Immersion into a 360° video device to stimulate coaches' self-evaluation on their observation

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Literature

Ecological paradigm (Araujo et al., 2006)

Situation Awareness Theory (Endsley, 1995)

→ Environment perception = Crucial for the performance

Model of visual attention in sport (Williams et al, 2004)

→ Study in a close to reality context

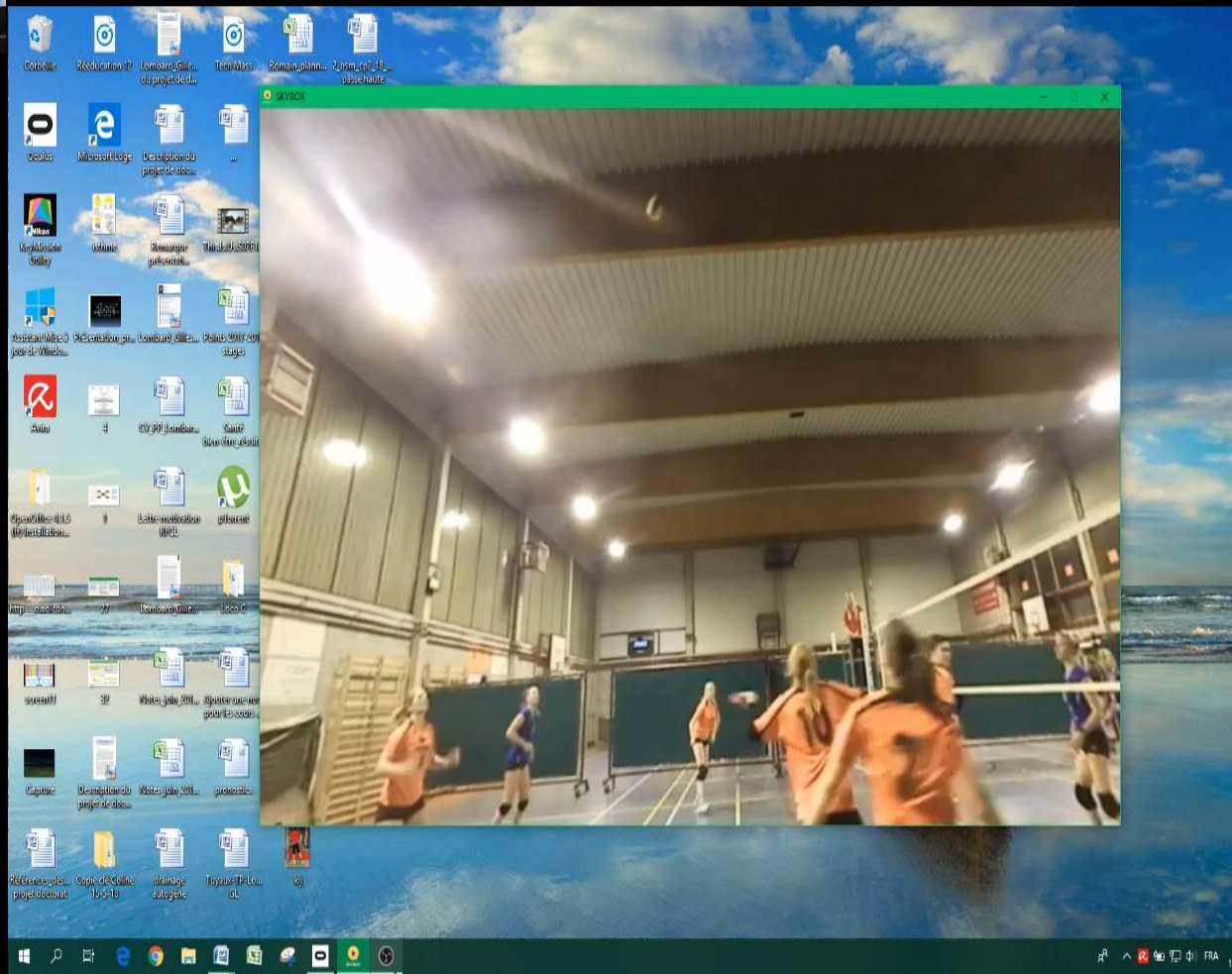
Literature

- Scoping review
  - Aim : Exploring the literature focusing on the observation by sport actors in official sport competition context
  - Methods : Arksey et O'Malley (2005)
  - Results :
    - Eye tracker (96,6%)
    - « VR » (3,3%)
    - Coaches (8,3%)

Aim : To study the impact of a 360° video device on volleyball coaches' awareness of their observations during a competitive situation

Methods

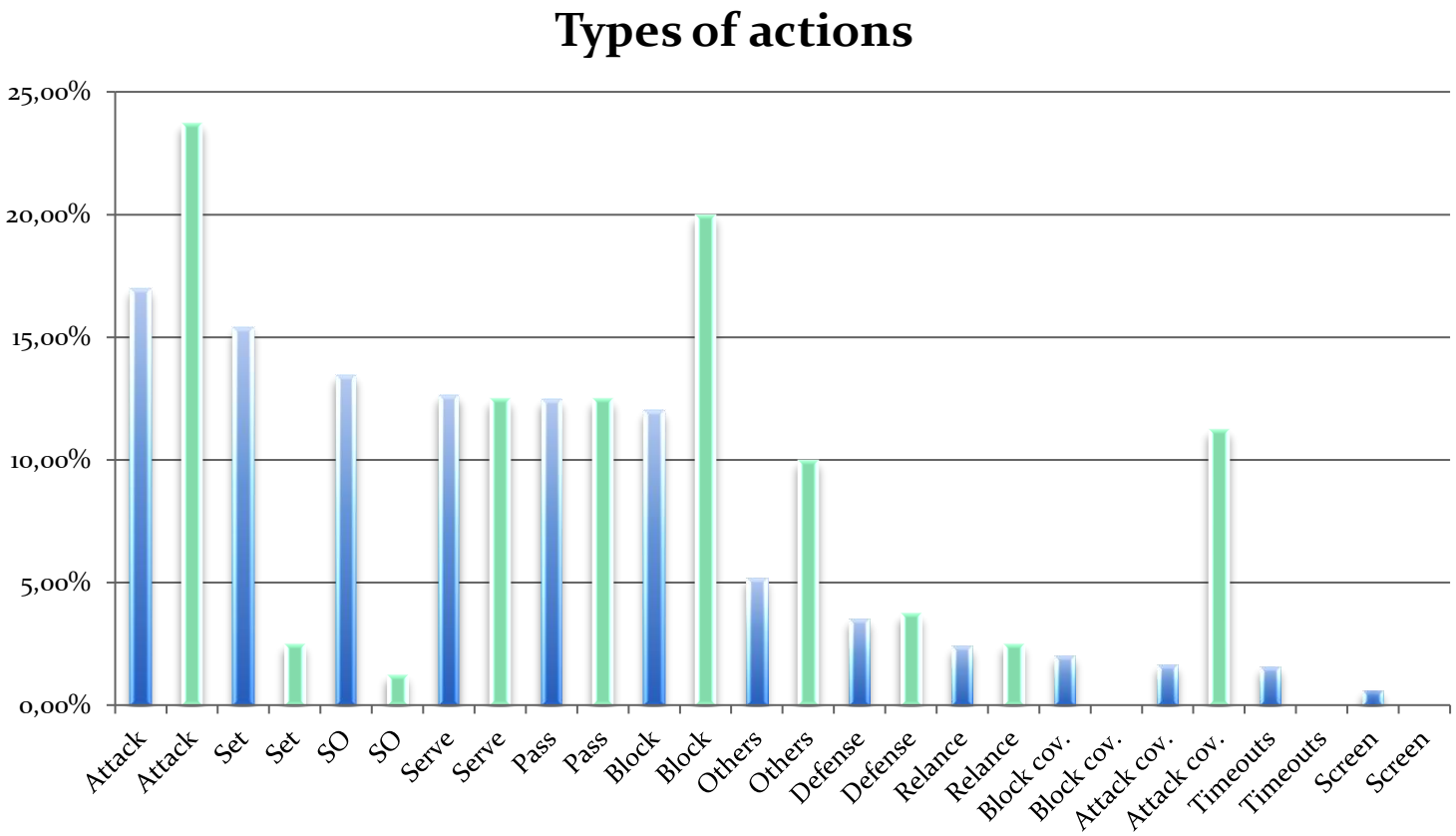
- 360° video device (Lombard et al., 2022)
  - Two game simulations
  - 360° camera near the bench (1.75 m of the side line)
  - 15-20 minutes sequences
  - Think aloud protocol


SKYBOX

Methods

- Qualitative experimental design
- 7 coaches
- 3 steps
  - 360° immersion with coding by researchers → Report
  - Stimulated recall
  - Final interview

Methods


Types of actions
25,00%
20,00%
15,00%
10,00%
5,00%
0,00%
Attack
Attack
Set
Set
SO
SO
Serve
Serve
Pass
Pass
Block
Block
Others
Others
Defense
Defense
Relance
Relance
Block cov.
Block cov.
Attack cov.
Attack cov.
Timeouts
Timeouts
Screen
Screen

Methods

	Aces (2)	1 block attack (8)	No block attack (2)	First serve (2)	Bad pass (5)
Number (sample)	1,55	2,77	0,44	0,77	3,44
Percentage (sample)	77,50%	34,63%	22,00%	38,50%	68,80%
Number (subject)	2	1	0	1	4
Percentage (subject)	100,00%	12,50%	0,00%	50,00%	80,00%

Results

- Awareness
  - 3 subjects were suprised and wanted to modify at least one element of their observation strategy
  - 3 subjects were not suprised but pointed out their will to modify at least one element of their observation strategy
  - 1 subject was not surprised and did not want to modify his/her strategy

Results

- Awareness

  « Now I know that I have to look at the entire team and really have to try to observe every players »

  « I will be more focus on the opponent team, it will clearly have an impact on me »

  « I look at many more elements than before. Now I have to find the perfect balance to avoid neglecting the others »

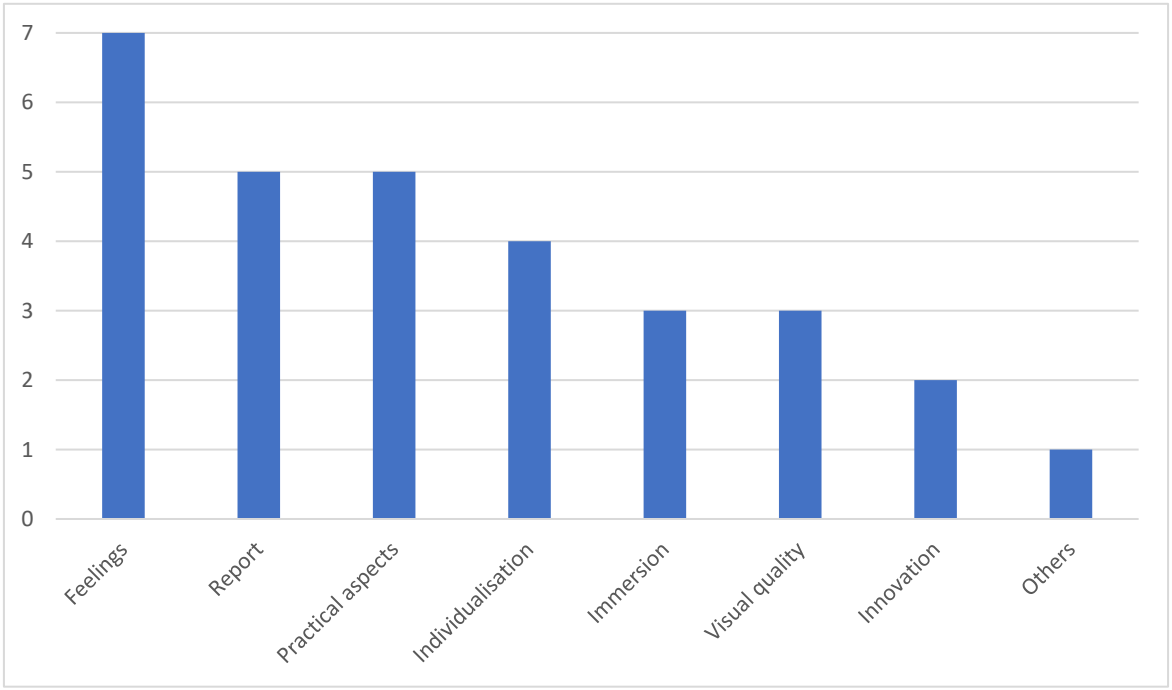
Results

- Awareness

  « Maybe I have to look more at my team because we confirmed that I was more attracted by the other team »

Results

- Positive points



Results

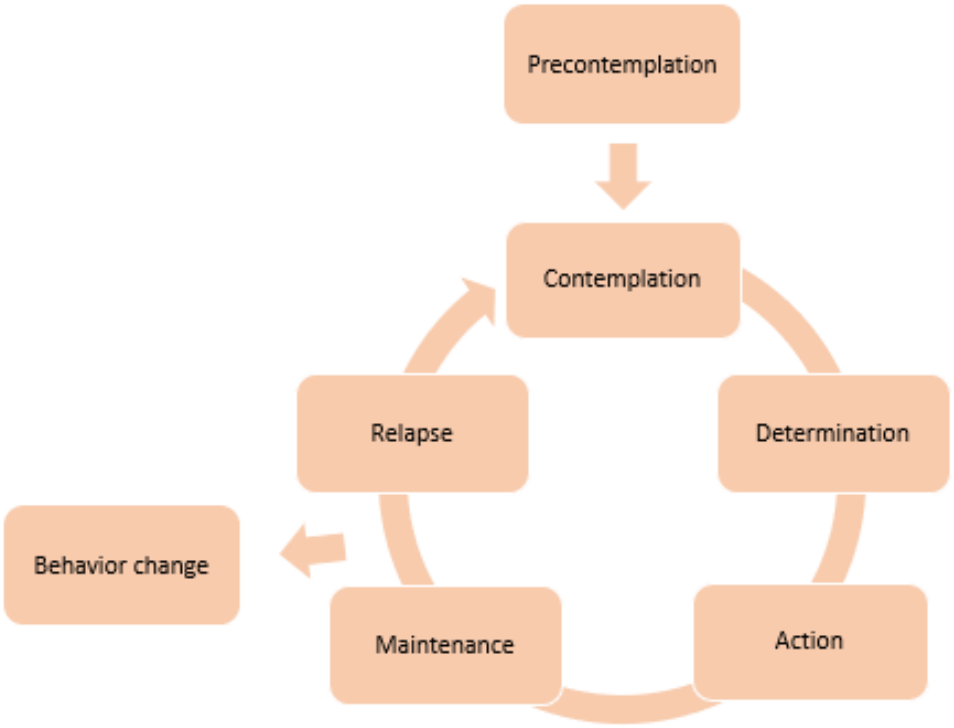
- Editable aspects
  - Longer experience
  - Level of the games
  - Lack of interaction

Discussion

- The coaches seem to have a bad perception of their practice (Millar et al., 2011 ; Partington & Cushion, 2013)

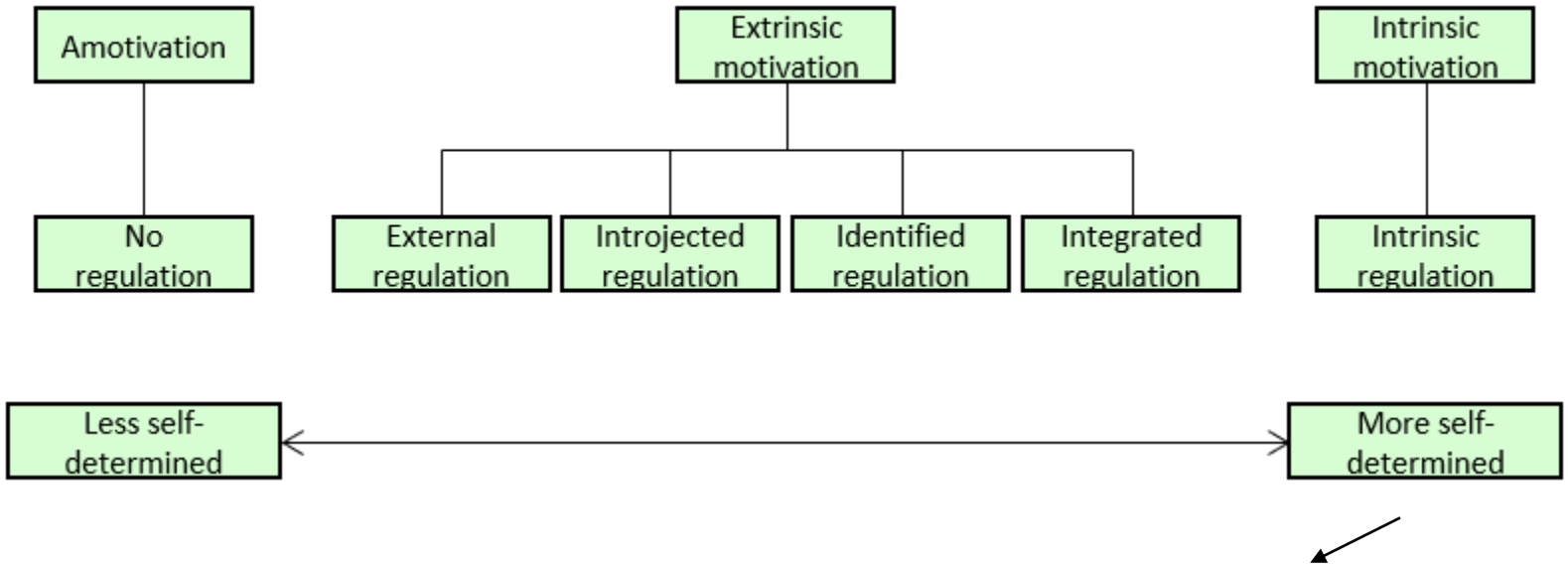
Discussion

➔ Transtheoretical model of behavior change (Prochaska & DiClemente, 1983)



Discussion

➔ Self-determination theory (Ryan & Deci, 2000)



- Autonomy
- Sense of competence
- Social inclusion

Perspectives

- Continue to recolt and educate coaches on the field
  - More individual experiences
  - Longer education
- Mix the protocol with others to explore the implicit aspects and the decison-making process

Thank you for your attention

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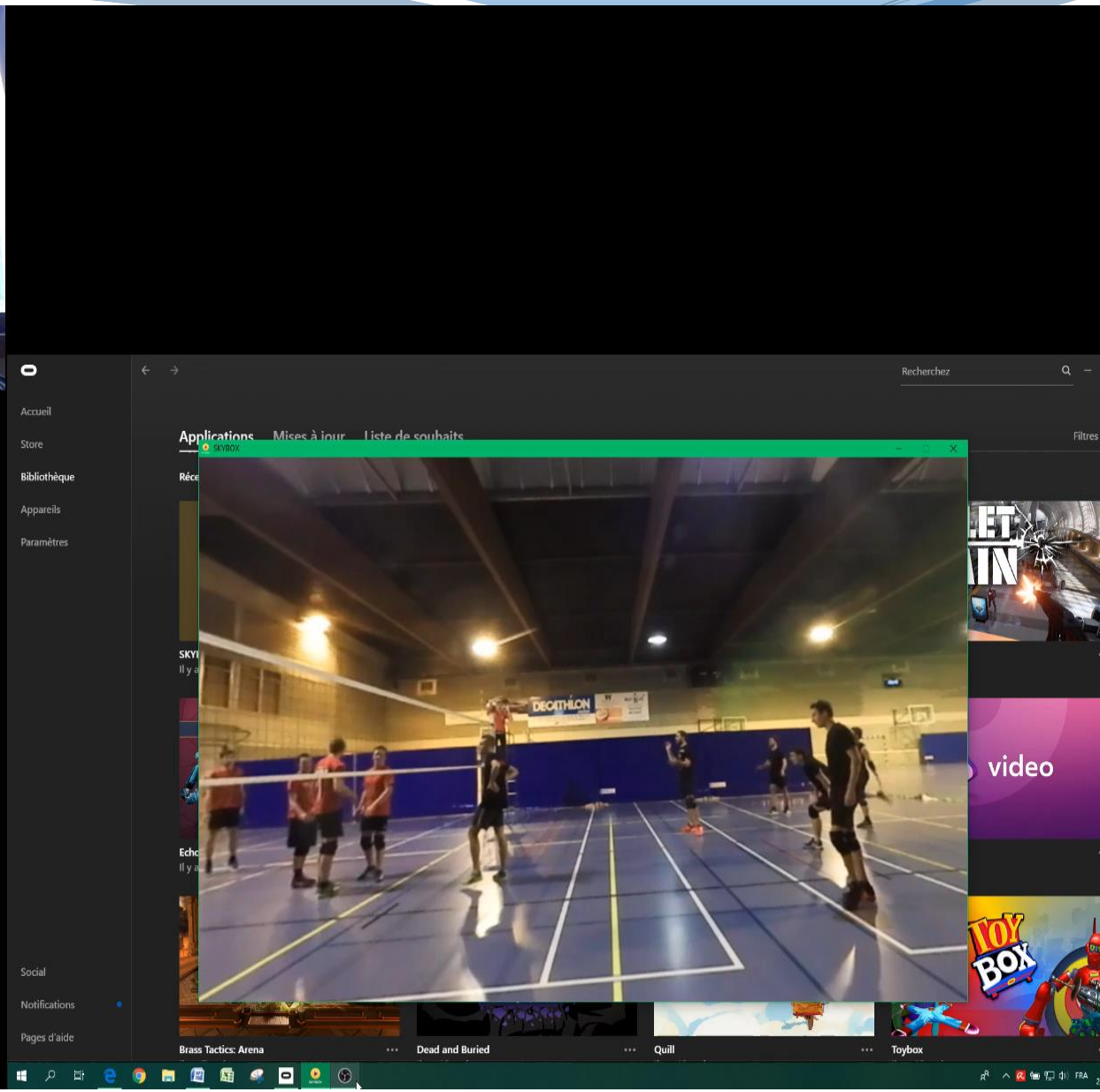
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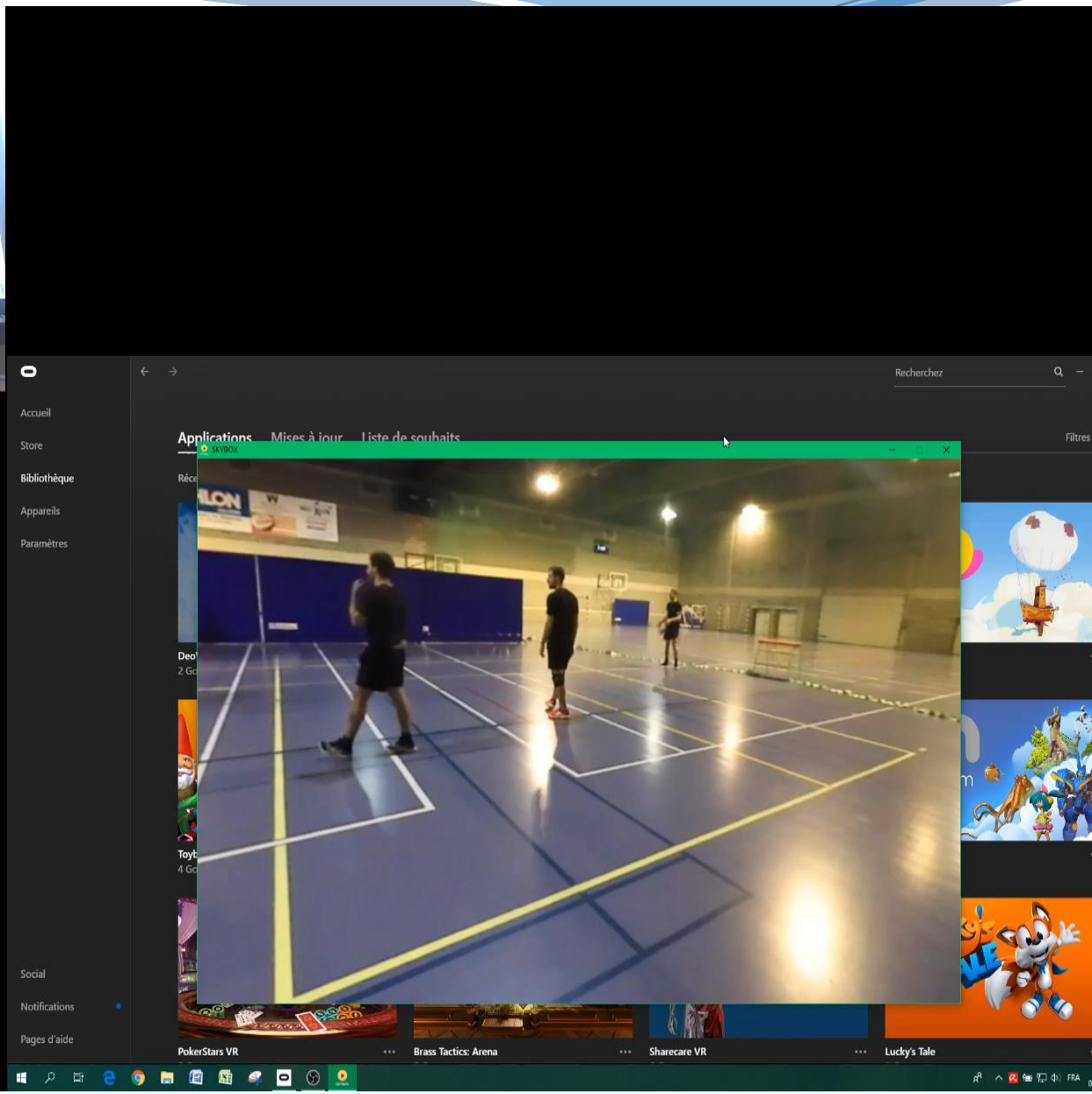
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