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### Background Document to the Final Dissemination Event held in Paris on August 29 2023, Paris Dauphine University





# ANGLE OUTPUT 3: THE VIDEO LEARNING TOOLS RELATED TO THE BOOKLETS, THE GAME AND THE QUIZZES AS PART OF INTELLECTUAL OUTPUT 3 (103)

**Output 3** 

**Online learning Tools** 

#### From the booklets, the game and the films to a first on-line learning tool

The Angle Project Submission indicated that, among other contributions, Output 3 would "translate in a video format some of the materials produced within IO1 and IO2, thus providing additional learning tools for students...In addition, final quizzes or small-scale ANGLE game features will be embedded in the tools. In this way, although the learning tool developed within IO3 will be a self-standing on-line educational resource, it will also contribute, together with IO1 and IO2, in creating a coherent ANGLE learning path"-

The submission further specified that "the translation in an on-line video format of the whole group of life-cycle decision points included in the previous two outputs would require in fact time and financial resources which are beyond the scope of this proposal. Therefore, the tools developed within IO3 will represent a sort of prototype (or mock-up) of a more comprehensive on-line educational tool of financial literacy in a life cycle course perspective to be eventually developed in a subsequent phase after the ANGLE completion".

Paris Dauphine has been coordinating the IO3 section of the ANGLE project, with a central contribution on the active production of video tools. Related to the booklets and the game. Skills Together has been working jointly and in parallel with Paris Dauphine on an online learning tool prototype.



One of our main realizations for the IO3 is to propose an innovative "translation" in a video format of some of the materials produced within IO1 and IO2, thus providing additional learning tools for students. Part of the booklets' contents, the quizzes and the educational modules prepared for the table game feed the ANGLE's online Learning Tools.

Our online teaching tool has two main ingredients. Firstly, an initial series of teaching videos based on the booklets. These are short videos on specific points to keep the attention of an uninformed audience who is new to financial issues and has no prior knowledge. As well as presenting the first videos shot, I will describe in this document how these videos were made and how teachers can also use this experience to teach the concepts described in the booklets in an innovative way. The aim of our work is therefore, not only to propose educational videos for young people, but also to suggest a new and innovative way of using the proposed teaching material. This innovative way to teach will keep the project alive in European classrooms in the spirit of the ANGLE project, which is to teach young people by involving them and keeping their attention focused. The idea is to work collaboratively with our students so that they can learn by playing an active role and by participating in the transmission of knowledge beyond the walls of the classroom to reach a young audience that does not necessarily go to university.

The second product offered for our online version is a quiz that uses the questions asked in the game. This quiz allows young people to test their knowledge and learn at their own pace. Each question is associated with an answer written in a pedagogical way to help students understand their mistake and to progress. The questions may relate to financial concepts, numerical skills, or a good knowledge of basic economic and financial facts. The questions are directly related to the content of the booklets.

Although the learning tool developed within IO3 is a self-standing online educational resource, it will also contribute, together with IO1 and IO2, in creating a coherent ANGLE learning path.

#### 1. The Video Learning Tool

Economic and financial literacy is a basic knowledge that can be acquired very early in life. It helps to make individual financial decisions better informed and more effective. However, there are currently significant gaps that need to be filled, particularly regarding the younger generations and the educational technologies used. The young generation is an extremely connected generation, used to social networking and watching online content in the form of short videos lasting a few minutes. Young people seem to be more and more reluctant to read long pages and prefer interactive formats. We tried to keep this in mind when we defined the online version of the content created as part of the ANGLE project.

The project also put a strong emphasis in co-creating and co-constructing the online project outputs jointly with the students to use an approach consistent with their language and to best include needs, aspirations,



and viewpoints of the youths. In this way we are faithful to the DNA of the ANGLE project, which is a collaborative approach with young people and our students.

Our aim is that at the end of the project, the ANGLE outputs could also be of interest for high school students, young unemployed and NEETs thus broadening the initial audience.

#### 1.1 The advantages and main difficulties of Online Learning tools

The online video is an essential feature in a world where distance learning is becoming more and more widespread and effective. The potential impact of an online instrument is enormous in terms of the leverage on the public that can be reached. Providing the opportunity to learn in a variety of ways increases the learning potential. A series of short asynchronous videos can be watched on the way to school or university and corresponds to the younger generation use. Moreover, learning is most effective when people can progress at their own pace.

But even if Massive Open Online Courses (MOOCs) have developed rapidly in recent years, and have attracted millions of online users, a central challenge is the extremely high dropout rate — recent reports show that the completion rate in MOOCs is below 5% (Onah, Sinclair, and Boyatt 2014; Kizilcec, Piech, and Schneider 2013; Seaton et al. 2014).

#### 1.2 Our idea

Our main conclusions from these studies: students need feedbacks, students need a personal journey. We must avoid any "vertical" pedagogy and promote co-creation and "peer to peer" knowledge sharing. We therefore propose both a quiz that allows students to test their knowledge and a series of very short videos of 2 minutes that allows to keep the attention of young people, thanks to a creative content which can adopt for instance a humorous approach. The idea is not to listen to a teacher doing an academic lecture in financial education but to watch in the form of cartoons or mini film educational capsules made by young people. Videos must be very short. One video per concept. The videos must not require any prerequisites and must put the concepts into context to make them concrete. Our project is not to teach abstract concepts but to show young people the importance of financial education throughout the life cycle with impactful videos, some of which may be inspired by YouTube codes.

#### 1.3 Our realization

We offer Dauphine University's students who follow a specialization in Finance at the Master level the opportunity to work on the educational content proposed by the European consortium (ANGLE) in the field of financial education (savings choices, property investment, understanding key concepts such as inflation by example). From this content, students are asked to select a few key notions or concepts and propose a



set of learning materials, in an online video format, on these questions relating to "saving or indebtedness". The idea is to provide high school students, or young adults with no prior economic or financial knowledge, with the knowledge and skills they need to better manage their budget from a life-cycle perspective, better prepare for their future and avoid spiraling into over-indebtedness. Linked to students' social responsibility, the aim is to work on a "peer to peer" knowledge-sharing approach to best include the needs, aspirations, and viewpoints of young people.

The work on the vulgarization of knowledge enables Dauphine students to better appropriate knowledge by reflecting on the best way to present it to a young audience and to teach it using a creative approach. It also gives them an opportunity to learn about new communication tools via social networks, and to meet professionals to understand the impact of images and the keys to visual language.

It is an interesting way to teach. Students are active, they must be creative and translate into their words the content of the booklet. It is easy to see if they have well understood the concepts and interesting to exchange opinions with them around their scenario.

The students learn how to master a video language which is an important competence for their professional life. Some of them have created an Instagram account "ANGLE" to try to promote financial literacy concepts among young people. Others adopt the TikTok codes with short 'mini-series' videos where young people can choose an alternative for the hero and see the consequences of the choice on the hero's life. One of the key points of the ANGLE project is to teach that financial choices have medium- and long-term consequences and that it is important to acquire a sound financial culture as early as possible to do the best choice in their life cycle.

Assessment method: Screening of the videos in front of a jury, who will discuss the videos with the students. The videos can even be shown to secondary school pupils, who will be able to share their feedback with the students and vote for the video they feel has had the greatest impact.

In the future: enrich each year the video library by proposing to some students to translate in a short video a concept of a booklet.

The advantage of the ANGLE online project is twofold: to teach financial concepts in our universities (or high schools) in an innovative way by making the students actors in the popularization of key financial concepts, and to teach young people who have not had the chance to go to university thanks to the best creative videos made by the students with the codes and technical means of their generation.

#### 1.4 Our Making Off

September: First meeting with students enrolled on this innovative financial education course. The teacher in charge of the project explains to the students what is expected and how it will be implemented. The



students have to acquire or revise essential financial literacy knowledge thanks to the booklets and learn to master the tools to produce an impactful short film lasting a few minutes.

November: Each group of 3 or 4 students has selected a topic, a financial key concept in a booklet, that they want to teach to young people thanks to a short movie. Students explain why they think this is an important concept for young people and can begin to share their ideas on how to explain this concept to a young person with no finance background. The teacher in charge ensures that the concept is well understood by the students and can supplement and deepen their knowledge on this occasion.

December: The teacher in charge can give some advice on how to do a good video or invite in the classroom a youtuber or a professional in communication and numeric tools. At Paris Dauphine, the teacher was supported by the educational innovation department and the digital department, with the help of film and communication professionals.

February: Presentation of the script and storyboard by each group. This step is very important. The teacher must ensure that the concept is clearly explained. It has to be simple without being simplistic.

March: First draft of the videos

April: Presentation of the final version of the videos by each group.

Some advice which can be given to the students:

#### 1.4.1 The 5 commandments of a good scenario

#### 1 - Surprise

- First with the title
- With the script/story
- Prepare the storyboard: This is a chronological description of the video with text and visual elements (people, text, etc.).

#### 2 - The words/structure

- Go from the simplest to the most complex
- Choose words that are simple and appropriate for the audience.



- Write your text orally (avoid brackets or lists) - read it out loud to see how it "sounds", and if possible read it to someone else for an external opinion. Have as many people as possible reread the text to check that the explanation is really as simple as you think.

#### 3 - Amuse

- Humor is one of the best ways of getting people to remember something. You need to amuse while staying on topic.

#### 4 - Humanize the speech

- Identifying characters and personification
- Storytelling: telling a story, associating knowledge with emotion.

#### 5 - Get people involved

Going back to point 3, making people laugh is a way of getting them involved.

- Often ask questions that are a little rhetorical (e.g. "By the way, do you know what the ECB is for?").
- Possibility of making an interactive video with changes according to the viewer's choice.

#### 1.4.2 Advice on making good teaching videos

#### General advice

- Be careful about the number of videos and their length the attention span is just a few minutes.
- Identify similar videos that you like to guide your stylistic choices
- Prepare your media and illustrations (pictos flatIcon, thenounproject, Powerpoint, unsplash images)
- Quickly record an initial "pilot" video to get to grips with the production issues

#### The 5 commandments of a good video:

#### 1 - Change of pace

- It's important to avoid a monotonous voice as much as possible. The voice really needs to tell a story with all its modulations.
- Make the rhythm irregular.
- Speak loudly enough, Test your microphone beforehand to adjust the volume. Listen to the recording on headphones. The lower the recording level, the more you will need to amplify it when editing, which will also amplify the noise.
- Evaluate the length at between 150 and 200 words/minute.



#### 2. - Create links

- You need to link the different elements and concepts in your speech properly
- Real links: if two elements are linked, they must be linked in the drawing by a road, a pipe, a wire or whatever.

#### 3. - Keep it simple/sober

- Make minimalist drawings to deliver a minimum of information with maximum efficiency. (e.g. cow: three spots and horns are enough).
- The same goes for music or background music: keep it very simple.
- Make sure the design is consistent: colour, font, presentation, and style of illustrations.

#### 4. - Synchronize

- You need to synchronize the image (what you see) and the text (what you read) with the voice-over (what you hear).
- Don't forget to take a photo of the hand with the drawing: this guides the viewer to the area of the screen to look at and concentrate on.

#### 5. - Anchor your visuals

- Don't erase as you go along, and don't go shot by shot.
- Keeping the whole image allows you to remember each stage.
- At the end, go back from the zoom (analytical view) to the overall image (synthetic view).

#### 1.4.3 Tips for recording:

- Have your notes to hand (2nd screen, smartphone, paper, etc.),
- Be calm,
- Be comfortable with your text,

#### 1.4.4 Copyright, image rights...:

- Get the people involved in the videos to sign an image rights assignment.
- Choose images that are free of copyright or for which you have the right to use. It is possible to use a short extract from someone else's work without authorization in a few specific cases (https://www.mesdroitsmonavocat.fr/).



1.4.5 Where to find free professional software, music, sounds, and pictures:

<u>Screencast Software</u>: QuickTime (MacOS), ScreenCastify (Plug-in google chrome), Screencast O matic,

<u>Editing software</u>: Imovie (MacOS), Windows Movie Maker, OpenShot, CapCut (on smartphone), Kdenlive,

Animation: Explee, Powtoon, Prezi, Canva,

Image database / pictos: flatIcon, thenounproject, PowerPoint, unsplash, pixabay, Flickr

Vidéos library: pixabay, videvo, life of vids

Cinéaste.org : create an advert for your short film project and recruit actors (specifying that it is on a voluntary basis)

#### 1.4.6 Some references in French

- 10 principles of multimedia learning from Richard E. Mayer (<a href="https://innovation-pedagogique.psl.eu/sites/default/files/2021-11/principes">https://innovation-pedagogique.psl.eu/sites/default/files/2021-11/principes</a> inspires RMayer 2020 0.pdf)
- Making a screencast video (screen + voice-over): <a href="https://innovation-pedagogique.psl.eu/sites/default/files/2021-09/Fiche%20conseil\_R%C3%A9aliser%20une%20vid%C3%A9o%20p%C3%A9dagogique%20de%20type%20screencast.pdf">https://innovation-pedagogique.psl.eu/sites/default/files/2021-09/Fiche%20conseil\_R%C3%A9aliser%20une%20vid%C3%A9o%20p%C3%A9dagogique%20de%20type%20screencast.pdf</a>
- The 10 commandments of an educational video: https://www.youtube.com/watch?v=Zii2VCa38kU&t=253s
- Creating and publishing videos on TikTok: https://www.commentcamarche.net/applissites/reseaux-sociaux/1133-publier-une-video-sur-tiktok/

#### 1.5 Our video library



The videos were produced in French. This choice was made in consultation with the students. We didn't want a poor understanding of English to be a barrier to young French people. Financial concepts are complex enough to grasp without adding a language barrier. However, the students translated the texts to add subtitles so that they could share their videos with all the European students taking part in the project. Our wish is to continue this initiative within the partner universities in the coming years so that each partner adds videos produced in its own language to our common library with English subtitles. The idea of organizing an annual competition to select the best video produced by the partner universities would be a fantastic way of keeping the project alive and continuing to forge links between the students on this European Erasmus + project. In the next future, beyond this project, each partner will be able to create its own YouTube channel to disseminate the videos in its country, helped by the social networks of their students involved in the project.

1.5.1 Budgeting and Saving for the future (cf. Booklet 1): https://youtube.com/playlist?list=PLVQQNsnsU6lCYhuxXBFj\_qqdBEsiVlayO

Note: it's a video designed for Tiktok where the reader has to make a choice for the hero. They can see the short- and medium-term consequences of the hero's choice. Here the hero is faced with three options: save nothing, save without diversifying into a high-risk asset, or save wisely by diversifying.

1.5.2 Bonds and Stocks (cf. Booklet 1 and 3) : https://www.youtube.com/playlist?list=PLVQQNsnsU6lAyowXtzkL4IujKfMgOYoMU

Note: This is a series of 5 educational videos in which the reader learns about traditional savings vehicles such as bonds and equities. More specifically, the various videos cover the following subjects:

- a: What is a bond
- b: What is a green bond
- c: What is a stock
- d: Risk and diversification in investing decision
- e: Differences between Bonds, Equities, and Cryptocurrencies
- 1.5.3 Risk and saving in cryptocurrencies (cf. Booklet 3)
  - a. Risk and cryptocurrencies: <a href="https://youtu.be/YcYFAZyZaBU">https://youtu.be/YcYFAZyZaBU</a>



- b. Blockchain and cryptocurrency: https://www.youtube.com/watch?v=mPQ100 C6tg
- 1.5.4 Myopic Behavior, Discount factor and Utility (cf. Booklet 2) https://www.youtube.com/playlist?list=PLVQQNsnsU6lBhPDJMliWdeVqDutjKr3kP

Note: it's a video designed for Tiktok where we can see the consequences of the hero's choice. Here the hero is facing the choice between studying or having fun.

- 1.5.5 Public Debt Trap (cf. Booklet 3): https://www.youtube.com/watch?v=Y2z3RA7zRul
- 1.5.6 Purchasing Power (cf. Booklet 3): https://youtu.be/LuMnDxZs1hg
- 1.5.7 Inflation (cf. Booklet 3 and 5): https://youtu.be/icdJynTtyoY
- 1.5.8 What is a mortgage loan? (cf. Booklet 4): https://www.youtube.com/watch?v=CFTZx944yUs
- 1.5.9 Pension and Saving Plans (cf. Booklet 5)

Note: These 'power point' were originally designed for an Instagram series where readers can go at their own pace. We've created this YouTube video to make it easier to read the English translation of the original work created by the students but here's the link to the Instagram page created in French by the students

(https://www.instagram.com/educfidau/?fbclid=lwAR0JF5nGalFalmrcRPkmpChHNjn7zblDcaVCvTD ye-7zFhfC3aV14vXnPKc).

#### Here are the links to the playlists by Booklet:

- Booklet 1: https://www.youtube.com/playlist?list=PLVQQNsnsU6lDc5Q\_XdVcgTdd4lWTjvFic
- Booklet 2: https://www.youtube.com/playlist?list=PLVQQNsnsU6lBhPDJMIiWdeVqDutjKr3kP
- Booklet 3: https://www.youtube.com/playlist?list=PLVQQNsnsU6ID4JSVJ5mY25ws4HZrGfk8Y
- Booklet 4: https://www.youtube.com/playlist?list=PLVQQNsnsU6lAnLYJPDYP 68MVFCPkoQdV
- Booklet 5: <a href="https://www.youtube.com/playlist?list=PLVQQNsnsU6IDVQQDOommSaSEJZ">https://www.youtube.com/playlist?list=PLVQQNsnsU6IDVQQDOommSaSEJZ</a> ZumheV



#### 2. The Quiz Learning Tool

ANGLE: a multiple-level learning tool.

The objective: multiple choice questions discussed by the players around the table.

The objective was to use the questions as a stimulus for the players to take an active role in discussing issues in life-cycle questions around the game table.

Over 120 multiple-choice questions have been created within the Angle project.

The questions cards have been designed so as to have on the front the question with three possible answers and in the back the indication of the answer and a short explanation.

#### The difficulty: how to combine questions and a smooth game process?

During the first game sessions it soon appeared that some of the questions derived from the booklets were too advanced for a smooth game. Moreover, though studying the booklets was recommended in preparation of the game, it became soon clear that not all the students had the time to study all the booklets before the game session and that the game should not be seen as a test of the booklet reading.

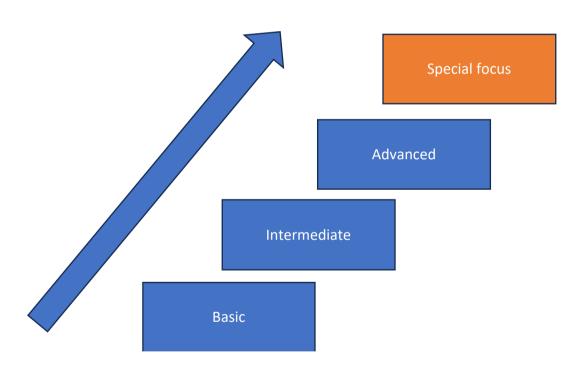
#### The solution: a multiple-level game tool

Given also the broader objective of the Angle project, i.e. to design a game that could address other target groups such as the Neets and the unemployed, the partners found the solution in segmenting the questions in three levels: basic, intermediate, advanced. The sources of the questions were broadened, with the questions directly derived from the booklets concentrated in the advanced level. For the basic level questions the partners were inspired by questions already used in surveys such as PISA [https://www.oecd.org/daf/fin/financial-education/oecdpisafinancialliteracyassessment.htm] and for the intermediate level proposed by academics and specifically by professors Anna Maria Lusardi and Olivia Mitchell [https://gflec.org/education/questions-that-indicate-financial-literacy/], as well as by Central Banks and other organizations. Last but not least we added some questions relating to "factfulness", showing with figures from Eurostat some key numbers relating, for example, income to levels of education, etc..



#### Tools open to possible future developments

The table-top game has been successful in involving students who have quickly familiarized with the rules. The question cards are part of the game, but the specific contents are independent from the game dynamics. Thus, it is conceivable to use Angle as a sort of multi-level challenge package, with one basic board game, but where a student can start playing with the basic level, then move to the intermediate and advanced ones and, in the future, maybe move to some special levels, for example for finance or retirement.





#### An online learning tool

#### Using the game cards, along with the films and booklets, in preparation and testing

The idea underlying the following experimental online game tool is very simple: an encouragement to play the game, to read the booklets and to view the films; moreover, an instrument for better assessing the quality of the questions, the level of involvement of the players, to design possible improvements.

This online learning tool uses, besides the booklets, the explanations that are in the back of the questions cards, explanations that have been sequenced in a new format so as to allow their use in a direct learning process [https://drive.google.com/file/d/1Q1V86FozUW3\_GSqTl1X52TrNjCSqjQjk/view?usp=drive\_link];[https://drive.google.com/file/d/1Q0DCcvbCDGh0RkucNQcGE\_VpzzecpdiU/view?usp=drive\_link].

We have sent a questionnaire to the students who have successfully undertaken the Kahoot contest illustrated below and most have answered that indeed they have used some, if not all, the ANGLE materials they had been encouraged to use before engaging in the contest itself.





#### Using the Kahoot application for engagement, evaluation, and progress

As ST Skills Together, we received good external insights relating to applications that can be used to make online learning tools effective:

- A Conference on Digitalization and Financial Awareness held in October 2022 with Bank of Italy, Museo del Risparmio and the International Federation of Finance Museums [https://www.museodelrisparmio.it/wp-content/uploads/2022/10/Conference-programme\_3-4-October-Rome.pdf]
- Angle dissemination events organized by ST Skills Together with the participation of Bank of Italy
  officials involved in Financial Education and who indicated to us their use of Kahoot! in their
  financial education events with students.
- The Project Coordinator, Collegio Carlo Alberto checked with Indire that the use of Kahoot as an
  instrument could be considered appropriate in an Erasmus project, as long as the costs were
  borne within the budget of the project itself.

#### Kahoot! and the pilot contest on Angle

Kahoot! is an all-in-one engagement, teaching, assessment, and review tool that is quite popular in education and training institutions.

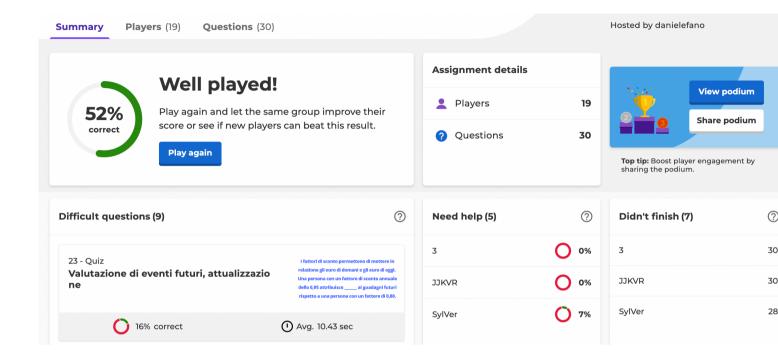
We launched a first pilot contest on Kahoot selecting 30 questions form the basic and intermediate levels. The contest was publicized with a direct marketing initiative towards a group of economics students at the University of Rome Tor Vergata; Collegio Carlo Alberto signalled the Kahoot to its network; finally the Kahoot was signalled on social networks. An incentive was offered with a 10 euro Amazon gift coupon to first group that would have completed the test with over 50% right answers and a 30 euros gift coupons for the 3 participants on the podium for the best results. Overall, 19 persons participated.

Though by no means a "scientific" experiment in terms of sample selection, it appears it does represent an interesting initial experiment, allowing to "break the ice" on the uses of online instruments.

As follows the results from the Kahoot platform.

Summary: well played according to Kahoot parameters.





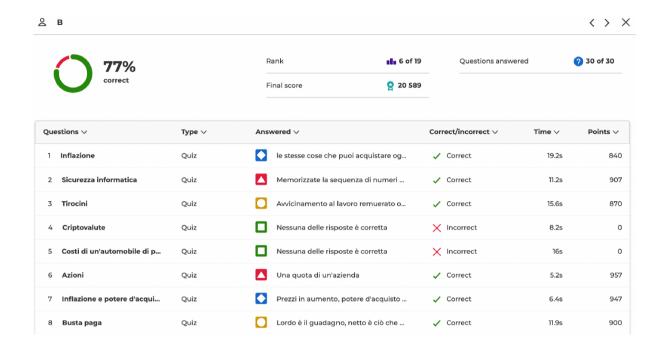
A broad range of results: 93% correct answers from the winner, but a good number of players got between 60% and 80% correct answers



Summary	Players (19)	Questions (30)			Hosted by danielefano		
AII (19)	Need help (5)	Didn't finish (7)				Search	
Nickname ∨			Rank 🗸	Correct answers ∨	Unanswered ∨	Final score ∨	
Redhair			1	93%	_	27 166	:
Lluve			2	83%	_	22 583	:
mea			3	80%	_	21 991	:
DL			4	73%	_	21 218	:
S293472			5	73%	_	20 639	:
В			6	77%	_	20 589	:
Ricky126			7	63%	_	17 216	:
DodiDodi			8	63%	_	16 937	:
Zilenny			9	63%	_	16 207	:
Fra Rev			10	60%	_	15 623	:

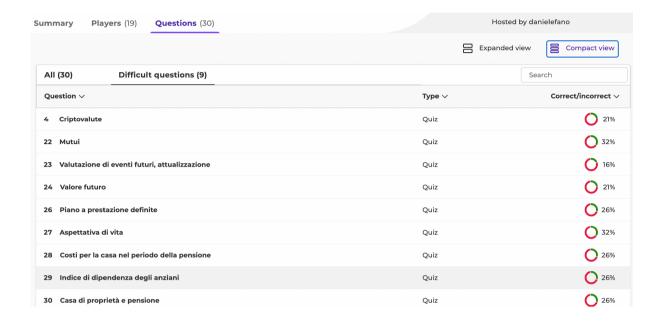
Kahoot allows to focus on individual players: their strengths and weaknesses Example Player B





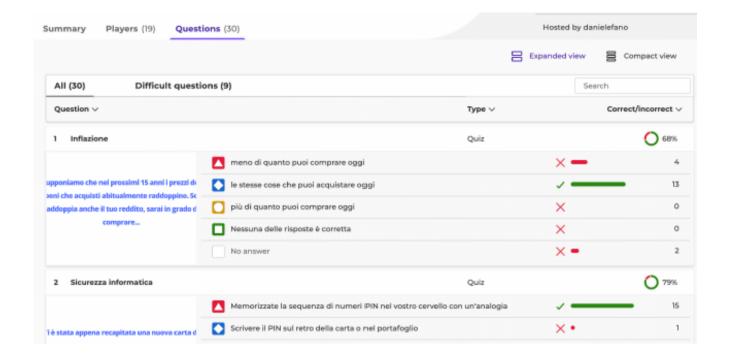
Moreover it allows to focus, across all answers, on the "difficult" questions...





...and to focus on the specifics of the difficult questions





So the PODIUM is just the "tip of the iceberg" of the wealth of information that can be gathered





The Kahoot proves to be a sophisticated instrument that is known by many schools and students and that, moreover, provides teachers and course/educational instruments designers and providers with a wealth of information for interaction and improvement.

## ATTACHMENT PARIS DAUPHINE

## Experimentation of the Table Game