Digitalizing social practices

The 15th Nordic conference on basic literacy for adult immigrants.

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Overview of presentation:

A bit of context – who am I and why did I end up as a language game developer?

The theoretical starting point – what do we know that tells us this might work?

The empirical foundation – what did I want to put in the game, and why?

Presentation of the game

Effect monitoring – method and results
Who am I and how did I end up as a game developer?

I have a cultural rather than a linguistic approach to language and language learning.

I have carried out interactional research on second language learning and speaking contexts for 20 years.

My overall research interest and motivation are processes of inclusion, exclusion and marginalization.

I have always carried out research in collaboration with practitioners and external partners (language schools, companies, ministries, interest organisations).

I used to be a gamer myself and learned my basic English through playing adventure games.
The theoretical starting point – what do we know that tells us this might work?

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<td>An interaction approach to SLA (Firth &amp; Wagner, 1997; Wagner, 1996; Gardner &amp; Wagner, 2004) – A starting point in authentic interactions</td>
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<td>Affordance og investment (Van Lier 2000)</td>
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<td>Language learning and the physical materiality (Kraft 2019, Svennevig 2017, Ratia 2019, Tranekjær 2020)</td>
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<td>Language learning ‘in the wild’ (Wagner, 2018; Eskildsen, 2018)</td>
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Language learning at work does not happen by itself – it requires language use, interaction and scaffolding (Strömmer 2016, Suni & Tammelin-Laine, 2020, Bramm & Kirilova 2019, Bramm 2020)

Three myths:

1. Migrants learn language automatically through employment

2. Manual labor jobs require and involve no language at all

3. Language teaching classes IN the workplace are better or different than at the language school
Knowledge about motivation that motivated me

• Motivation for language learning increases when Professional training is combined with language training (Strömmer, 2017)

• Recognition is a prerequisite for motivation (Söderlundh & Keevallik 2022, Kraft 2019)

• The opportunity for translanguaging increases motivation

• Language learning has to make sense as part of life trajectory and situation (Pedersen 2021, 2022)
What do we know about Computer Assister Language Learning (CALL)?

Digital language resources work because they secure motivation and investment, they are problem oriented, flexible and contextually relevant for the user (Garrett, 2009; Levy, 2009).

Available games for language learning: Croquelandia (Sykes, Oskoz, Thorne, 2008), ZON (Lai, Ni, & Zhao, 2013) → not workplace oriented!

Available learning platforms for health care, cleaning etc. → Not gamebased, not language learning oriented, not aimed at beginners or learners with little schooling.
The potential of the authentic language learning environment (the workplace) can only be fulfilled in combination with planned language activities and support.
Different language learners are motivated differently

• Level of schooling and literacy

• Work situation and life situation

• Psychological and emotional barriers

• Learning styles and preferences (some prefer books, some prefer exercises, some are creative, some are digitally interested and/or adept)
A digital learning game is useful for some – as a starting point, a supplement or an alternative to ordinary language teaching.
The empirical foundation

What did I want to put into the game, and why?
What is ‘spild’ (waste)? –

90 i må meget meget gerne komme med nogle gode ideer eller
91 forslag til (.) hvad vi sku gøre og hvad vi ku rykke
92 og også (.) kommer spild måske også lidt ind

93 ((TL looks to agenda and points to word ))
94 EM1: hva (?? ?? )
95 PPP: (0.6)
96 TL: spild det er hvis du gør noget der ikke er nødvendigt
97 PPP: (0.9)
98 TL: hvis du for eksempel skal have en pose m- med strømper

99 ((TL points in front of herself))
100 PPP: (0.4)
101 TL: så du hele tiden skal flytte de der vogne der står [foran]

102 ((TL makes moving motion))
103 EM2: [åh ja]
104 TL: i [stedet] for at du bare kunne gå hen og tage [dem]
105 EM2: [ja ] [meget godt]
106 TL: altså det (.) det er så nogen [s- småting]
107 EM2: [ja xxx]

It’s these small [things]
[ ja xxx]
i må meget gerne komme med nogle gode ideer eller

forslag til (.) hvad vi sku gøre og hvad vi ku rykke

og også (.) kommer spild måske også lidt ind

((TL looks to agenda and points to word ))

You are very very welcome to come up with good ideas or

Proposals of what we should do and what we should move

And also waste comes in here

EM1: hva (?? ?? )

PPP: (0.6)

TL: spild det er hvis du gør noget der ikke er nødvendigt

waste is when you do something that is not necessary

EM2: (0.9)

PPP: (0.4)

TL: hvis du for eksempel skal have en pose m- med strømper

If you for example need a bag of stockings

((TL points in front of herself))

EM2: (ja xxx)

TL: så du hele tiden skal flytte de der vogne der står [foran]

so you constantly have to move the trolleys standing in front

EM2: [åh ja]

TL: altså det (.) det er så nogen [s- småting]

it is small things

EM2: [ja xxx]
What is the point of this example?

The team meeting is a situation where language problems appear and a potential for language learning arises.

Word explanation is not enough, there is a need for gesture, exemplification and visual stimuli.

Work place knowledge is a platform and resource for language learning. SPILD ---concrete example of work situation.

Language learning is fundamentally situated and embedded in social practice.
Language learning for migrants in the workplace requires learning words in close relation to workplace culture

Creating an immersive, digital environment from a physical reality

So what aspects of this reality did I try to get in the game?
5 different aspects of workplace language/culture

- Signs and instructions
- Locations and work stations
- Actions and workplace tasks
- Incidents and problems
- Workplace culture and norms
Signs, objects and instructions
Locations and work stations
Actions and work tasks
Episodes and problems
Presentation of the game
From research at work to game development
Status and content

A mobile based game targeting different industries

Two prototypes, one for laundry and one for cleaning.

Funding from NCFF og Styrelsen for Integration og International Rekruttering (SIRI)

Immersive map-based with work stations and work functions

Language learning is integrated with concrete workplace tasks and situations, familiar to user

Minigames with an emphasis on vocabulary (nouns, verbs, prepositions), instructions and simple speech acts and repetitions

Audio og visual supplemented by writing

Translations and repetitions

DEMO: https://workdplays.dk/demo/
Laundry game MAP VIEW
Map view – cleaning game.
General point of departure - the cafeteria and the team leader
Each location has a name corresponding to authentic environment
The cafeteria and the team leader is point of entry and transition
Translanguaging

Welcome to the TEAM MEETING
The changing room – an opportunity for more generic training of words (colours, clothes, hair etc.)
The cleaning room
The sorting game
Effect monitoring

Testing and results
40 different words from the game were tested.

Clothes, colours, cleaning products and cleaning actions.

20 employees were tested in total: 10 in Måløv, 5 in Kalundborg and 5 in Roskilde.
Overall findings

• The game had an effect on everybody testing it (except one)

• The significance of being seen, acknowledged and taken seriously

• Different approach to working digitally and playing games

• Playing as an approach to learning was, for some unusual

• Different outcome for beginners and more skilled language learners
Testing approach

• Information about game and monitoring project in 3 different cleaning sites

• Language screening by certified language teacher and placement with the Danish language module system

• Pre- and post-testing of in-game vocabulary using test developed especially for this monitoring

• Gaming kick-off session where employees were given access to game

• Minimum 4 hours of gaming time over a period of 2 months
Pretest og post-test results

Percent error initial test: between 10% and 67%, 28 % in average

Percent in final test: Between 0% and 50%, average 12%.
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Prætest og post-test results

Largest effect on beginner level learners, DU1 and DU2 modul 1-2 level, some of whom had been in the country over 10 years

Most significant effect: from 60 % mistakes to 5 % mistakes

(DU2, modul 1, Rumania, 2 years i DK)
Conclusion

WorkdPlays is based on an approach to language and language learning as a situated social practice.

In this way, it is different from many other digital platforms and resources, as these are typically based on a text-book and language system approach.

The simulated workplace context presents a possible bridge between classroom-based language learning and the work-life challenges and needs of language learners.

Digital language learning games can provide an alternative, a supplement or a starting point for second language learners, in particular beginners and illiterate learners.