



Session 713

**The Quantified Learner:
Using Wearables to Enhance
Training**

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winston wolfe

Innovative hr solutions



#DevLearn

So, I'm from Belgium...





Seriously, who are you?



No, we want the gaming version!



Cool, let's talk about wearables!

wearable

/'wɛ:rəb(ə)l/

a computer or other electronic **device that is
small or light enough to be worn or carried **on**
one's body**

We gonna talk about

different types

use cases

my experience

your experience

We gonna talk about

different types

use cases

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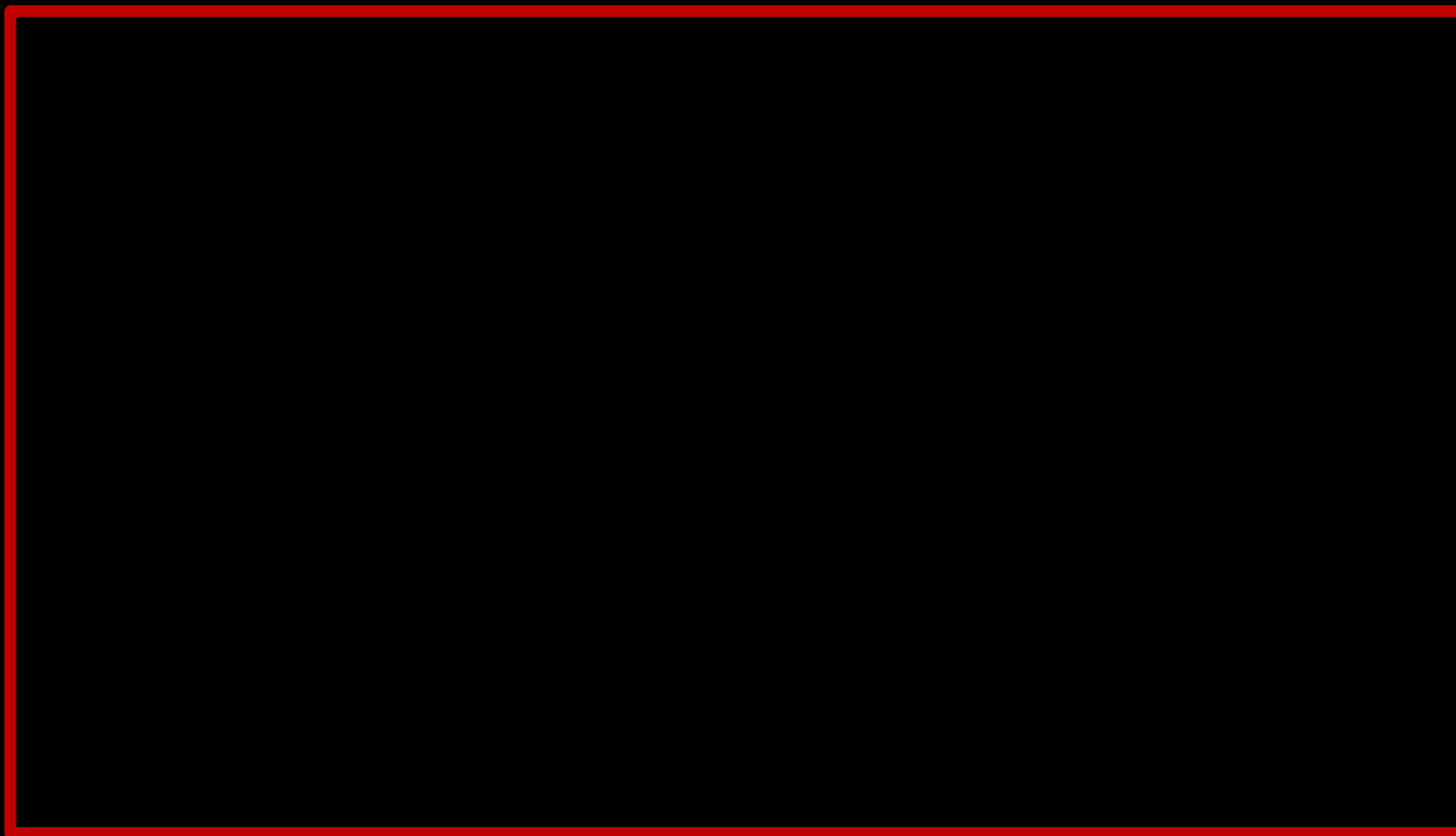
your experience

I. Life has changed! No?

1. Life

**My children will grow up in a totally
different world**

1. Life



“A magazine is an iPad that doesn’t work”

1. Life

If we may believe the gurus,
we live in a **VUCA** world

o n o m
l c m b
a e p i
t r l g
i t e u
l a x e
e i
n

1. Life

Look on the **bright side...**

1. Life

We'll meet **Marty McFly**
in a couple of weeks



1. Life

**We don't need
that much
luggage on
holiday**



1. Life



**We no longer have to
drink to save up for a
cellphone**

1. Life

Yeah!

1. Life

However, on the other side...

1. Life



**Concert
experiences
changed**

1. Life

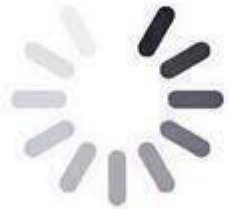
**Sometimes,
we feel **old**...
Really old...**

Our children will never know
the link between the two



1. Life

3 WORST THINGS THAT COULD HAPPEN



**And according
to my wife,
I tend to suffer
from
Nomophobia!**

1. Life

**Just keep in mind:
it's all changing **very fast** and
technology has **a huge impact****

2. And then we leave for work

2. Work

But **what is work?**

2. Work

**“That brief period during the day
where I have to use **old** technology”**

Peter Hinssen

2. Work



2. Work

“Denial is not a river in Egypt”

Gerd Leonhard

2. Work

We still party like in 1999

2. Work

We still **work like in 1999**

2. Work

We still **learn like in 1999**

3. What's the **problem?**

3. Problem

10% of working Flemish people
suffer from **burn-out** symptoms

3. Problem

Up to 25% suffer from negative emotions, psychological complaints,

...

3. Problem

What are **we doing about it?**

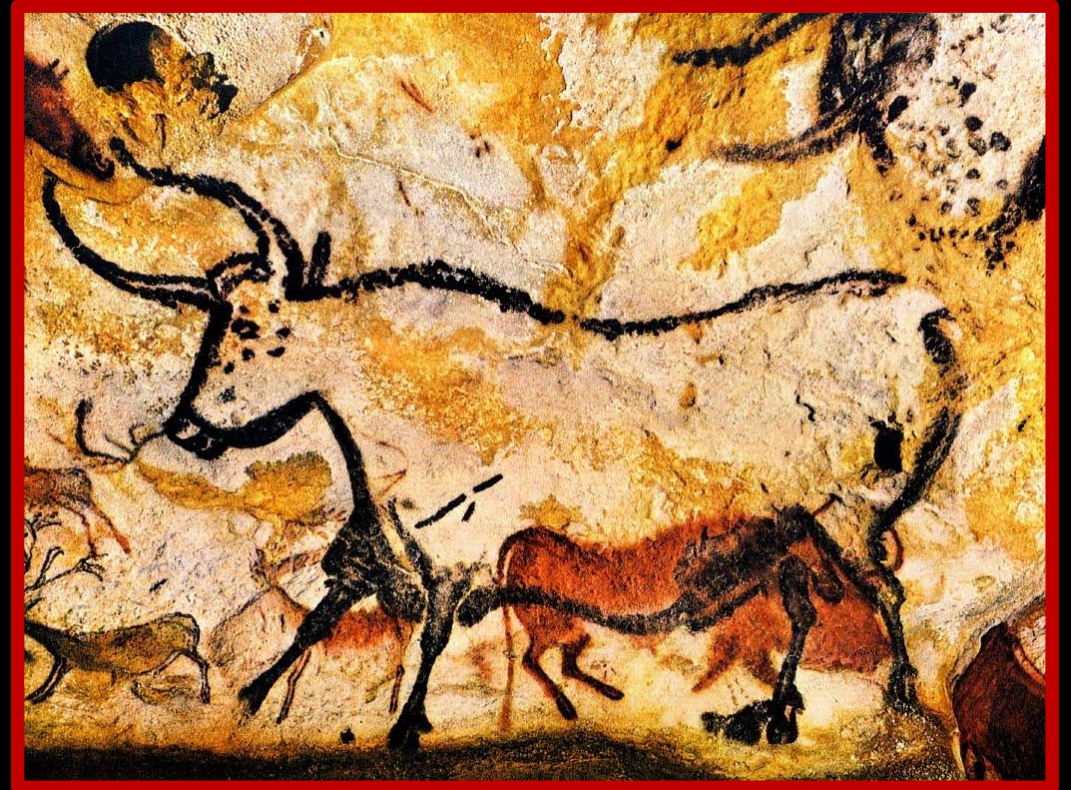
3. Problem

$\Delta x = x_f - x_i$ $\Delta v = v_f - v_i$ $v = \sqrt{v_x^2 + v_y^2}$ $\theta = \tan^{-1}(\frac{v_y}{v_x})$ $\omega = \frac{\Delta\theta}{\Delta t}$ $\alpha = \frac{\Delta\omega}{\Delta t}$
 $\bar{v} = \frac{\Delta \vec{r}}{\Delta t}$ $\bar{a} = \frac{\Delta \vec{v}}{\Delta t}$ $v_x = v \cos(\theta)$ $x = r\theta$ $\omega = 2\pi f$ $f = \frac{1}{T}$
 $v = v_0 + at$ $x = x_0 + v_0 t + \frac{at^2}{2}$ $x \rightarrow x,y$ $x_n \rightarrow x_n, y_n$ $v = \omega r$ $a = \alpha r$ $\omega = \omega_0 + \alpha t$
 $v^2 - v_0^2 = 2a(x - x_0)$ $v \rightarrow v_x, v_y$ $v_n \rightarrow v_{nx}, v_{ny}$ $I = \sum_i m_i r_i^2$ $\theta = \theta_0 + \omega_0 t + \frac{1}{2} \alpha t^2$
 $\bar{v} = \frac{v_f + v_i}{2}$ $\Delta x = \bar{v} \Delta t$ $a \rightarrow a_x, a_y$ $a = \sqrt{\frac{T}{\rho}}$ $\omega^2 - \omega_0^2 = 2\alpha(\theta - \theta_0)$
 $\vec{F}_{tot} = m \vec{a}$ μN $a = \frac{v^2}{R}$ $v = \lambda f$ $L = r_1 p = mvr_1$ $\tau = r_1 F = rF_1$
 $W = F d_{\parallel} = F_{\parallel} d$ $E = K + U$ $\Delta Q = (\text{quant.}) C_{\text{const.}} \Delta T$ $\Delta S \geq 0$ $L = I\omega$ $\tau = \frac{\Delta L}{\Delta t}$ $\tau = I\alpha$
 $W_{\text{ext}} = \Delta(KE)$ $E_i = E_f$ $\Delta Q_{\text{inb}} = \Delta W_{\text{by}} + \Delta E$ $\Delta Q = 1 \Delta(\text{quant.})$ $PV = nRT$
 $\Delta U = -W_{\text{if}}$ $\frac{1}{2} mv^2$ $\frac{RT}{2} |_{\text{deg. freedom}}$ $C_p = C_v + R$ $e = \frac{\Delta W}{\Delta Q}$ $e = 1 - \frac{T_L}{T_H}$ $P = \frac{F}{A}$
 $\frac{1}{2} kx^2$ $\omega = \sqrt{\frac{k}{m}}$ $x = A \cos(\omega t)$ {or} $A \sin(\omega t)$ $M = \rho V$ $P_1 = P_2$
 $p = m v$ $v = A\omega \sin(\omega t)$ {or} $A\omega \cos(\omega t)$ $\Delta P = \rho g \Delta h$
 $\vec{P}_{\text{int}} = \vec{P}_{\text{ext}}$ $a = A\omega^2 \cos(\omega t)$ {or} $-A\omega^2 \sin(\omega t)$ $B = \rho_{\text{liq}} V_{\text{disp}} g$
 $\left(\sum_j m_j \vec{v}_j \right)_{\text{int}} = \left(\sum_j m_j \vec{v}_j \right)_{\text{ext}}$ $M_e = 5.97(10)^{24} \text{ Kg}$ $\frac{GM_e}{R_e} = gR_e$ $\frac{GMm}{r^2}$ $A_1 v_1 = A_2 v_2$
 $R_e = 6.37(10)^6 \text{ m}$ $\frac{GMm}{r}$ $P + \frac{1}{2} \rho v^2 = \text{const.}$
 $G = 6.67(10)^{-11} \text{ N m}^2/\text{Kg}^2$

Organisations are still looking for the **secret** formula of L&D

3. Problem

**It's about training not
being **the default
solution** anymore**



3. Problem

**To support performance, we need to
think **outside the box****

3. Problem

**Learning is not
a nine-to-five 'thing'...**

Our support is.

3. Problem

**How can we support people in
a way it improves their personal and
professional performance?**

4. Thank you, wearables

4. Wearables

How many wearables do you have?

4. Wearables



Fitbit



Spire



Doppel

4. Wearables

**They give 'insights' &
you get to know yourself**

4. Wearables

How do **we** use it?

4. Wearables

tension

focus

FitBit is about **sleep**

Spire

Doppel

4. Wearables

FitBit

tension

Spire is about **focus**

Doppel

sleep

4. Wearables

FitBit

Spire

Doppel is about **tension**

focus

sleap

4. Wearables

How could *you* use it?

5. Time for the Emotiv!

5. Emotiv



Optimize your brain fitness and performance

5. Emotiv

execute mental commands
recognize expressions

An Emotiv can

visualise emotions

5. Emotiv



Interest Engagement Stress

Relaxation Excitement Long-term Excitement

Display Length : 300 seconds

5. Emotiv

An Emotiv can

execute mental commands

recognize expressions

visualise emotions

5. Emotiv

An Emotiv can

execute mental commands

recognize expressions

visualise emotions

5. Emotiv

How could **we use it in L&D?**

5. Emotiv

We could use it for

games

live ILT sessions

testing

5. Emotiv

We could use it for

games

live ILT sessions

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5. Emotiv

We could use it for

games

live ILT sessions

testing

5. Emotiv

Any other ideas?

5. Emotiv





“The art and science of asking **questions is the source of all knowledge.”**

Thomas Berger

Thank
you

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