that the quest will expose to the students at the key steps of the quest. It will also list and expose the content of the challenges of the quest. From a simple button the teacher will be able to edit each of the pedagogical and challenges' opened parameters.

The third tab will present all the information about the narrative and will allow editing it to make it fit to the teacher's wishes.

Finally, a button will allow the teacher to enter the assign screen, so that they can finalize the assigning of the quest (the assign screens are not yet covered in the prototype).

3.5 CLASS OVERVIEW

The class overview screen (Figure 9) allows the teacher to monitor the progress of their students from a general view. It will allow them to capture in a glance where their attention needs to be focused to plan their next efforts.

The class overview displays a list of all the students of one class (represented with their photo and their name) along with a visual evaluation of their aggregate performance on all quests played so far for a given period. This aggregated performance will be calculated in regards to long term performance set on a limit of time, in order to allow measuring the progress of the student precisely.

The final visual of the performance evaluation remains to be determined, but a possibility is to represent the performance in a form of a progress bar with a % of completion. A colour code can also be applied to mark a difference between low/good and excellent performances (not more than 3 colour codes is recommended though).

If the teacher wants to focus on one student to see more detail they just needs to click over that student thumbnail.

If the students are gathered in groups, it will also be possible to switch the view into a performance by group view.

A final indicator will be shown as the overall class performance. If the teacher has several classes, it will allow them to evaluate faster which class is requesting their immediate attention.

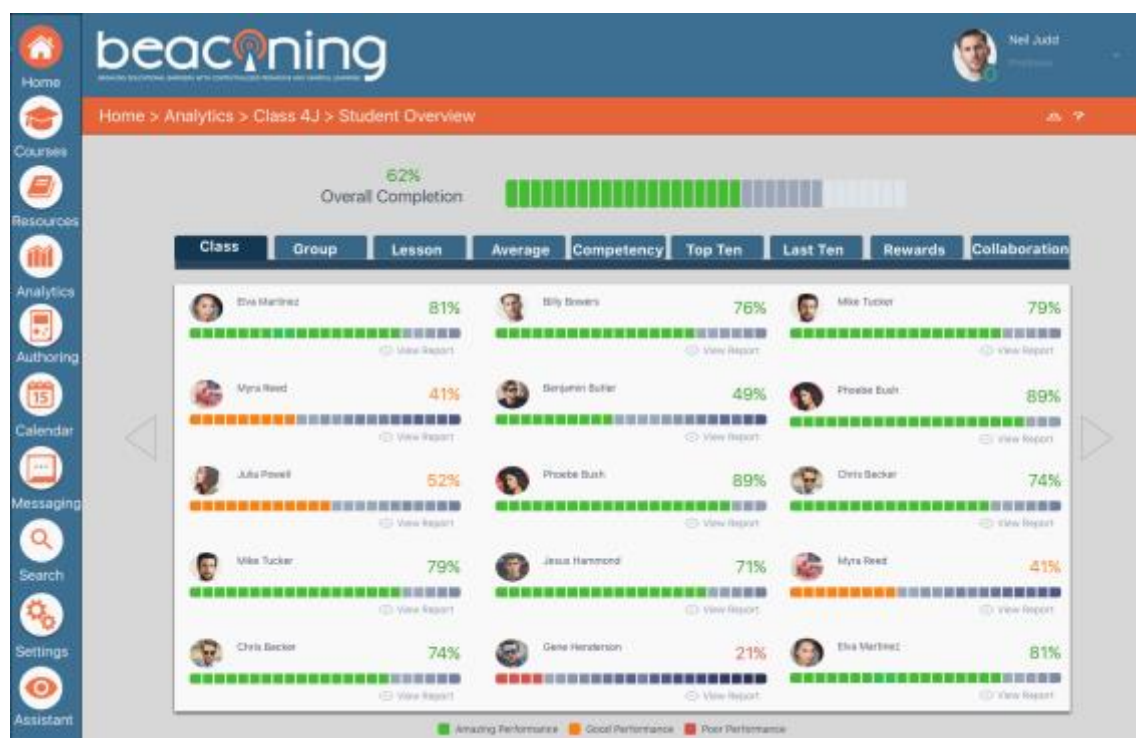


Figure 9. Mockup of class overview

3.6 STUDENT VIEW

If the teacher clicks on a student thumbnail from the class overview or if they had clicked on a student's name in the student tab on their dashboard, they can access the student view (Figure 10).

The student view allows the teacher to browse between all the students via a top bar listing all the students. The list is scrollable on mobile, but it will be completed by arrows on the side to allow navigation through the whole student list (a counter might also be needed in case of big classes).

(A student will always be selected by default so that the main tab is not empty).

The first part of the student view will be listing all of the quests that the student played through and his overall evaluation for that quest.

There will be one entry per quest and for each quest the following items will be listed:

- The name;
- The STEM topic and subtopic it belongs to;
- The difficulty level;
- The evaluation of the student;
- The date of the evaluation.

A button will allow the teacher to consult in more detail the results of a student for a specific quest. It will be possible to sort this list per topic/date/grade.

A histogram view will allow the teacher to consult the evaluations of a student, but in a more visual way. It will summarize the evaluations obtained, sorted by chronological order.

This tab will also emphasize what was the best evaluation obtained by the student, as well as their average evaluation over all the quests.

The last tab will enable the student to view their progress in all the competencies and skills expressed as % of mastery or via a completion bar. It will be possible to sort the skills and competencies by their name or by the % of mastery.



Figure 10. Mockup of students view

3.7 DISCUSSION

Specifications shall be considered as living documents evolving weekly especially in highly iterative digital projects. It was therefore proposed that the specifications are moved into an online document allowing collaborative work and quick dissemination of the information.

An updated summary of the interface specifications, based on the feedback collected from developing partners, will be provided in D3.6 System architecture.

4. CONCLUSION

This deliverable presents the first version of interfaces for students and teachers. The focus in the design specification process has been to come up with a design that is attractive to the different user groups. Therefore, the design and the layout of the interfaces presented in this deliverable show clear differences if it is made for teachers or for students. Nevertheless, the underlying approach is the same - BEACONING interfaces need to be adaptable and customisable for different user needs with high usability and easy access, so that students get engaged with the topic (not requiring focus on how to operate the tool) and teachers identify the usage of BEACONING as a part of the lessons paths they prepare as a supportive tool, enabling them to offer more personalised teaching without additional work. Consequently, the core objective in the interface design has been in identifying the key functionalities for each screen and where these should be placed on the screen. The results (presented here), will be tested and improved in the upcoming months. This deliverable serves as input both for the architecture deliverable as well as a basis document for the work carried out in WP 4 as well as in the task on game development. It is a living document and will be changed according to the user feedback.