



2020-1-DEC02-KA202-007585

COMPETENCE+

How to use Competence+ VR
experience.
Guide for use of VR.



A BLENDED LEARNING PROGRAMME FOR COMPETENCE
DEVELOPMENT BEYOND PURE PROFESSIONAL SKILLS



Co-funded by the
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of the European Union

**HANDBOOK FOR
TRAINERS**

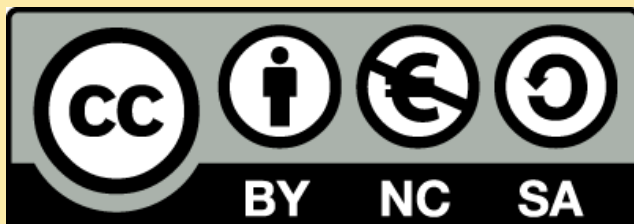


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Open Educational Resources



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Our TEAM



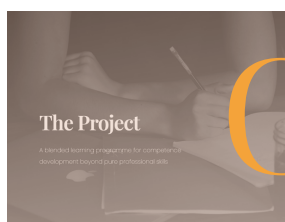
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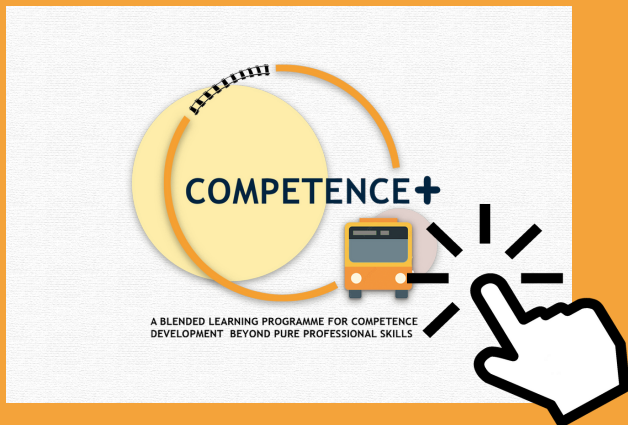
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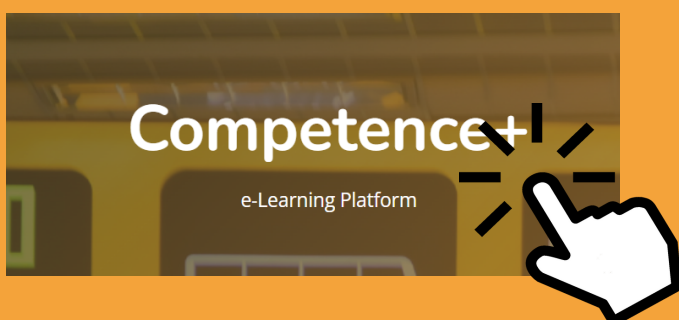
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Competence+



A blended learning programme for competence development beyond pure professional skills.

The mission of COMPETENCE+ is to provide training for current and future employees in the public transport sector with a blended modular learning concept. The newly acquired skills and knowledge can and should be directly applied in everyday training and work.



This handbook is a comprehensive guide that provides information and guidance on how to use the Competence+ VR experience.

The purpose of a handbook is to provide a reliable and accessible resource that teachers can refer to when they need information or guidance on the use of Competence+.

The Competence+ e-learning platform offers a wide range of courses in various subject areas, including languages, digital skills, entrepreneurship, and intercultural communication. The courses are designed to be flexible and adaptable to the needs and schedules of individual learners, allowing them to learn at their own pace and on their own schedule.

How to download Competence+ VR

What do you need?

Oculus Quest 2 is a virtual reality (VR) headset developed by Facebook Technologies, LLC. It is the second generation of the Oculus Quest series, which is designed to offer a high-quality VR experience without the need for a PC or external sensors.

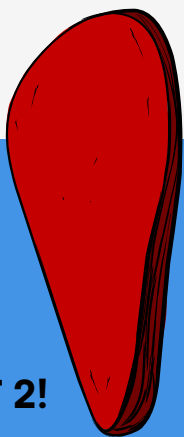


The Oculus Quest 2 features a high-resolution display with 1832 x 1920 pixels per eye, which provides a clear and immersive VR experience. The headset also features a fast-switch LCD, which reduces motion blur and improves visual clarity.

One of the key features of the Oculus Quest 2 is its wireless design, which allows users to move freely and experience VR without being tethered to a PC or console. The headset includes built-in sensors and cameras that track the user's movements and enable them to interact with virtual environments and objects.

IMPORTANT!

COMPETENCE + ONLY RUNS ON THE OCULUS QUEST 2 AND NO OTHER SOLUTION AT THE MOMENT. THAT MEANS IF YOU WANT TO USE COMPETENCE+ YOU WILL NEED THE OCULUS QUEST 2!



Besides the VR headset, you will also need to have access to the internet to download the application.

After you have downloaded the Competence+ VR experience, you do not need to have access to the internet or wifi anymore.

Why Oculus Quest 2?

There are several reasons why an educational centre might choose to use the Oculus Quest 2 in their teaching:

1. **Immersive Learning Experience:** The Oculus Quest 2 provides an immersive learning experience that can enhance student engagement and increase knowledge retention. VR technology can help students to visualize complex concepts, experience historical events, or explore new environments in a more vivid and interactive way.
2. **Accessibility and Mobility:** The Oculus Quest 2 is a wireless, all-in-one VR headset that is easy to set up and use. This makes it highly accessible and mobile, allowing educators to use it in any location, without the need for a computer or a wired connection.
3. **Cost-effective:** Compared to traditional classroom technologies, the Oculus Quest 2 is relatively affordable, making it an attractive option for educational institutions with limited budgets.
4. **Interactive Learning:** The Oculus Quest 2 can facilitate interactive learning, allowing students to collaborate, communicate, and share ideas in real time. This can help to develop critical thinking and problem-solving skills, as well as social and communication skills.

Overall, the Oculus Quest 2 can be a valuable tool for educational institutions looking to enhance their teaching and learning strategies by providing immersive, interactive and personalized learning experiences.

Competence+ consortium decided on Oculus Quest 2 as the technical partner recommended it due to its cost-effectiveness and ease of use. The fact that it is a standalone product without the need for a computer is also a big plus. Furthermore, the technical partner was the most confident in the development of Oculus Quest 2 as it has a lot of support documentation.

What other VR is used in education?

Educational centres use a variety of VR headsets depending on their specific needs, budget, and the type of VR experience they wish to provide. Here are some of the most popular VR headsets used in educational settings:

1. **Oculus Quest 2:** The Oculus Quest 2 is a popular choice for educational centres due to its affordability, mobility, and ease of use. It is an all-in-one VR headset that does not require a computer, making it easy to set up and use in any location.
2. **HTC Vive:** The HTC Vive is a high-end VR headset that provides a premium VR experience. It is a popular choice for educational centres that require a more advanced VR experience, such as medical simulations or architectural design.
3. **Google Daydream View:** The Google Daydream View is a mobile VR headset that is compatible with Google Pixel smartphones. It is a lightweight and affordable option for educational centres that require a mobile VR experience.
4. **Pico Neo 3 or Pico Neo 4:** The Pico Neo 3 (or 4) is a standalone VR headset that provides a high-quality VR experience. It is a popular choice for educational centres that require a premium VR experience but do not have the budget for a high-end VR headset like the HTC Vive.

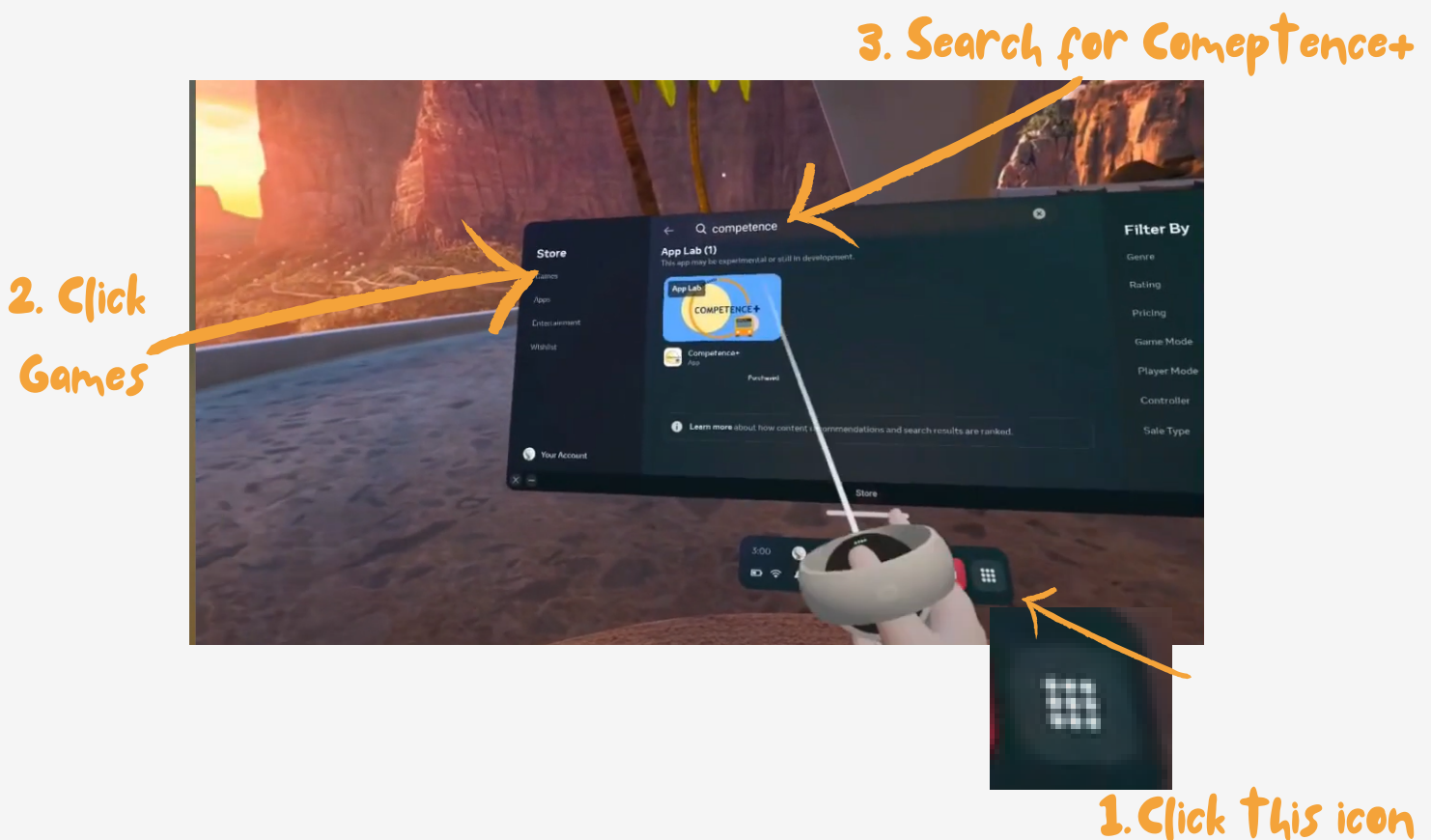
Overall, the choice of VR headset will **depend on the specific needs and goals of the educational centre**, as well as their budget and the type of VR experience they wish to provide.



How to download Competence+ VR



The easiest way to learn about how to download the Competence+ into your headset is to follow our instructional video. The video is available in English voiceover, but we have also provided subtitles in Icelandic, Greek, German, Danish and Spanish. Simply click on the picture above and you will be directly taken to the video.



How to START Competence+ VR

To start any Oculus Quest 2 application, Competence+ including, you will need to follow these steps:

1. Turn on your Oculus Quest 2 headset by pressing and holding the power button located on the right side of the headset.
2. Put on the headset and adjust it so that it fits comfortably and securely.
3. From the home screen, select the “Library” button located on the bottom bar of the screen.
4. From the Library screen, navigate to the application you want to start. You can either scroll through the list of installed apps or use the search bar to find the app.
5. Once you have found the app, select it by pointing your controller at it and pressing the trigger button.
6. The app should start automatically, and you will be taken to the app’s home screen or menu.
7. Use the controllers to interact with the app and navigate through its features and functions.

Note: If you are launching the app for the first time, you may need to complete some setup steps or tutorials before you can start using the app. Follow the on-screen prompts and instructions to complete the setup process. Also, make sure that your headset is connected to a Wi-Fi network to download and update the app if needed. You do not need to have Wi-Fi on once you have downloaded the Competence+ VR experience.



1. Click This icon

General lesson guidelines

Teaching soft skills such as stress management, conflict resolution and others using virtual reality (VR) can provide students with a safe and controlled environment to practice and improve their conflict resolution skills.

Here are some steps to teach conflict management using VR:

1. **Introduce the topic of conflict management:** Begin by introducing the topic of conflict management, including the importance of resolving conflicts and the different approaches to conflict resolution. All of these materials are available on the **Competence+ e-learning platform**.
2. Demonstrate conflict resolution techniques: **Demonstrate different** conflict resolution stress management **techniques** such as active listening, empathy, and problem-solving. Explain how these techniques can be used to resolve conflicts effectively or manage stress for example.
3. Use our VR scenario: **VR scenario lesson** explanations are listed below.
4. **Assign buddies:** It is always preferred to have students in pairs.
5. Guide the VR experience: **Guide students through the VR experience**, encouraging them to use conflict resolution techniques to resolve the conflict. Demonstrate stress-relieving techniques to put theoretical knowledge into practice. As the teacher, you could act as a mediator, providing guidance and feedback on their performance.
6. **Debrief the experience:** After the VR experience, debrief with the students, discussing their experience, what techniques they used to resolve the conflict, and what they learned from the experience.

Using VR to teach soft skills can provide students with a safe and engaging way to practice and improve their conflict resolution skills. By simulating real-life scenarios, students can develop a better understanding of the challenges of conflict resolution and learn effective techniques to resolve conflicts.

The "Buddy System"

The "buddy system" is a technique that involves pairing up students when they use VR technology. **One student wears the VR headset** while **the other acts as a guide**, providing support and assistance as needed. Here are some reasons why you might use the buddy system when using VR:

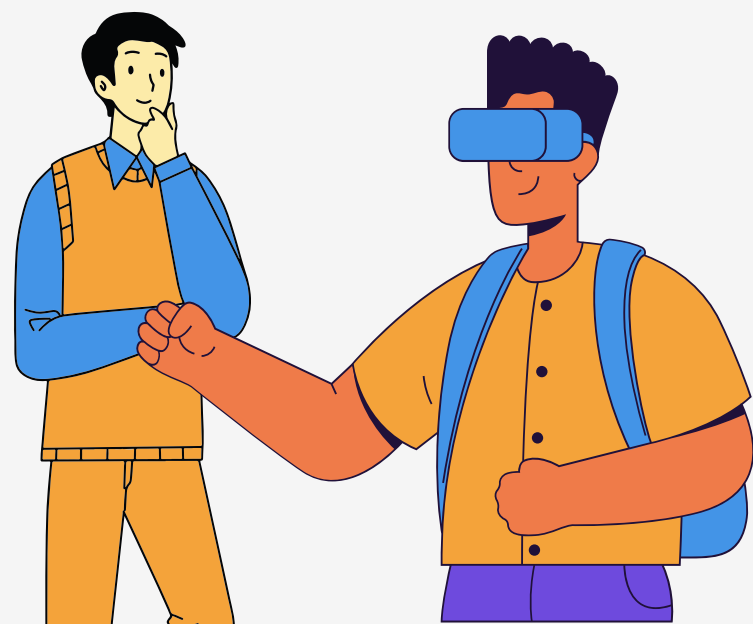
Safety: When students are immersed in a VR environment, they may lose track of their physical surroundings and become disoriented. Having a buddy present can help prevent accidents and ensure the student's safety.

Support: The buddy system provides students with support and assistance when using VR. The buddy can help the student navigate the VR environment and troubleshoot any technical issues that may arise.

Collaboration: The buddy system encourages collaboration and communication between students. The buddy can help the student share their experience and reflect on what they learned.

Engagement: The buddy system can increase engagement and participation in the learning process. Students are more likely to be engaged when they have a partner to work with and share the experience with.

Overall, the buddy system can enhance the effectiveness of using VR in education by providing a safe, supportive, and collaborative learning experience.



Environmental Awareness VR Lesson

About VR experience

The student takes the role of a bus driver. They have some time spare before they have to start another tour when a young mother approaches with her son who is asking a lot of questions about public transport and environmentalism.

Recommendations

This VR scenario shows you the power of knowledge and how you can help form the opinions of the younger generation based on your actions and decisions.

After finalisation of the course, you can use the VR experience with the following suggestion:

Let the students know there are two questions they have to answer after:

How did the plant look at the end of your experience?

What colour was the boy's T-shirt?

Conflict Management VR Lesson

About VR experience

The student takes the role of a Ticket controller and is faced with a dilemma about the person who wanted to buy the ticket through the mobile but they are experiencing difficulties with the mobile application.

Recommendations

After finalisation of the course, you can use the VR experience with the following suggestion:

Students should enter the VR 3 times.

- **Exploration**

When the student enters the VR for the first time, they will be excited and distracted by what is happening around them and what they see. This is normal and you should not interfere a lot. You want them to experience the situation as they would without much guidance.

We do recommend assigning them two small tasks before they go into the VR. Tell them to keep these in mind:

1. How many people are on the bus?
2. What colour is the customer's T-shirt?

These will make sure that your student enters the VR with purpose. After they are done, have a quick debriefing (they can have a discussion with their buddy) about what has happened.

- **Learning**

The second time your student enters VR, they should focus on identifying the conflict as described in learning materials. They should keep the conflict-defusing techniques in mind and apply them. Ask them to make a commentary on what is going on and why they select specific options. Follow up with a de-brief on what was the root of the conflict, what were the interests etc.

- **Practical application of theory**

The final time you ask the student to go inside of the VR should be observed by you, the teacher. Ask the student to have a conversation with the characters to emulate their behaviour. Then have a de-brief.

Stress Management VR Lesson

About VR experience

The student takes the role of a bus driver who is taking over a shift from their colleague who got sick and had to leave. It is early morning, the bus door is broken and passengers are already very agitated when a person comes in blasting music making the situation even more stressful.

Recommendations

After finalisation of the course, you can use the VR experience with the following suggestion:

Students should enter the VR 3 times.

- **Exploration**

When the student enters the VR for the first time, they will be excited and distracted by what is happening around them and what they see. This is normal and you should not interfere a lot. You want them to experience the situation as they would without much guidance.

We do recommend assigning them two small tasks before they go into the VR. Tell them to keep these in mind:

1. How many doors were broken?
2. What was the code?

These will make sure that your student enters the VR with purpose. After they are done, have a quick debriefing (they can have a discussion with their buddy) about what has happened.

- **Learning**

The second time your student enters VR, they should focus on identifying the stressors as described in learning materials. They should keep stress-relieving techniques in mind and apply them.

- **Practical application of theory**

The final time you ask the student to go inside the VR should be observed by you, the teacher. Ask the student to pause when they would start to feel stress and ask them to demonstrate their favourite stress-relieving technique. Then have a de-brief with the student to show the importance of trying these techniques in VR (mainly that they practice them as only knowing the theory will not benefit them in long term).

Moral Courage VR Lesson

About VR experience

The student takes the role of a bystander. As they are heading home from the long shift, they encountered a group of young men bullying a girl who wears religious clothing. The student is prompted to take action in a safe way to help the girl out.

Recommendations

After finalisation of the course, you can use the VR experience with the following suggestion:

Let the students know there are two questions they have to answer after:

How many oppressors/bullies were there?

What colour was the girl's shirt?

Ask the students to **just explore** the VR experience at first and let them do what they want.

Let the student explore and do their decision. Then they should have a debrief about the situation with their assigned buddy.

When the students try the VR for the **second time**, they should make comments on what is going on inside of the VR and narrate the situation. They should be encouraged to **“talk to the character“** to practice speaking.

After that, you can have a debrief on which decisions they have made and why (for example if they decided to talk to the bus driver, why did they think getting him involved would be the best choice in this situation).

There are no right or wrong answers as long as the students are staying safe themselves and trying to help another person in a safe manner. You can further the discussion into how would they use the Conflict Management knowledge (if they have had it before this module) and what would they do.

Tips and Tricks

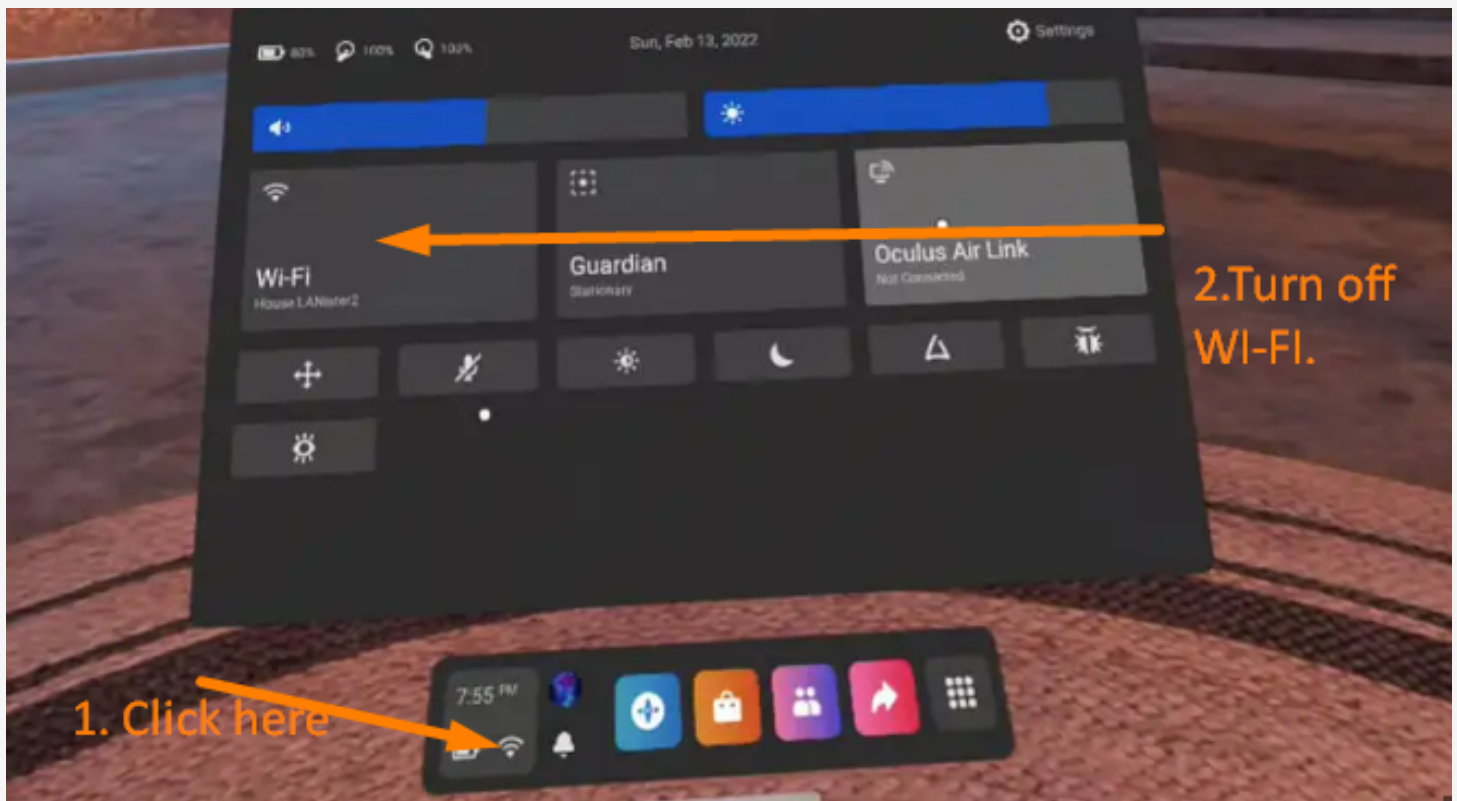
Buddy system

As mentioned before, it is essential for safety of your students and equipment to use the “Buddy system“.

ONE FB/META Account with more than TWO headsets

If you have multiple headsets (more than one) connected to your account, you should know this trick. If you will try to access the same application/VR experience/game on your Oculus Quest, you will be notified that there is another account trying to access it. This can result in issues. There is a simple solution, just turn off the wifi after you have downloaded the application and there will be no more problems with sharing one account among many headsets.

Turn off Wi-Fi



Tips and Tricks

Casting (seeing) what a student sees

To cast what you see using Oculus Quest 2, you can follow these steps:

First, make sure that your Oculus Quest 2 and the device you want to cast (such as a smartphone, tablet, or TV) are **connected to the same Wi-Fi network**.

Put on your Oculus Quest 2 headset and open the Oculus menu by pressing the Oculus button on your right controller.



Select “Sharing“ from the menu and then choose “Cast“.

Choose the device you want to cast from the list of available devices. If you don't see the device you want to cast to, make sure that it is connected to the same Wi-Fi network as your Oculus Quest 2.

Once you've selected the device, you can choose whether to cast it in standard or high quality. High quality will provide a better viewing experience but may require more bandwidth.

Start casting by selecting the “Start“ button.

You can stop casting at any time by opening the Oculus menu, selecting “Sharing“, and then choosing “Stop Casting“.

Note that not all apps and games on the Oculus Quest 2 support casting, so some content may not be available for casting.

Why to cast?

If you have a lot of students and a limited amount of headsets, this can be a way how to use the limited amount of hardware you have available. You can ask your students to make decisions for the person inside of the VR while discussing why specific options are good or bad based on the materials.

Tips and Tricks

Casting (seeing) what a student sees

You can also cast Oculus Quest 2 to your computer wirelessly using the following steps:

1. Download and install the **Oculus app** on your computer if you haven't already done so.
2. Make sure your Oculus Quest 2 and your computer are connected to the same Wi-Fi network.
3. Put on your Oculus Quest 2 headset and open the Oculus menu by pressing the Oculus button on your right controller.
4. Select "Sharing" from the menu and then choose "Cast".
5. Choose "Computer" from the list of available devices.
6. Once you've selected your computer, you can choose whether to cast in standard or high quality. High quality will provide a better viewing experience but may require more bandwidth.
7. Start casting by selecting the "Start" button.
8. On your computer, open the Oculus app and click on the "Devices" tab.
9. You should see your Oculus Quest 2 listed under "Headset". Click on it and then click on the "More Settings" button.
10. In the "More Settings" menu, enable the "Wireless Streaming" option.
11. You should now be able to see your Oculus Quest 2 screen on your computer wirelessly.

Note that wireless casting may not be as stable or reliable as wired casting, so you may experience lag or stuttering. If you encounter any issues, try switching to a wired connection using the Oculus Link cable.

Tips and Tricks

You can also cast Oculus Quest 2 to your computer wirelessly using the following steps:

1. Download and install the **Oculus app** on your computer if you haven't already done so.
2. Make sure your Oculus Quest 2 and your computer are connected to the same Wi-Fi network.
3. Put on your Oculus Quest 2 headset and open the Oculus menu by pressing the Oculus button on your right controller.
4. Select "Sharing" from the menu and then choose "Cast".
5. Choose "Computer" from the list of available devices.
6. Once you've selected your computer, you can choose whether to cast in standard or high quality. High quality will provide a better viewing experience but may require more bandwidth.
7. Start casting by selecting the "Start" button.
8. On your computer, open the Oculus app and click on the "Devices" tab.
9. You should see your Oculus Quest 2 listed under "Headset". Click on it and then click on the "More Settings" button.
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Note that wireless casting may not be as stable or reliable as wired casting, so you may experience lag or stuttering. If you encounter any issues, try switching to a wired connection using the Oculus Link cable.

Tips and Tricks

Virtual Reality (VR) can be an excellent tool for education, but it is essential to **avoid the entertainment side effects** that may distract learners from the intended educational goals. Here are some steps that can be taken to avoid the entertainment side effect when using VR for education:

Define learning objectives: Clearly define the learning objectives for the VR educational experience. This will help ensure that the VR experience is designed to meet the educational needs of learners rather than simply entertaining them.

Design for educational purposes: Design the VR experience to emphasize the educational purpose, rather than the entertainment value. The VR experience should be designed to engage learners in active learning, providing them with opportunities to apply concepts and solve problems related to the learning objectives.

Incorporate assessments: Incorporate assessments into the VR experience to measure learning outcomes. These assessments should be designed to evaluate whether learners have achieved the intended learning objectives and are not simply testing their entertainment experience.

Provide appropriate guidance: Provide appropriate guidance and feedback to learners to help them stay on track with their learning goals. This can be achieved through the use of instructional prompts, feedback mechanisms, and a clear path for learners to follow.

Evaluate the effectiveness: Evaluate the effectiveness of the VR educational experience by measuring learning outcomes and comparing them to traditional educational methods. This will help ensure that the VR experience is delivering the intended educational benefits.

By following these steps, educators can ensure that the use of VR in education remains focused on its intended educational goals and avoids the unintended entertainment side effects.

Troubleshooting

If you are experiencing issues with your **Oculus Quest 2**, there are a few troubleshooting steps you can take to try and resolve the problem.

Here are some tips:

1. **Restart the device:** Sometimes simply restarting the Oculus Quest 2 can fix minor issues. To do this, **press and hold the power button** on the side of the headset until the power menu appears, then select “Restart”.
2. **Check for updates:** Make sure your Oculus Quest 2 is running the latest software. To check for updates, go to “**Settings**” > “**Device**” > “**About**” and look for any available updates.
3. **Clear the cache:** Clearing the cache can help resolve issues with the Oculus Quest 2 app. To do this, go to “**Settings**” > “**Device**” > “**Storage**” and select “**Clear All Data**”.
4. **Check your internet connection:** Make sure your internet connection is stable and strong. A poor internet connection can cause issues with the Oculus Quest 2 app and content. If you are still experiencing problems, you can also just turn off the wi-fi.
5. **Check for app updates:** If you are experiencing issues with a specific app, make sure it is up to date by going to the Oculus Store and checking for updates.
6. **Factory reset:** If all else fails, you can try a factory reset of the Oculus Quest 2. Note that this will erase all data and settings on the device, so be sure to back up any important information. To perform a factory reset, go to “**Settings**” > “**Device**” > “**Reset**”.

If these steps do not resolve your issue, you may need to contact Oculus support for further assistance.



Competence+ Troubleshooting

There are two main problems or errors that we have encountered. These two issues we were not able to fix and therefore, we would like to let you be aware of them.

"My selected language is not loading!"

There are two main problems or errors that we have encountered. These two issues we were not able to fix and therefore, we would like to let you be aware of them.

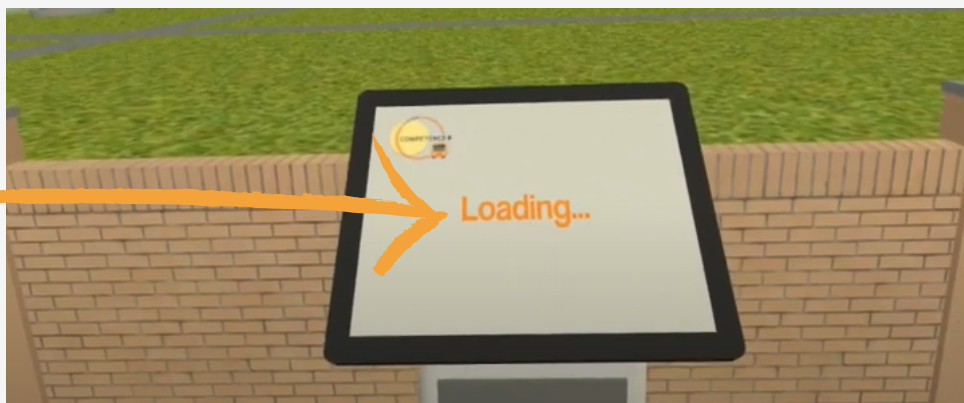


1. Icelandic was selected

You select your language, but the text in the picture is not in your selected language.

2. But text is in English

The text for "loading" are in English (or another language you have not selected).



3. But the options are in English Too!

And the options are in English (another language) as well.

SOLUTION

Give it time!

Eventually, the text will change into your language. The longest we had to wait was 3,5 minutes. You do not need to click on anything. Simply let the system load your language. When it is finished you will see everything in your language too!

Competence+ Troubleshooting

There are two main problems or errors that we have encountered. These two issues we were not able to fix and therefore, we would like to let you be aware of them.

"The chat has disappeared!"

This problem is another one that you can encounter! We were not able to replicate it always and therefore we do not know how to fix it so it will not happen again.

Environmental Awareness and Stress Management can encounter this issue when you click on the chat or if you look away.

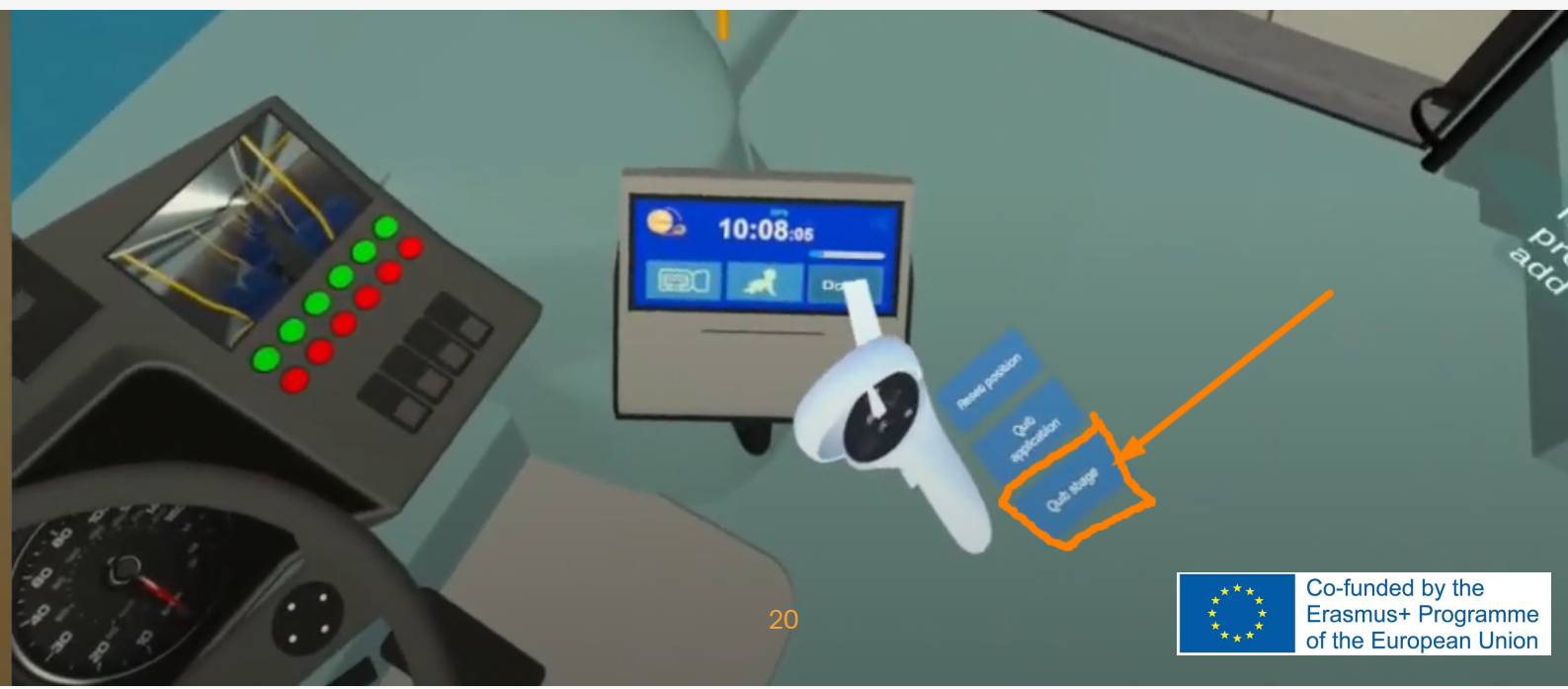
SOLUTION

Restart the Competence+ application

As this is something we are not able to fix at the moment, you can fix this during your class by having your student restart the scenario inside of the Competence+ application.

You do not need to completely turn off your application, but you can simply use your hand menu to go back to the scenario selection and start over.

Simply look at your hand in the VR and find the "Quit stage" option and click on it. This will take you to the language selection option and you can try again.



Competence+



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<https://competencepluselearning.eu/>
@CompetencePlusEU