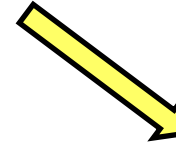
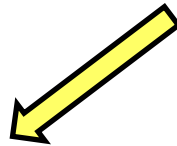


**Relevance of 3D video
observation training tool in
competitive context:
Exploratory research with
volleyball coaches**

Lombard Gilles, Cloes Marc

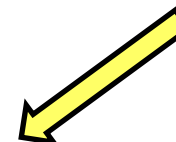
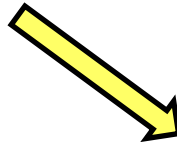
Starting Point

Coaching process



Dynamic activity in a social and changing context (Cushion, 2014)

Multidimensional concept with explicit and implicit parts (Wenger, 1998)



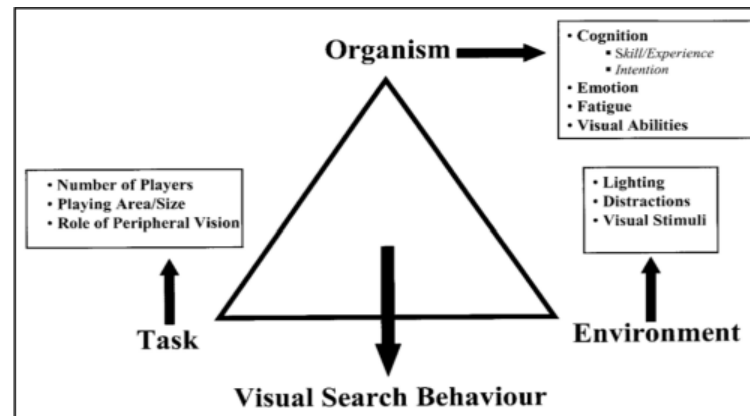
→ Wide concept composed and influenced by a multiple of interconnected dimensions that are sometimes hard to handle

Starting Point

Key point :

Being aware of his/her environment → to be able to make the best decision at the right time !

→ Therefore, the observation of the environment is a really important aspect of the coaching process



Williams et al. (2004)

Starting Point

BUT ...

The observation of the coaches during a competition is very few studied (Lombard, Remacle et al., 2022)

WHY ?

It is an invisible process depending on the environment

➔ Thus, it is really difficult for the researchers to get an access to the information without intervening and modifying the environment.

Methods

The optimal situation would be to put the coach into an environment corresponding to the reality (to preserve the fidelity of the observation) but an environment that would stay unchanging despite the intervention of the researchers.

Methods

The 3D video is a device that could be used to create such a situation !

To create the device, we followed those steps :

- 1) We recorded volleyball games with a 360° camera located near the bench at the place of a coach
- 2) We cut the records to get some 15'-20' sequences
- 3) We immersed the subject of the studies into the game and asked them to use the think aloud protocol (Ericsson & Simon, 1993).

Methods

During the immersion, we were able to code the different observations to collect the data.

This methodology has provided us the way to get an access to the invisible process of observation without modifying the game !

Methods

Let's look some videos to show you how the environment seems real to some coaches...



Recherchez

Applications Mises à jour Liste de souhaits

Accueil

Store

Bibliothèque

Appareils

Paramètres

SKYR
À l'air

Echo
Il y a

Social

Notifications

Pages d'aide

Brass Tactics: Arena

Dead and Buried

Quill

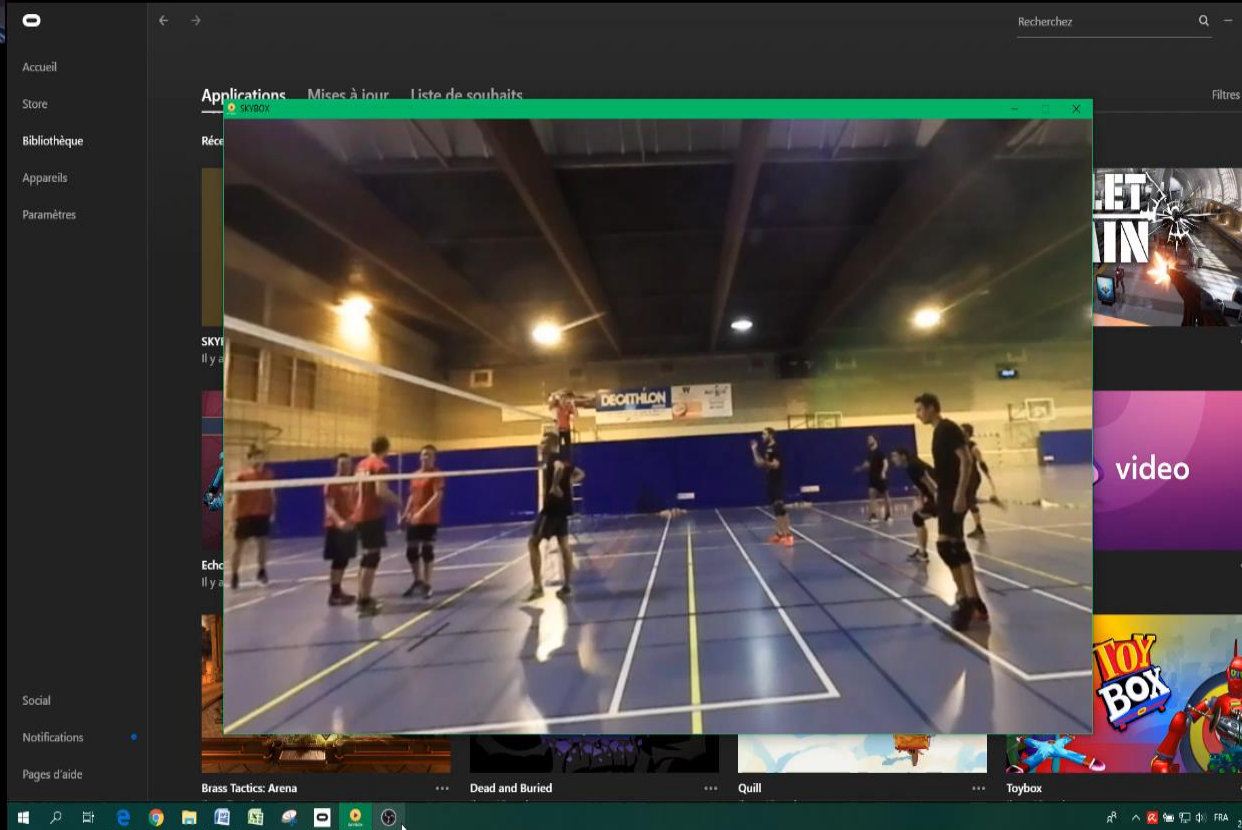
Toybox

video

TOY BOX

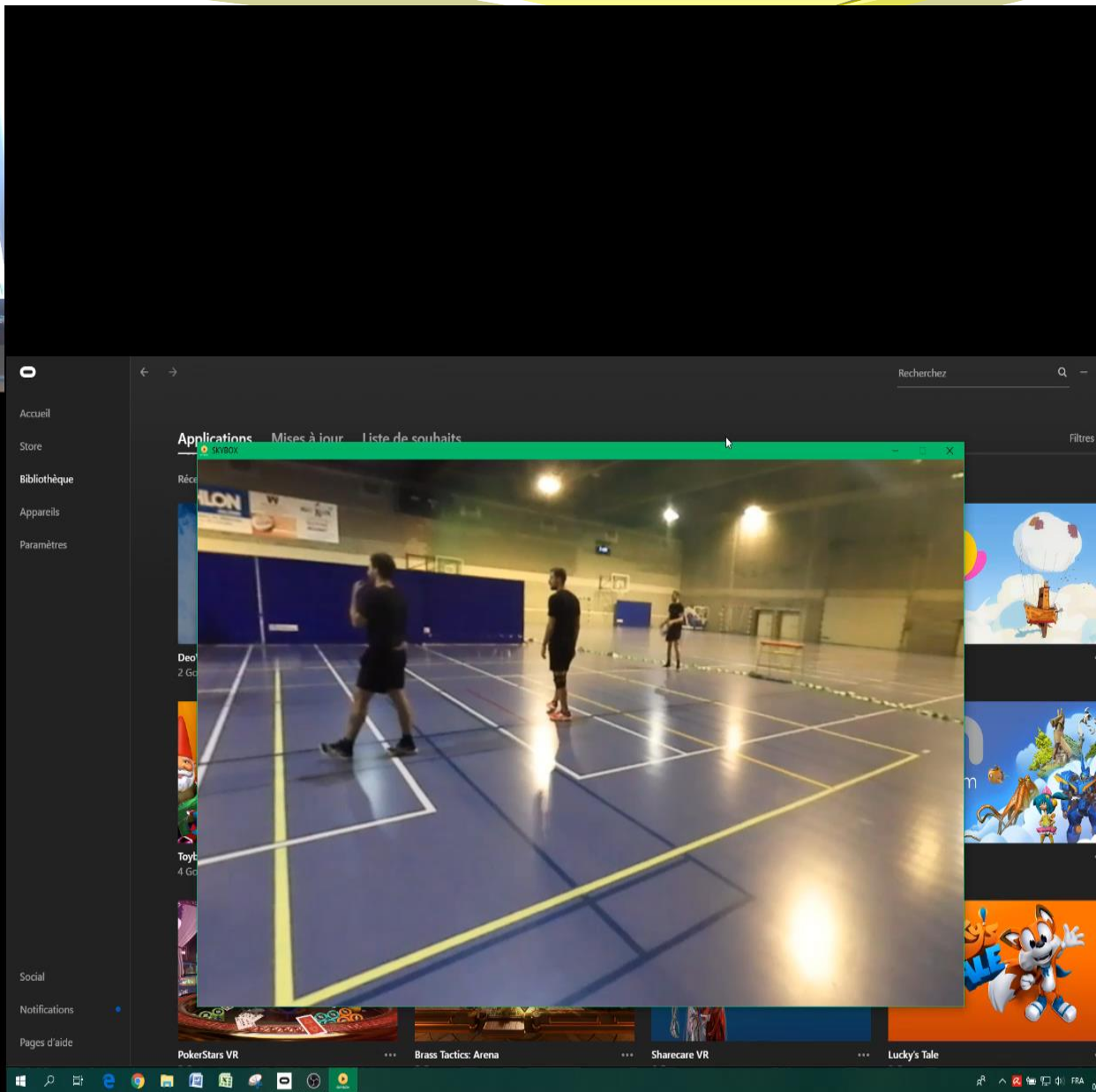


A screenshot of a Windows 10 desktop. The taskbar at the bottom shows several open applications: Brass Tactics: Arena, Dead and Buried, Quill, and Toybox. A video player window is open in the center, displaying a volleyball game in progress. The video player has a green title bar and standard window controls. To the left of the video player is the Windows Start menu, showing options like Accueil, Store, Bibliothèque, Appareils, Paramètres, Social, Notifications, and Pages d'aide. On the right side of the desktop, there are several promotional tiles, including one for 'video' and another for 'Toy Box' featuring a character from the game. The desktop background is dark, and the overall interface is in French.





A screenshot of a Windows 10 desktop. The desktop background is dark. On the left is the Start menu with icons for Accueil, Store, Bibliothèque, Appareils, Paramètres, Social, Notifications, and Pages d'aide. In the center, a video player window titled "Applications" is open, showing a volleyball game. The video player has a green title bar and a search bar at the top right. Below the video player, there are several application thumbnails: "Brass Tactics: Arena", "Dead and Buried", "Quill", and "Toybox". The taskbar at the bottom shows the Start button, search icon, and several pinned application icons. The system tray on the right shows the date and time as "FRA".



First results

We have been able to do a few studies with this methodology and with coaches of different levels :

- 1) The coaches seem to look their own team more than 80% of the time (Lombard, Dejong et al., 2022)
- 2) The more experienced coaches seem to more often decentre their eyes of the ball (Lombard, Dejong et al., 2022)
- 3) The coaches of the women seem to look more at the defense and less at the block than the men's coaches. (Lombard, Dejong et al., 2022)
- 4) Few coaches transmitted all the observations considered as the most important to their players during the timeouts (Lombard & Cloes, 2021)
- 5) The majority of the studied coaches want to modify their observation strategy during the future games after being informed of the elements that they were looking at during the game (Lombard, Kune et al., 2022)

Perspectives

Comparison between beginners and experts coaches :
By comparing the observations of the experts and beginners coaches in a same game context, we would be able to create theory that could help a lot of volleyball coaches in the world.

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