

Exergames effects on situational interest and physical activity of high school students: a pilot program in Physical Education

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JULES LESVEN

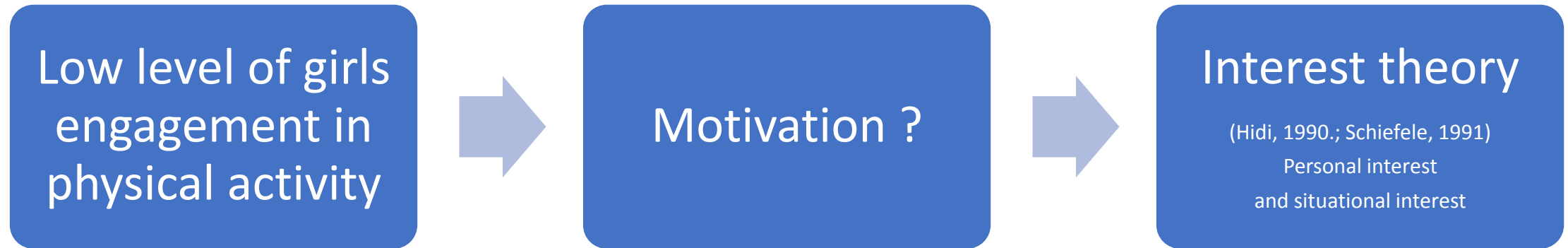
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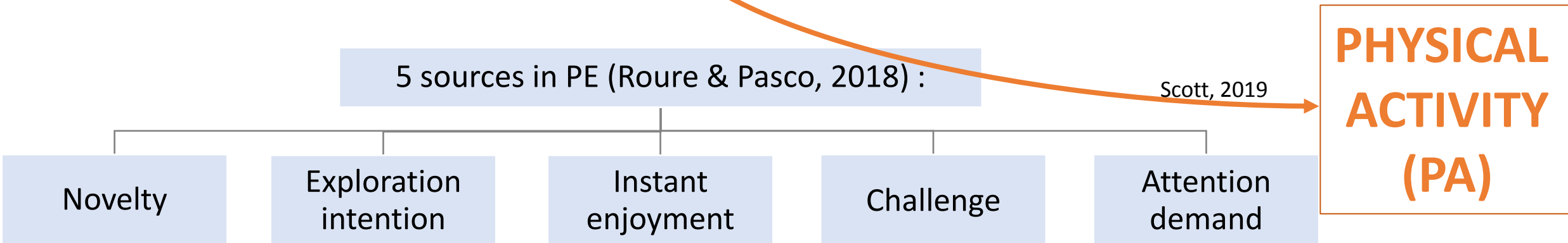
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Introduction – Situational interest, arousing engagement



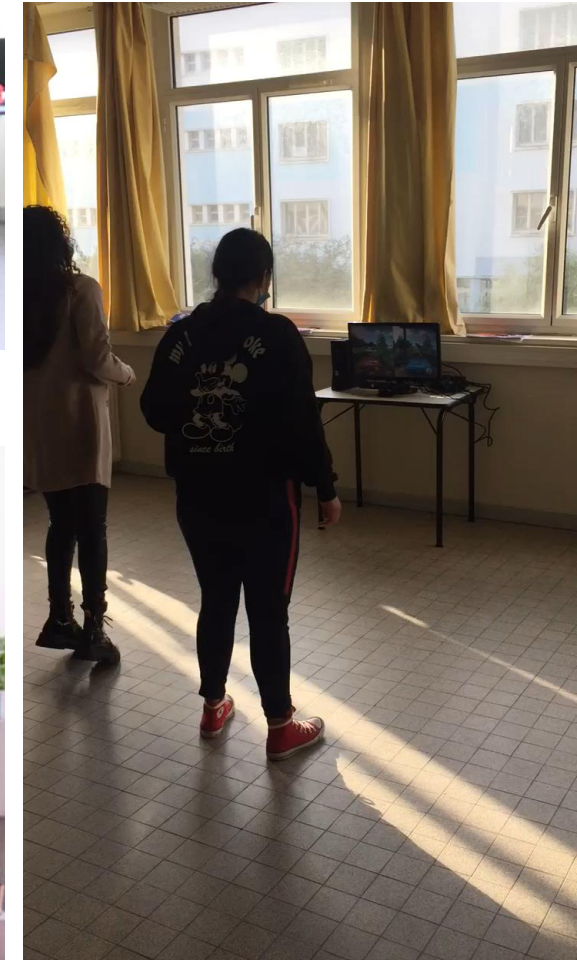
Theory of **situational interest (SI)** (Chen & Darst, 2001)
= Total interest + SI sources



Introduction – Exergames, SI et PA

- Exergames : active video games
- Increased SI ?
- Increased PA ?
- Conception of a PE program, based on Exergames (Kinect, Ring Fit, connected ergocycles), AND interest theory

Dynamics of SI and PA in 5 weeks



(Pearson et al., 2015)

Method – Participants and measures

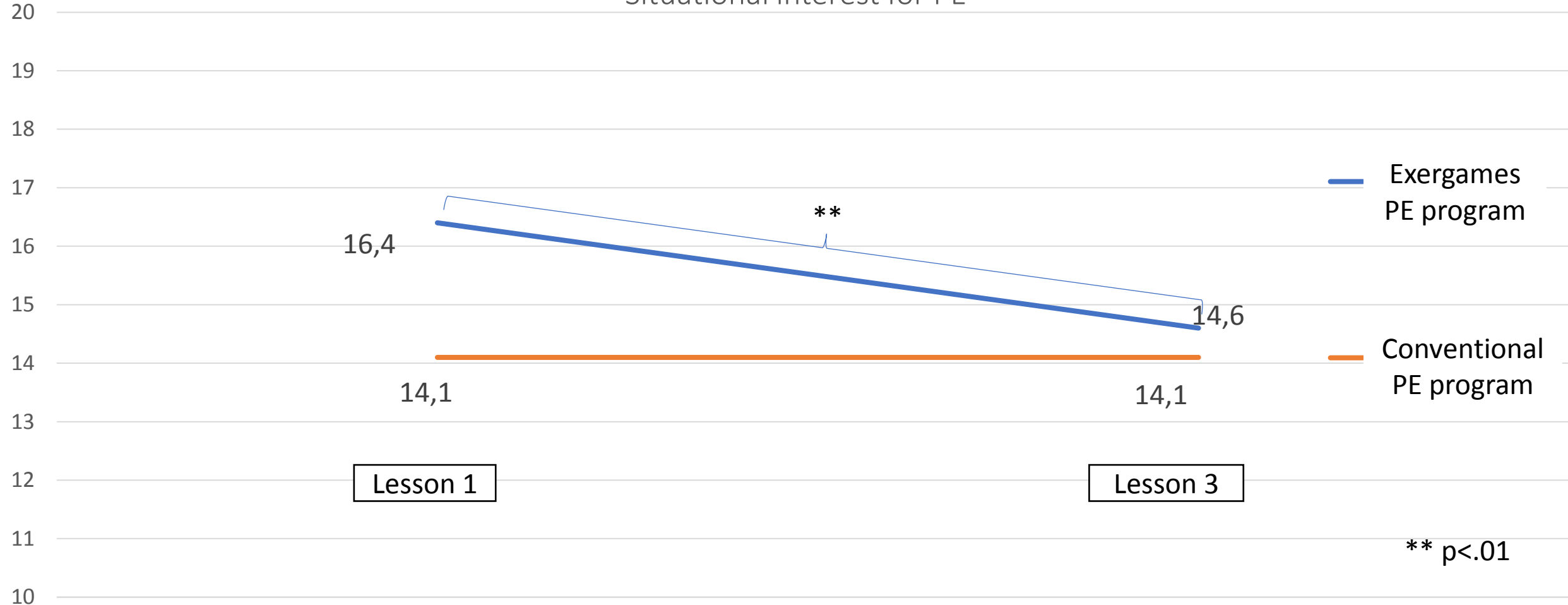
- 47 participants:
 - 45 students ($M_{\text{age}} = 15,205$ ans, $SD = 3,122$) from 2 high schools, set up with exergames, Brest, France
 - 2 teachers
- Measures
 - Situational interest: SI scale (15 items) and total interest scale (4 items) (Roure, Kermarrec & Pasco, 2016). Week 1/3/(5)
 - Physical activity: MVPA data by accelerometers, worn on the ankle
Week 1/2/3/4/(5)

Compared with data from conventional PE studies

(Sun et al., 2012 ; De Vries et al., 2011)

Results – Situational Interest

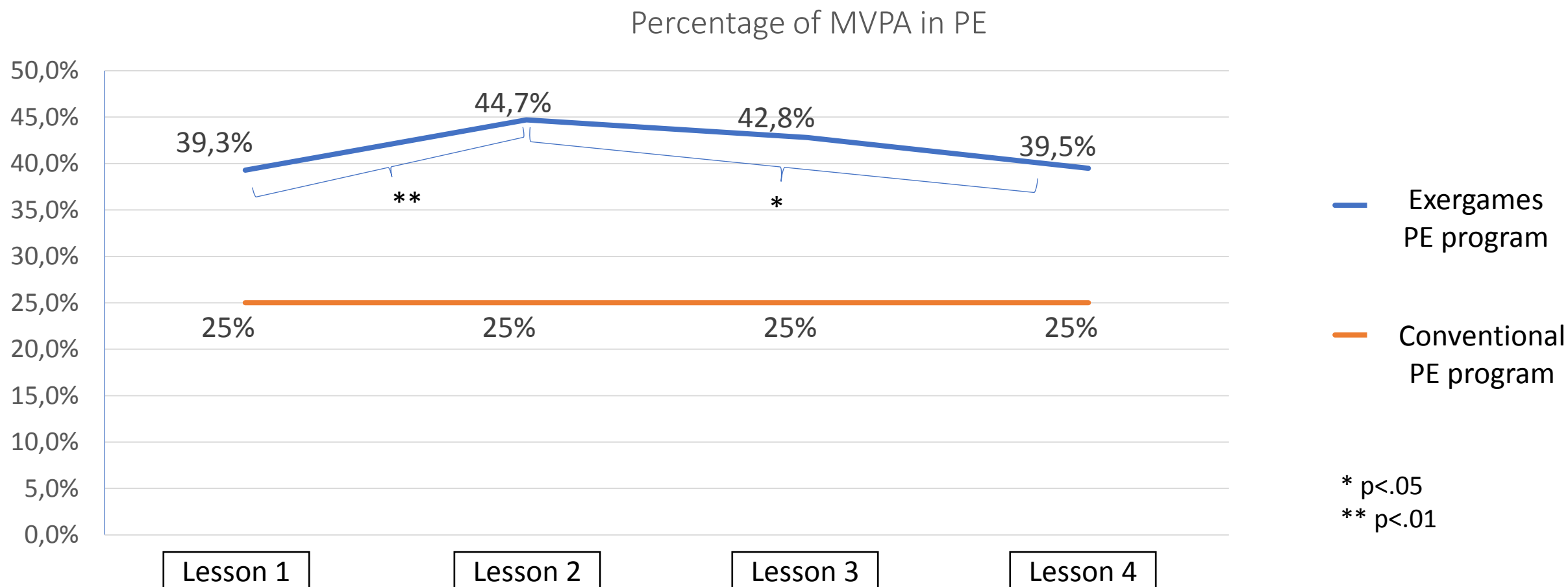
Situational interest for PE



SI decrease from lesson 1 (M=16.379; SD=3.401) to 3 (M=14.550; SD=5.559) $t(26)=3.229$, $p<.01$, Cohen's $d = 0,621$.

JASP

Results – Physical activity



MVPA increases between 1st lesson (M=39.326; SD=9.259) and 2nd lesson (M=44.683; SD=11.479; $t(23)=-3.678$, $p < .01$, Cohen's $d=-0.751$) and decreases between second and fourth lesson (M=39.497; SD=11.763; $t(20)=2.155$; $p < .05$, Cohen's $d=0.470$).

Discussion

- In accordance with the literature: SI decreases, but PA increases.
→ Novelty ?
- Exergames PE > Conventional PE.
- Which results in a full program ?
- No visibility in the real dynamic... SI and PA

(Sun et al, 2012; Brusseau et Burns, 2015)

Perspectives

Co-conception of a PE program of 10 weeks

PE Teachers
Focus groups
www.reveneps.com

PE Exergames Program

INSTANT ENJOYMENT

NOVELTY

CHALLENGE

CHALLENGE

EXPLORATION INTENTION

ATTENTION
DEMAND

NOVELTY

S1

S2

S3

S4

S5

S6

S7

S8

S9

S10

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PE Exergames Program

Raise of Personal interest ?

Links between PA (in PE)
and health (daily)

Pre-test and post-test

?

Thank you for your attention.
Do you have any questions ?

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