Lessons learnt from piloting and deploying Virtual Reality applications for career guidance: part 1 NAV

Presentation

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Summary

We have tried out two pilots by using VR apps as part of career guidance of youth being NEETS.

The users of Jobbhuset have told us Virtual Reality (VR) has the potential of being a tool in career guidance alone or together with traditional career guidance. We have experienced and observed that youth with learning disabilities, ADHD, autism and other specter diagnosis give their thumb up for using VR.

They say VR engages youth and helps them to focus and concentrate more than traditional teaching in school. They are active users when they have the VR goggles on and they do tasks in the application.

The NAV counselor is also a breaker to use to open up to talk to youth about employment and start the process of recovery. The youngsters identify themselves as "sick" and we have to engage them into changing their identity into "I can have a future in working life".

A large selection of 'job taste' VR applications could give the youth the chance to explore new job opportunities.

The VR application has potential for improvement. The VR4VET blue sector app is really close as it gets really nice feedback from the users.

How to get our staff to use VR in their work? It is an internal issue for NAV. It takes time to be an expert in the technology and user of the applications. Today the VR comes as an extra task for the NAV counselors. The employer has to give time for using this technology in the daily work with this target group.

Learning objectives

- Learn how to use VR technology to give youngsters another tool to explore different jobs and job tasks.
- Learn how VR technology can help youngsters with learning disabilities and other mental issues in the specter diagnosis to concentrate and focus better.
- Explore why VR applications can be complementary as a tool together with more traditional career guidance.

Introduction

First, I will give you an introduction on how we work and how we use VR applications in our work at Jobbhuset.

You have to understand our target group and our methodology as context for our decisions on this topic.

Jobbhuset is a location and arena outside of the official NAV buildings for youngsters between 18-25 years old. Here we meet the youngsters which need close follow up on the road to employment or education.

NAV Falkenborg office in Trondheim.

Jobbhuset in Trondheim

In 2017 we had a collaboration with NTNU, Department of education and lifelong learning, professor Ragnvald Kvalsund, associate professor Camilla Fikse and Kristin Landrø. They followed us for one month to see what we were doing in our group process. They set our process into career management skills which are important skills to develop for youngsters in the 21 first century working life. It is related to associate professor Hannah Owens Svennungsen in her previous presentation on the DOTS model.

Our assignment

Our assignment is to clarify youth for further activity. We wish to help them back to employment or back into education.

Methodology

We have three different approaches on close follow up on our participants. First is the one where we work together with the youth doing work tasks. Secondly it is our group process over 4 weeks and two days per week. The third approach is by using music, multimedia, sound and lights to offer creative youth the chance to use their hobby to find motivation for work or education.

We have acknowledged good user meetings and new ways to do follow up are important when we focus on work and activity.
We commit young people to take responsibility. We work with their motivation and mastery.
We wish to make opportunities visible for them.

Group process

Our group process lasted 4 weeks. The group has around 12 - 15 participants and 2 NAV employees to guide the group and 2-3 assistants helping in the smaller groups.

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The process ends in each participant creating its own plan for change. The participants worked on reflective questions in smaller groups and here are some examples on questions they reflect on.

- Why are you here today, and what prevents you from being at work or school?
- What are you good at and what can you bring to the group?
- Wishes and dreams for the future?
- What kind of work do you want to know more about, or try out?
- How would you be motivated?
- Do you wish to complete your education?

The first two weeks are all about making the youth feel safe and well being. The second week still focuses on well-being. In the second week, we start to introduce the participants to topics like employment. We use a digital career guidance tool named karriereverktøy. Then we ask them to try out the VR apps on job taste. We try to challenge young people's job aspirations and motivation.

Success criteria

Over the years we have learned that early intervention and the following key points are the success criteria:

- Meeting youth on a different arena
- Group dynamics
- Individual focus
- User interaction in focus – evaluation – improvements – role of assistants
- Dedicated staff who are enjoy working with youths
- Good cooperation with other parties at our venue (the partners come to us)

We do what we know works: good clarification and close follow up!

Piloting

We have done two pilots during autumn. The last one we set up differently from the first one. The improvements were based on the participants' feedback. There was too much passive waiting time during the first pilot.

The second pilot we organized differently as we made the group into three stations. One did traditional career guidance and another one was reflecting and talking about jobs. The last group tried different job taste apps like blue sector app, dentist secretary and drone pilot. The participants then rotate on the stations for 20 minutes each.

In the two pilots we have had 20 participants.

When answering the question "To what extent would you recommend others to use VR in exploring careers and work tasks?", the participants gave 4 on average on the Likert scale from 1-5, where 5 is best.

When answering the question "To what extent did the apps make you more curious about what different professions and educations are available?", the participants gave 3 on average on the Likert scale from 1-5, where 5 is best.

When answering the question "How did you experience the usability of the applications?", the participants gave 3 on average on the Likert scale from 1-5, where 5 is best. Here I wish to mention it is a big gap between

those who tried the VR4VET Blue Sector app and the two other ones. The Blue Sector app received better scores.

When answering the question "To what extent did you learn anything new about the professions you tested out?", the participants answered very differently. They split totally in 50 / 50 as half of them were pleased and answered they learned something new. While the other half said they did not learn anything new from the apps. As I can read which apps they have tried as it was the first question to specify the app they had tried. It shows the difference between the VR4VET Blue Sector app and the other ones in ease of use.

Some quotes from the participants in the pilots

- Great potential to be used in learning situations as a realistic representation of different work tasks.
- Fish factory: Precision (didn't have time to do anything other than gutting fish) good HMS routines, knowledge of fish health, efficiency
- Fun! In the short time I got to try the app, I feel like I learned just as much from a demonstration video + discussion, but for a middle school student, I can imagine that this type of interactivity provides better learning outcomes.
- Educational. Better to see and try instead of reading about professions. More fun to play than to read about it.
- They contained a great deal of detail and educational information that was relevant to the workplace.
- They created an idea of what it might feel like to do the work.
- They created some inspiration for the areas I was interested in by being able to "test" parts of the job. It was fun and well done.
- Sorry, but I can't answer these questions because when I put on the VR glasses I couldn't figure out what to do in the game at all.
- Couldn't imagine working with gutting fish as he is not comfortable with the task.
- Instructions both as text and video when explaining the controls. Important for those with reading difficulties. Option to choose additional directions (arrows on the floor, other indicators of where to go). Refinement of the grab function, it feels clumsy.
- Try technology instead of work. It would have been nice to be able to practise for an hour with the handheld consoles before trying the professional apps. I would have gotten more out of the job than I did.
- The user interface and information presentation could have been improved by making it clear at the start of the experience which movements/controls affect and having the ability to quickly review them while playing.
- Information boxes have a bit too much written text, and could have benefited from diagrams or images to show which actions to use later.
- The task board was a very good idea, but I discovered it on my own and it wasn't explained.
- There was a lack of a tutorial.
- Could have shown the apps on screen first so everyone could see what they are supposed to do. Could have reassured someone who has not tried VR before who would otherwise decline to try VR.
- Poorly explained/instructions in the app. Would have been better with less text and rather explain/exemplify how to perform the task.

What did we in the NAV experience from the pilot?

- No doubt we need to have the same ease of use for all apps in the job taste portfolio.
- We experienced that we could use the Blue Sector app only on one VR glasses at a time since we used the same Facebook account on all three glasses.

- Those participants which have not tried VR previously should be given time to practise and use the handheld consoles first.
- We need to find a way to organize it which is suitable for the group – learning analytics.
- It is a big issue for many of the participants in our group that insecurity and lack of confidence scare them and all new things bring anxiety in these social situations.
- VR has the potential of being a tool in career guidance alone or together with traditional career guidance.
- Youth with learning disabilities, ADHD, Asperger Syndrome, autism, specter diagnosis give their thumb up.
- It engages youth and helps them to focus and concentrate more than traditional teaching in school.
- It is also a breaker to use to open up to talk to youth about employment and start the process.
- A large selection of job taste apps could give the youth the chance to explore new job opportunities.
- Our target group needs more close follow up and support during the VR game.
- VR apps have potential for improvement – the Blue Sector app is close as it gets really nice feedback
- How to get our staff to use VR in their work?