Chatbots in education,

What options for teachers?

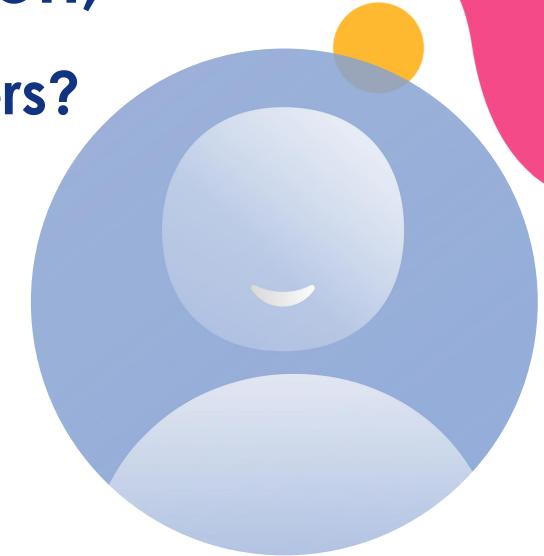
Unlocking the Potential of Chatbots for

**Enhanced Learning** 

7 February 5:30 to 6:30 PM (Brussels time)

Presented by Dorian Venderick





#### About us...

Logopsycom is an educational innovation centre in Mons (Belgium) that creates and uses alternative methods or tools (digital or otherwise) to support schools, vocational training centres, educational organisations, young people and parents.

It was originally set up as a care company specialising in learning disorders in young people, such as 'Dys' (Dyspraxia, Dysphasia, Dyslexia, etc.). So we're still working on content accessibility and inclusion.







#### About our work...

We have been supporting inclusive education for years



72+
International projects



208+ Cooperating partners



Years of experience



#### Some of our projects...



















**IN PROGRESS** 

















#### Today's plan



#### Chatbots in education, What options for teachers?

- What is a Chatbot?
- Scripted Chatbots and Generative Chatbots: what are the main differences and their pedagogical implications
- Static, scripted Chatbots (the traditional chatbots): what they are, how to use them and how to create one
- Dynamic context-aware generative chatbots (the new-comers): what they are, how to use them and how to create one
- Conclusion: which approach should you use?
- Questions and answers session





# What is a chatbot?



#### What is a chatbot?

A software application designed to **simulate conversation** with human users.

They are sophisticated systems designed to simulate human-

like conversations.

Used in a wide range of settings:

- Customer service
- Entertainment
- Education

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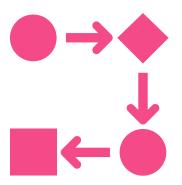


# What are the main types?



#### 2 main types

Scripted,
Sequential (static)
Chatbots



The more traditional chatbots

Generative (Dynamic) Chatbots



Recently popularised (ChatGPT, Google Bard, ...)







#### Static, Scripted Chatbots

#### What is interesting about scripted chatbots in education?

- Useful for Introducing Complex Concepts curated by teachers
- Informal Learning
- Autonomous Learning, with content selected by teachers
- Interactive
- Media Integration
- Accessibility and Inclusivity
- Personalisation
- Customizability and Control



#### A few examples from our projects

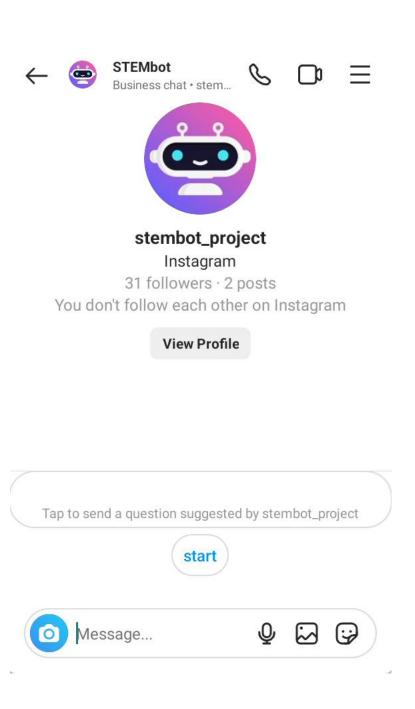
















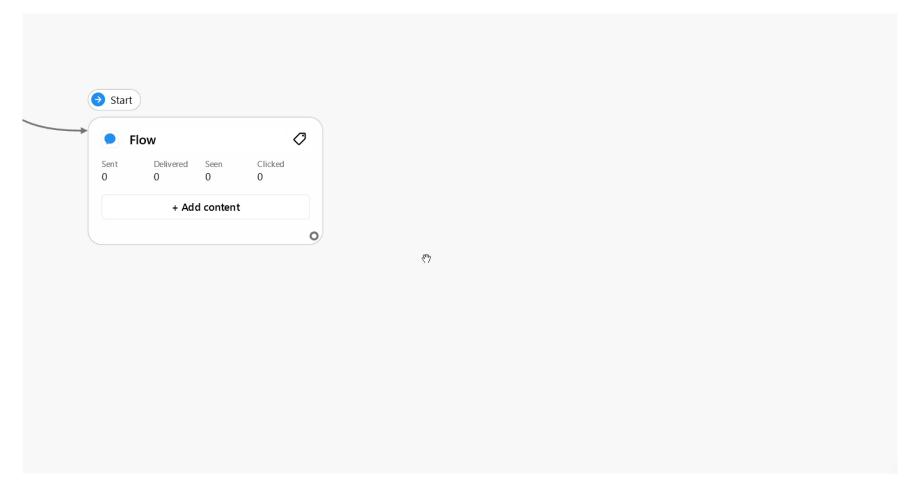
#### Creating a chatbot with chatfuel

Chatfuel is the chatbot creation platform from Meta (Facebook). Simple of use.

































1 guide on the situation and good practices in the partners' countries



Several already made chatbots on the platform



A creation platform with documentation

Project website:

https://chatbot4vet.com

Project platform

https://app.chatbot4vet.eu

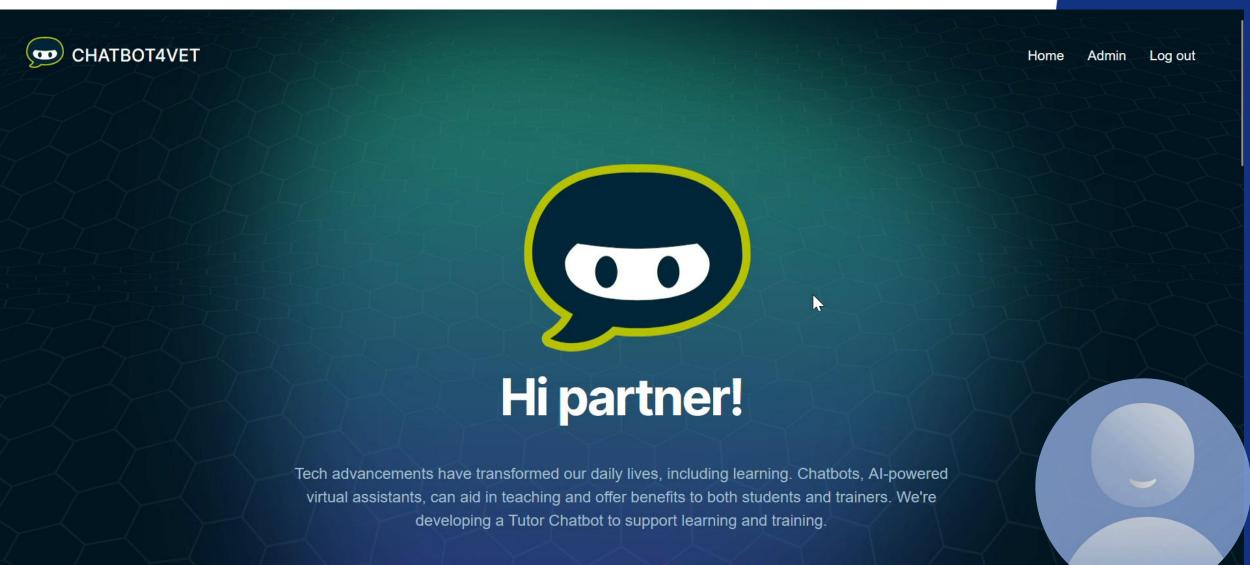


Co-funded by the European Union



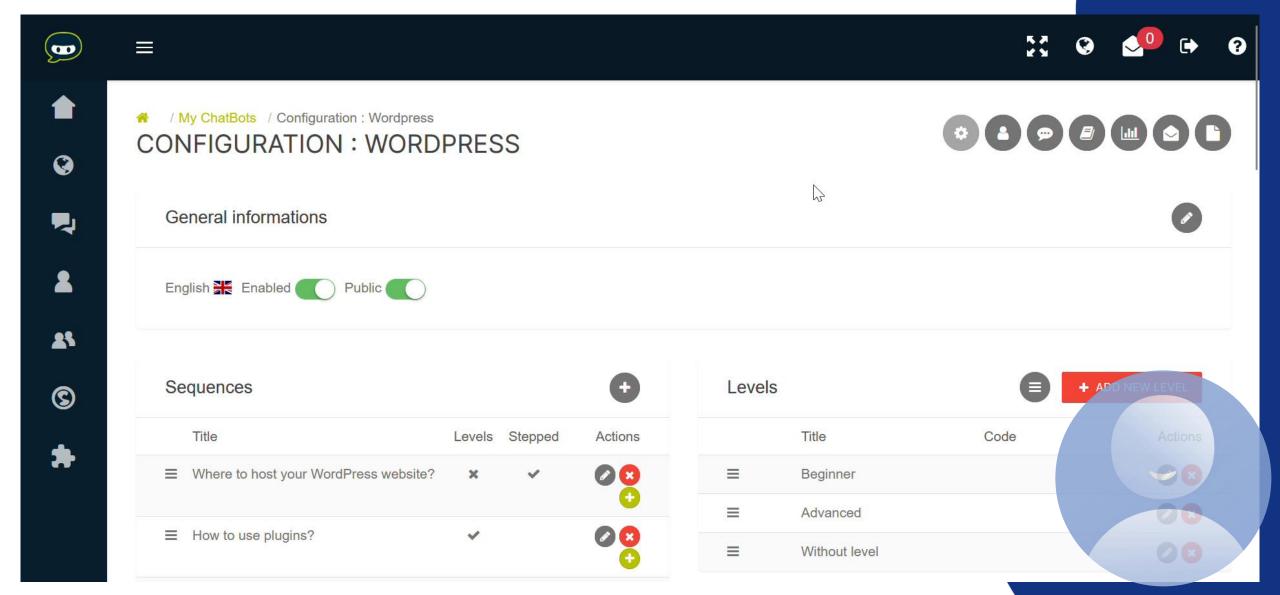
#### Creating a chatbot with CHATBOT4VET





#### Creating a chatbot with CHATBOT4VET





#### Creating a chatbot with CHATBOT4VET











#### CHATBOT CREATING GUIDE

A guide to help educators create and apply their own chatbot for VET education purposes around EU

Activity Sheet 1: Welcome to Chatbot4Vet!	. 2
Activity Sheet 2: What can I find on a chatbot?	. 5



#### Other options?

- BotPenguin: https://botpenguin.com/
- Botstar: https://botstar.com/
- ManyChat: https://manychat.com
- •



# Dynamic Generative Chatbots



# Dynamic, context-aware generative chatbots

#### What is interesting about these chatbots in education?

- Personalized Learning Experiences
- Interactivity and Engagement
- Instant Feedback and Support
- Adaptable Content Delivery
- Language Learning
- Support for Diverse Learning Styles
- Reduction of Repetitive Tasks for teachers



### Dynamic, context-aware generative chatbots

#### Innovative, yet to approach with care

As with any Al-driven technology, these chatbots learn from vast datasets that may not always be perfectly curated, leading to situations where the information provided might be outdated, biased, or incorrect.

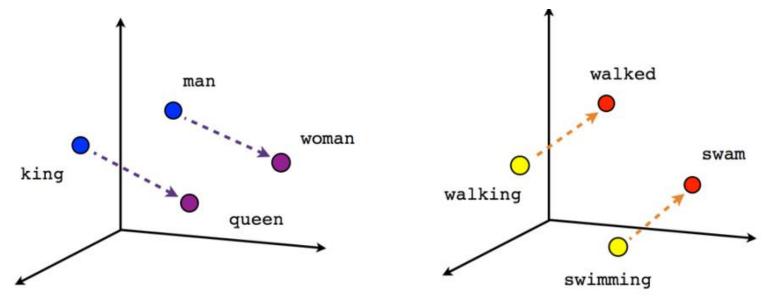
#### Key points to consider:

- Critical Thinking Development
- Accuracy and Reliability
- Ethical Use
- Supplementary Educational Tools



# Understanding dynamic chatbots: what is happening under the hood?

- The Science Behind LLMs
  - Word Embeddings
  - Contextual Inference
  - an astronomical amount of data



Word embeddings capture useful relationships. Source: Lynn 2018



# Understanding dynamic chatbots: what is happening under the hood?

#### Key aspects of LLMs

- Vast Training Data
- Understanding and Generation
- Limitations and Challenges



# How to create a generative chatbot for students to discuss with?

How to create a bot tailored to your students and your teaching material?

- The GPT Store (by OpenAI)
- Chatfuel integration of ChatGPT



# How to create a generative chatbot for students to discuss with?

{{GPT\_attiswet}} Connect Facebook Page To activate your bot, connect your Facebook Business Page. about the pheno Hydrophilicity a the video, or do first? Start ChatGPT Con Ansv Prompt 79/12000 tokens Save to 7 Set up ChatGPT reply save to {{GPT\_answer}}  $\delta^{(n)}$ Replies from prompt Send Mess Al has no answer Alright, tell me Send to live chat knoy Test this flow

Collect Ans

#### Other options?

- Google bards: https://bard.google.com/
- HugingChat https://huggingface.co/chat/
- •







# Thank you



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