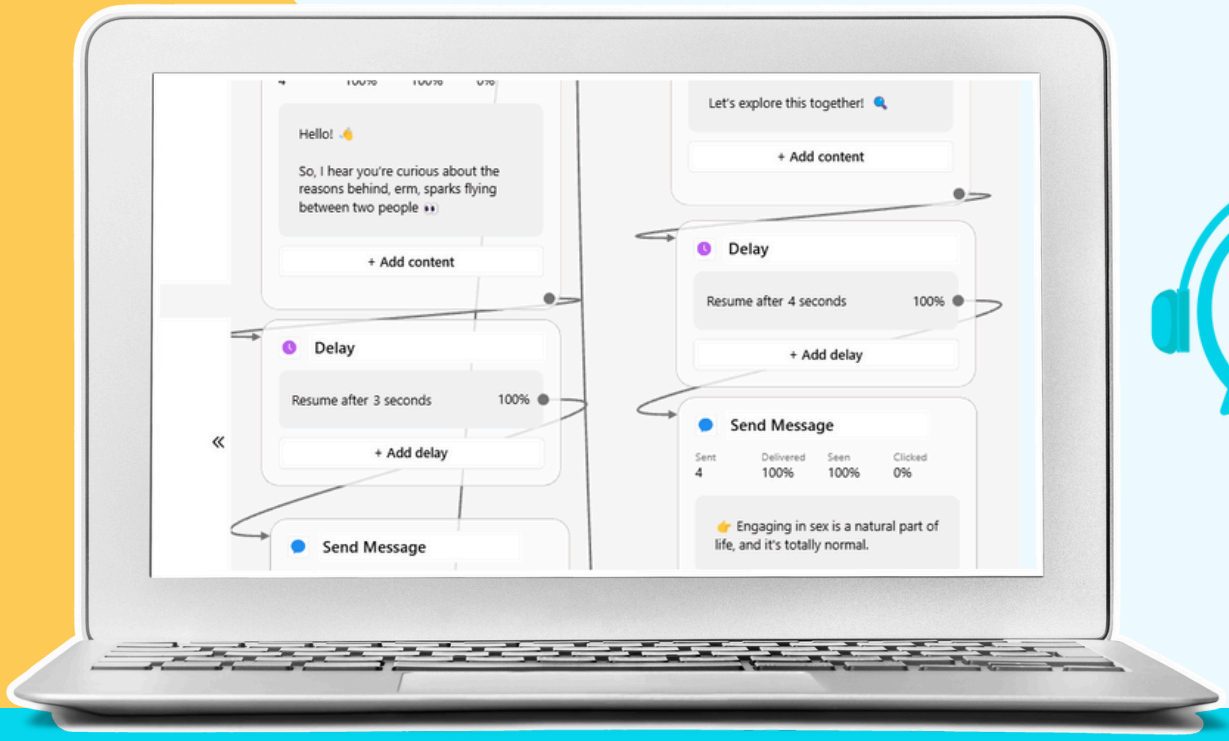
Creating a chatbot for sexual education

# A STEP-BY-STEP MANUAL ON EXPLOITING THIS TOOL FOR YOUR LEARNING AND TEACHING GOALS

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ALEX

# TABLE OF CONTENTS

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# < INTRODUCTION / >

- Purpose of the manual
- Overview of ALEX

The aim of this handbook is to provide users with practical guidance on creating educational chatbots. By users we mean our target group, namely youth workers and education stakeholders interested in strengthening their competences in teaching about sexual and relational well-being. Beyond this specific group, the handbook is also addressed to all other education professionals, no matter the age of their learners or the subject matter they teach as the text serves to provide practical guidance on how a chatbot can be used to achieve various pedagogical goals. The emphasis, of course, is on sexual and reproductive health (SRH) education, showcasing how this digital tool can support and enhance effective teaching practices in the field.

## THE RELEVANCE OF CHATBOTS IN EDUCATIONAL SETTINGS

If we talk about the importance of chatbots in education, it is worth highlighting that they can act as virtual advisors and adapt during the learning process to the students' capabilities and, therefore, their learning pace. Another important aspect is that chatbots can act as "vertical tutors", taking part in a dialogue with any user.

Another important aspect is that chatbots can act as "vertical tutors", taking part in a dialogue with any user. Using chatbots on a large scale allows us to replicate the process of critical discussion, questioning, ad drawing conclusions, and this promotes better understanding of different topics, memorisation and learning. According to Bill Gates[1], founder of Microsoft, chatbots can be virtual experts, mentors and learning partners at all levels.

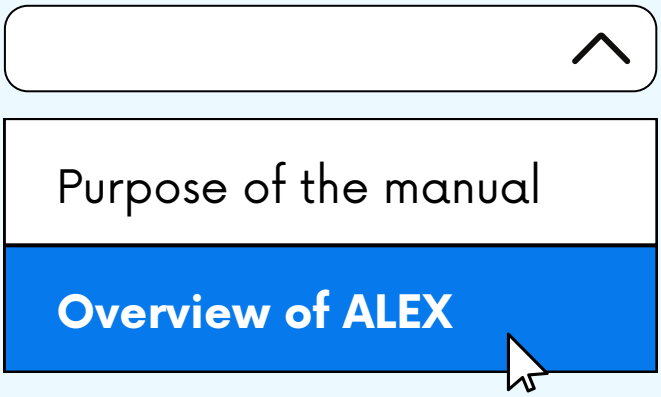
Ultimately, chatbots help the learner comprehend and develop a topic at their own pace, asking what they need and generating positive spaces for the exchange of ideas and problems to be solved.

## THE KEY POTENTIAL OF CHATBOTS IN THE FIELD OF DIGITAL EDUCATION

- **Detects the intent of the learner** (the chatbot can therefore modify its response and adapt the conversational language)
- **Provides personalised learning** (adapts to student needs and specific requirements)
- **Allows the teacher to reduce the time spent on organising and carrying out tasks**
- **Effectively stores and analyses data** (for example, helps students organise their time and assign tasks in line with their goals)
- **Improves access to education** (the chatbot is interaction-oriented and, therefore, does not take into account the resources, language or location of the student)

[1] Casey Newton, "Can Ai Fix Education? We Asked Bill Gates," The Verge, April 25, 2016, https://www.theverge.com/2016/4/25/11492102/bill-gates-interview-education-software-artificial-intelligence.

To conclude this section of the manual, we would like to briefly highlight the possibilities of the Chatfuel platform. This is a no-coding, easy-to-use platform for creating chatbots for companies and individuals. With it, you can set up chatbots for Messenger (Facebook), WhatsApp or Instagram, and embed them on your website. You can read more about this tool within Chapter 2.




## DESCRIPTION OF THE PROJECT AND ITS OUTCOMES

Nowadays, young people turn to social media for information about their bodies, thoughts and sexual behaviour. Unfortunately, as health professionals point out, the Internet very often provides misleading information and a distorted picture of sexuality.

Young people use online sources of knowledge mainly because formal education systems lack a holistic approach to learning about sexual and reproductive health. Despite the fact that WHO and UNESCO recommend SRH education include topics relevant for vulnerable groups (young women, LGBTQI+ youth and those with disabilities) such as human rights, consent, LGBTQI+ issues and gender roles, fewer than half of EU Member States follow these guidelines.

In view of the situation outlined above, the Alex: the SexEd bot project has proposed the development of a chatbot and a comprehensive SRH programme (contained as both standalone PDF material and text within the chatbot) that would reflect the realities of gen-Z youth today.

**AlexBot is able to address important needs of today's youth, such as:**

- free and confidential availability of information on sexual and reproductive health issues
- a holistic perspective on the topics covered
- inclusiveness of the content presented, thereby improving the social inclusion of marginalised groups

**Our project priorities include:**

- addressing topics affecting marginalised groups of young people (e.g. LGBTQ+, people with physical and intellectual disabilities) in a non-stigmatising and factual way
- discussing abuse specific to the digital age in order to make young people safer
- providing unbiased, peer-reviewed information on sensitive or embarrassing issues
- guidance to help identify misinformation and myths surrounding sexual and reproductive health
- enhancing young people's digital skills to ensure their safety when using the Internet
- guidance on how to use the Alex chatbot effectively and productively to address knowledge related to sexual behaviour, reproductive health and sexually transmitted diseases (STDs), broader carnality and body changes during adolescence, abuse, consent, sexual orientation and gender identity, inclusivity and romantic relationships.

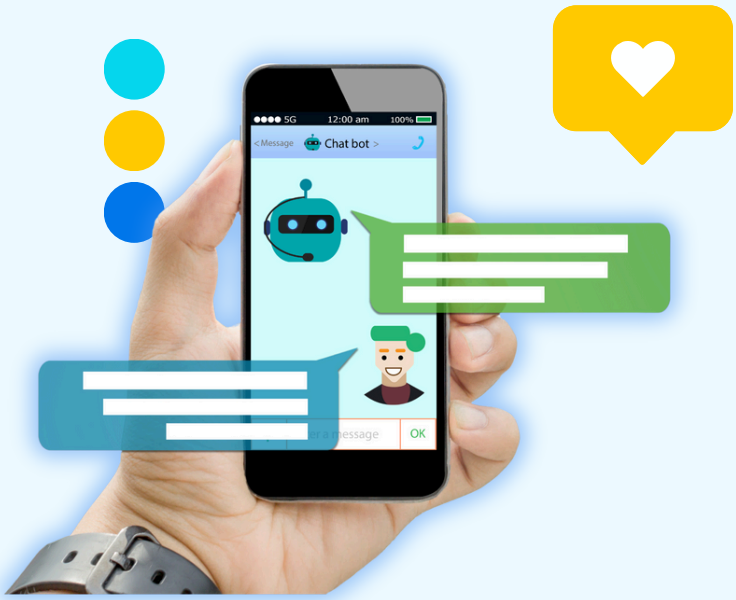
In addition to youth, our target group are youth workers, to whom we provide guidance on how they can become sex educators to reach their target groups. We teach the adaptation of SRH education and youth work practices to new technologies. We tailor chatbot creation skills according to the diverse pedagogical needs of youth workers.

**We believe that the inclusivity and the wide range of content proposed in the project will contribute to raising the quality of SRH education, and that the accessibility of the proposed materials will be appreciated by numerous users.**

# < UNDERSTANDING CHATBOTS IN EDUCATION / >

**What is a chatbot?**

Why use a chatbot for sexual education



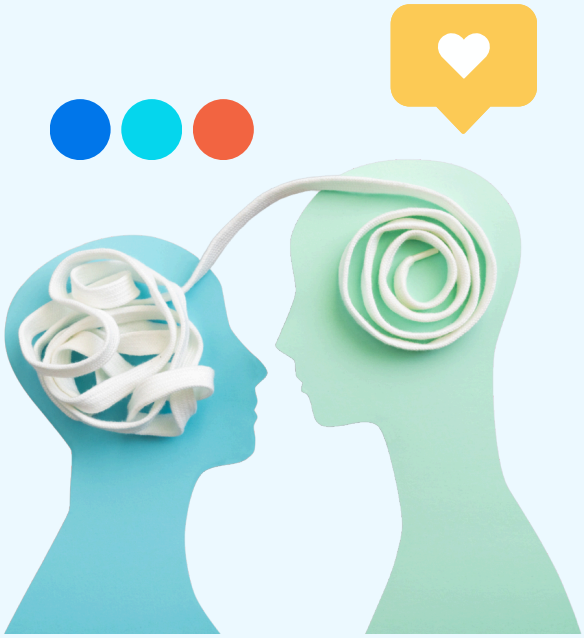

A chatbot is a software application designed to simulate spoken or written human conversations with users, especially over the Internet. Chatbots are widely used as customer care tools and are commonly employed for business purposes. However, their application is not limited to business; chatbots have also seen a rapid rise in fields such as education, healthcare, and entertainment.

The basic functionality of a chatbot is to provide immediate responses to users' queries based on predetermined rules and scripts. Chatbots can be classified into two groups based on their underlying technology.

- **Rule-based chatbots**, also known as scripted chatbots, operate with a predefined set of responses based on keywords or triggers from the user's input (phrased inquiry or selection of a predefined topic).
- **Modern AI-powered chatbots** use artificial intelligence, natural language understanding (NLU), natural language processing (NLP), and other advanced technologies. Users' input is analyzed by machine learning algorithms, enabling the chatbot to learn from conversations and improve its accuracy in providing the correct context.

What is a chatbot?

**Why use a chatbot for sexual education?**



In addition to its widespread use in business, chatbot technology is also being integrated into various fields of education. Implementing modern tools in education, such as chatbots, is helpful not only because they can support learning in formal education but also because they can fill gaps in areas where comprehensive educational programs are not readily available, such as sexual education.

Sexual education is a challenging field where new methods must be carefully selected to ensure accuracy of information, accessibility, and learner engagement.

Firstly, the built-in interactivity of chatbots contribute to capturing the attention of the target group of teenagers. Chatbots deliver information through conversation-like interactions triggered by users' input in the form of questions or the selection of predetermined options. This interactive functionality, where users can continue by asking another question or quit at any time, enhances their engagement in the self-learning journey. The flow of content is controlled by the user, allowing them to read and process the material at their own pace. This creates a personalized learning experience, with users viewing the chatbot as their "personal tutor." At a certain level, a chatbot can replace web searches by centralizing content and resources, providing a faster and more streamlined user experience.

Next, privacy is also a key consideration in this subject, and an automated, non-human system allows young users to access sensitive information privately. For example, a teenager wanting to learn more about their changing body might hesitate to ask questions of their parents or teachers. By using a chatbot, they can explore topics related to this subject confidentially, selecting only the relevant topics they want to know more about.

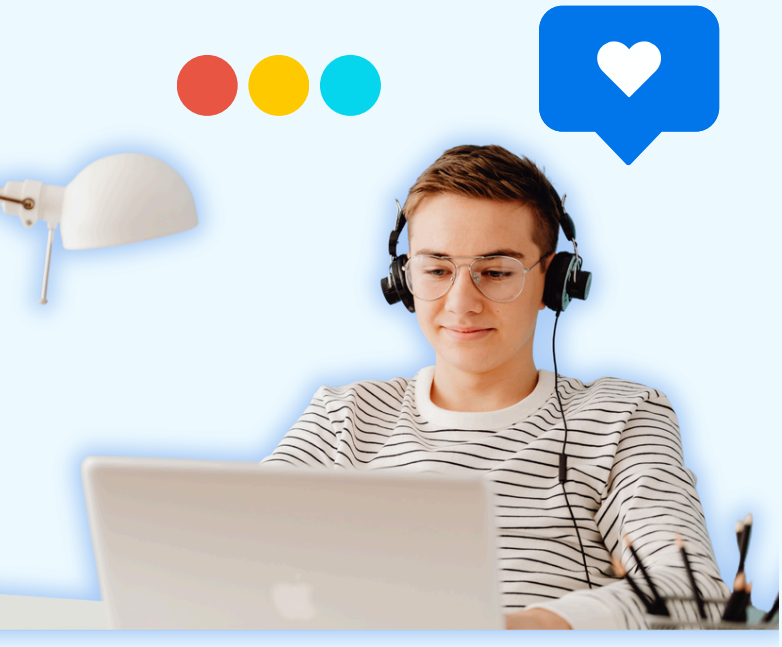
In addition, chatbots can serve as a low-threshold learning tool that is easy to access and ready at hand. From the perspective of sexual education, providing learning tools that deliver authentic information while being accessible to the largest group of teenagers can efficiently supplement formal sexual education programs in institutions and prevention programs.

Efforts have already been made to use chatbot technology as a tool for sexual education, resulting in several successful implementations. In India, an AI chatbot named SnehAI was launched in April 2019. Its aim is to provide accurate and engaging sexual health education to young people, with a special focus on the health and well-being of women and girls. It uses AI to offer personalized, anonymous guidance on topics such as puberty, relationships, and contraception, helping to fill the educational gaps in sexual health.

Roo is also an AI-powered chatbot, created by Planned Parenthood that answers questions about sexual health, relationships, and puberty. It's designed to be a safe, anonymous resource for teens, to get accurate information.

These examples demonstrate how chatbots can serve as accessible, confidential, and effective tools for improving SRH education worldwide.

# < USING CHATFUEL TO CREATE AN EDUCATIONAL CHATBOT / >





## SETTING YOUR GOALS AND OBJECTIVES

The planning of your educational chatbot requires setting goals and objectives thoroughly. Consider the following questions: What is the mission? How does it relate to the educational purpose I am aiming at? Am I setting realistic goals? Are these goals measurable?

**Begin by identifying the educational purpose: what knowledge do you wish to deliver and to whom?** Who is the target audience? Is there a gap in formal education that your chatbot aims to fill? How will your audience benefit from this knowledge in their lives? A clearly defined educational purpose will serve as a basic guideline throughout the process, from goal-setting to implementation.

- **Consider the ways your chatbot can be employed, for example, as an additional resource in formal education**, ready to be used in relevant classes with the guidance of a teacher. Additionally, think about how it could be effective outside of class, for users who want to explore the content on their own without direct guidance. A chatbot is a tool that you can customize creatively to respond to a specific need, and its design as well as the content must be aligned with the ways users will use it.

- **Goals and objectives shape your intent, helping you stay on track and evaluate your project and its progress**. It is also important to see the difference between a goal and objectives: goals are broad and comprehensive, rather long-term, while objectives are more specific and short-term steps that will contribute to reaching your goal. Hence, you will first establish your goal by giving a statement, then continue to break it down into several objectives covering specific actions to be taken to achieve your goal.

- **Setting measurable goals is key for evaluating your outcome and staying focused on your main objective**. Measurable goals can include quantitative values (e.g., outreach) or qualitative feedback from users (e.g., through evaluation forms or functions). Ask yourself questions like: How many users do you expect? How often and how long will they use your chatbot? How will you measure their overall satisfaction with the application? Define your metrics and methods based on these answers.

- **Measuring improvements in an educational project can be challenging, but tracking your progress will help you determine if you have met your goals or accomplished your objectives**. Measurement methods will require data collection, which you will use to evaluate your progress. This can include surveys for users, or you might consider building an evaluation function into your chatbot (such as rating the chatbot with a score, a like button, etc.).

## ANALYSING YOUR TARGET AUDIENCE

When you define the educational purpose of your chatbot, you also identify the audience you will target. The target audience consists of users who are likely to be interested in or need your educational project and who will benefit from it, making them the group your chatbot will "talk to." Therefore, it is essential to have a thorough understanding of the people you are targeting, including the methods for reaching them. The next step is to analyse your target audience, so that you can tailor the content and design to their needs. Consider the following aspects:

Focus on your audience's preferences by asking yourself: What information do they need? How important is this knowledge, or what impact does a lack of it have on their lives? What do you know about their general learning styles? What channels do they prefer, and how do they feel comfortable using them? Answers to these questions will help you select appropriate content and approaches for your chatbot.

The age of your audience is one of the most important parameters to determine, thus, ask yourself, what is the age group you are targeting? This is needed for selecting appropriate content, language, and design, including visual elements. For example, if you are targeting teenagers, you will need to adapt the material to be understandable and engaging for their age group.



For this reason, using easy-to-understand language is a good practice. Avoid overusing technical jargon and overly complex language. Aim to phrase the content concisely, using relatively simple syntax.

The language is a part of the cultural background that is also to be taken into consideration. Consider the cultural backgrounds of your audience, which may include age, ethnicity, religion, gender, and sexuality. Therefore, ensure the content and its presentation are suitable for a diverse audience. Think about how users from different cultures might perceive the content, and avoid elements that could be misunderstood or unintentionally offensive.

By thoroughly understanding and analysing your target audience, you will be able to create content that meets their needs and that will also provide them with a positive learning experience.

## INTRODUCTION TO chatfuel

The digital revolution has had a significant impact on a number of industries, including education. The chatbot is among the most promising technologies in this context. Artificial intelligence (AI)-driven chatbots are a great tool for education since they support interactive participation from users. Because of its rich functionality and user-friendly user interface, Chatfuel stands out among the many platforms available for creating chatbots. This text will walk you through the process of using Chatfuel to create an instructional chatbot. It will go over the basics of Chatfuel, including its benefits and drawbacks.

Launched in 2015, Chatfuel is a well-known chatbot-building platform that was initially created for Facebook Messenger but has since expanded to support other messaging services. Its accessibility has made it popular among developers, businesses, and educators who want to use chatbots for customer service, marketing, and education. Chatfuel works with a visual interface that allows users to create conversational flows using blocks and connections. Each block represents a step in the conversation and can include text, images, videos, quick replies, and more. By connecting these blocks, users can create complex conversations that are tailored to particular user needs.

The user-friendly design of Chatfuel is one of its biggest benefits. With the platform's simple to use drag-and-drop interface, users can easily develop chatbots. Because of its simplicity, even those without any coding knowledge can create chatbots. Numerous interfaces with various platforms and services are supported by Chatfuel. This implies that you can link your chatbot to external APIs, Google Sheets, and learning management systems for pedagogical purposes. The production of dynamic and interactive educational experiences is made possible by these integration capabilities. Chatfuel also allows for extremely high levels of personalisation in chatbot interactions. Users' responses can be used to segment them and customize the chatbot's responses. This feature makes it possible to create personalized learning experiences in an educational setting, ensuring that every student is given information appropriate to their interest and comprehension level.

Understanding user interaction with your chatbot is also key for continuous improvement. Chatfuel provides analytics tools that offer insights into user behavior, engagement rates, and conversation drop-offs. These analytics can help educators identify areas where students may be struggling and adjust the chatbot's content accordingly. Moreover, Chatfuel is designed to handle large volumes of conversations simultaneously. This scalability makes it ideal for educational institutions looking to implement chatbots for large classes or multiple subjects. Chatfuel also has a vibrant community and extensive support resources, including tutorials, forums, and customer support. This community can be an invaluable resource for troubleshooting and learning best practices.

Despite its many advantages, Chatfuel has some limitations. While Chatfuel is excellent for creating basic to moderately complex chatbots, developing highly sophisticated bots with advanced AI capabilities may require additional coding and integration with other AI services. Those looking for more sophisticated features may find Chatfuel's graphical user interface limiting. In addition, although Chatfuel offers a free tier, more advanced features and higher usage levels require a subscription. For educational institutions with limited budgets, the cost of improving chatbot capabilities can be a concern.

**In conclusion, Chatfuel presents a powerful tool for creating educational chatbots, thanks to its ease of use, plentiful features, and integration capabilities. While it has some limitations, its advantages make it an interesting choice for educators looking to enhance their teaching methods through technology. By using Chatfuel, you can develop interactive, personalised, and easily adaptable learning experiences that meet the diverse needs of target audiences. As chatbot technology continues to evolve, platforms like Chatfuel will play a role in shaping the future of education.**

# SETTING UP YOUR CHATFUEL ACCOUNT

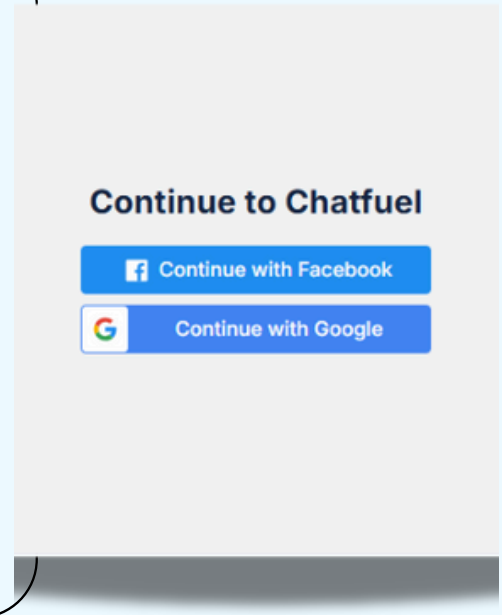
## Step 1: Create Your Chatfuel Account

**Visit the Chatfuel Website**: Go to Chatfuel.

**Sign Up**: Click on "Start free trial" or "Get started for free".

**Choose Sign-Up Method**: Sign up using your Facebook account or your email address.

**Complete Registration**: Follow the prompts to complete the registration process.




## Step 2: Connect to an Instagram Business Page

**Navigate to Instagram Setup**: After logging in, select "Instagram" from the dashboard.

**Connect Facebook Account:** Click "Connect Facebook Account" and log in with the Facebook account that manages your Instagram business page.

**Grant Permissions**: Grant the necessary permissions for Chatfuel to access your Instagram account.

**Select Instagram Business Page**: Choose the Instagram business page you want to connect from the list of pages linked to your Facebook account.

**Confirm Connection**: Confirm the connection and wait for Chatfuel to link to your Instagram business page.

## Step 3: Customise Your Chatbot

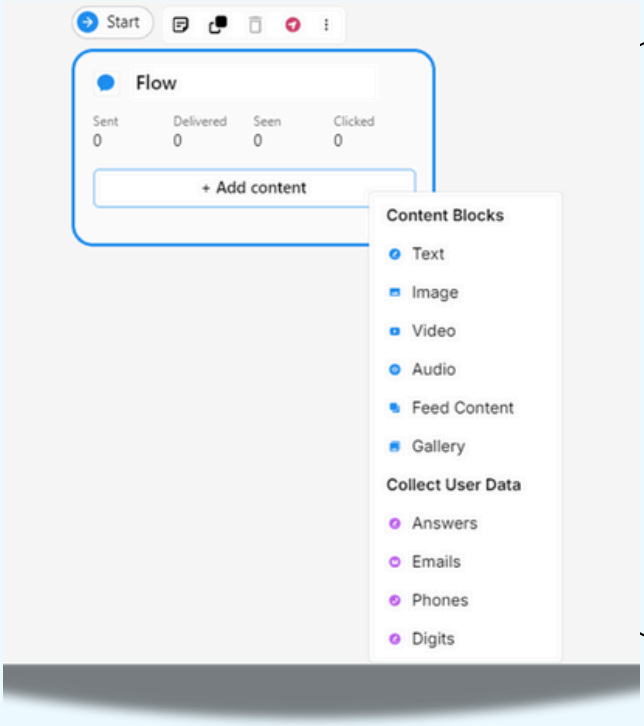
**Access Dashboard**: Once connected, you will be directed to the Chatfuel dashboard.

**Create New Bot**: Click on "Create from Template" or "Create from Scratch" to start building your bot.

**Edit Welcome Message**: Customize the welcome message that users will see when they interact with your bot.

**Add Blocks**: Use the "Blocks" feature to add different types of messages, including text, images, and buttons.

**Set Up AI Rules:** Define AI rules to automate responses to common questions and commands.




## Step 4: Test Your Chatbot

**Preview Bot:** Use the preview option in the Chatfuel dashboard to test your chatbot's functionality.

**Test Interactions:** Interact with your bot as a user to ensure that all responses and commands work as intended.

**Adjust Settings:** Make any necessary adjustments based on your testing results.

## Step 5: Deploy Your Chatbot

**Publish Bot**: Once satisfied with your bot's setup, click "Publish" to make it live on your Instagram business page.

**Monitor Performance**: Use Chatfuel's analytics tools to monitor your bot's performance and user interactions.

**Make Improvements**: Continuously refine and improve your bot based on user feedback and performance data.

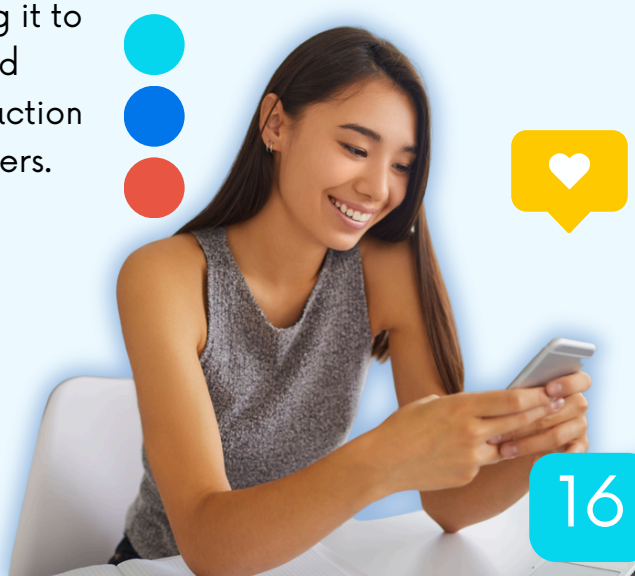
## Step 6: Make Use of Advanced Features

**Integrate Tools:** Explore integrations with other tools like Google Sheets, Shopify, and Zapier to enhance your bot's capabilities.

**Segment Users:** Use segmentation features to tailor responses based on user behaviour and preferences.

**Broadcast Messages:** Utilise the broadcast feature to send targeted messages to your audience.

Setting up your Chatfuel account and connecting it to your Instagram business page is a straightforward process that can significantly enhance the interaction and engagement with potential and returning users. Pro-tip: make sure to continuously monitor and improve your bot to maximise its effectiveness!



For more details, visit Chatfuel's website.

# MASTERING THE KEY FEATURES OF CHATFUEL

Now let's dive into the foundational elements of Chatfuel that will allow you to create and optimise your own chatbot. These features and techniques will help you design interactive, engaging conversations that you can use not only in SRH education but across a range of subjects. Here's how you can exploit the core features of Chatfuel to develop a hands-on understanding of how to apply this digital tool in pedagogical practice.

## Understanding blocks, flows, keywords and user attributes

### a) Blocks

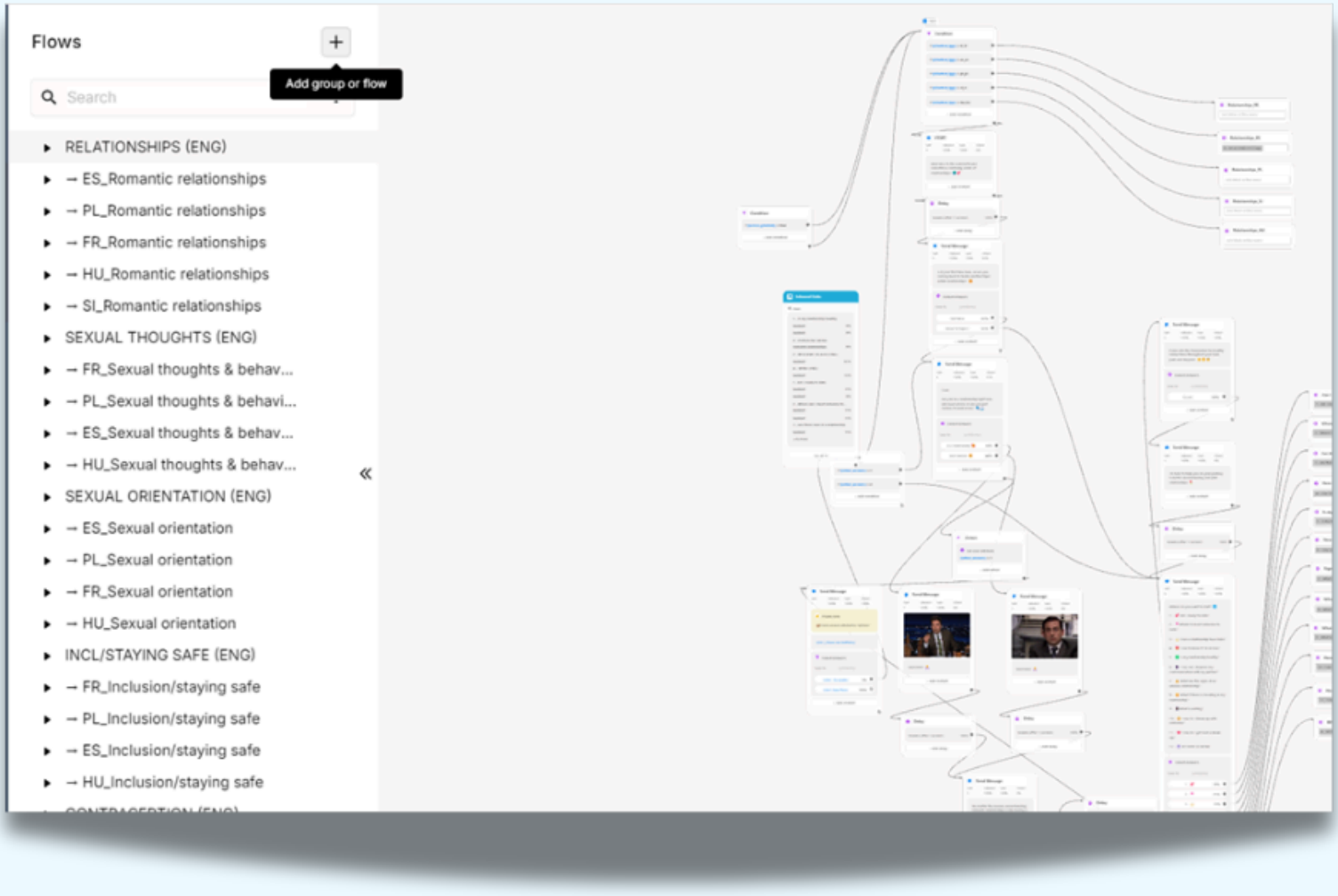
Blocks are the foundational building units in Chatfuel. Each block acts as a "container" for a specific message, interaction, or content you want your users to engage with. Blocks can contain: text, images, videos, or can be used to build more complex elements like quizzes or quick replies.

When designing your Chatfuel chatbot, it's important to break down your content into a series of logical, digestible blocks. For instance, in a sex education chatbot, you might use one block of text to introduce a topic like consent, another to provide a related graphic with an image block, and finish off the series of informational interactions with a True/False quiz (made up of text and quick replies). This modular approach can help you keep conversations on the chatbot structured and easy for your learners to follow.

### b) Flows

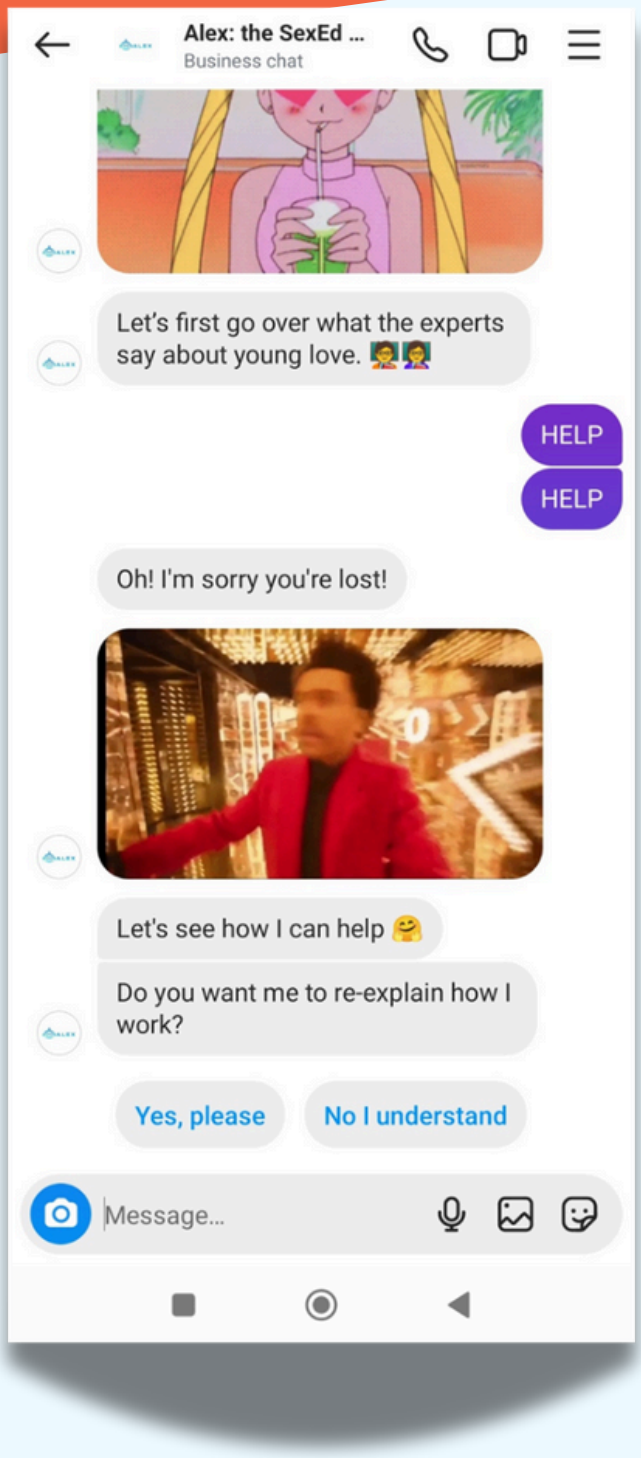
Flows are essentially "topics" singled out on the Chatfuel platform, within which your sequences of blocks are located. Flows are meant to guide users through the chatbot experience, they progress in the learning objectives by going from 1 flow to the next: for the purposes of pedagogy, each flow can represent a topic, a lesson, a unit, and the blocks within it are the lesson materials. Chatfuel first asks you to create a flow before you move on to enriching it with the blocks (content).

Below is a screenshot of a series of flow titles on the left-hand panel, and the blocks contained within one of them, within the ALEX Chatfuel workspace.




## c) Keywords

Keywords are an essential feature of Chatfuel – they allow your bot to respond predictably to specific inputs from users. For example, if a user types "HELP," you can program the chatbot to trigger a flow that provides assistance. This allows users to steer the conversation based on their needs and questions, improving the interactive aspect of the chatbot.




Keywords can also redirect users to a specific block or flow based on the word they type, helping to personalize the chatbot experience further. For example, when interacting with ALEX, users can type MENU at any time to go back and choose from a list of topics, or if they're interested in a particular topic, they would type in their interest and the chatbot is programmed to redirect them to a relevant flow, if it recognises the keyword (such as, "RELATIONSHIPS" or "STD").

## d) User attributes

User attributes store information about each user interacting with your bot, such as their preferences or prior responses, when we create a chatbot for the purpose of pedagogoy and not commercial sales. There are two types of attributes: system attributes and custom attributes.

- **System attributes**: This is automatically available information like the user's name or locale (language settings).

- **Custom attributes**: These are set by you and can be used to store quiz scores, user preferences, or track user progress across different conversations.

User attributes allow for personalisation and tailored experiences. For instance, if a user answers certain quiz questions correctly, you can store that information and adjust the chatbot's content for future interactions accordingly.

## Types of content you can incorporate into your chatbot

Text, images, videos, quick replies, and quizzes form the core components of your Chatfuel chatbot. This content is added in the form of a block, one of the aforementioned foundational elements in the platform. By combining these types of content thoughtfully, you can create a more interactive and inclusive educational experience for the users interacting with your bot.

### a) Text

Text is the simplest and probably most common block you can create, by simply choosing TEXT among the content block options. When using text for a chatbot, aiming for clarity is a best practice. In sex education, where clarity is especially critical, ensure that your language is age-appropriate and devoid of technical jargon or confusing slang.

**Pro-tip!**

**No matter the topic, break text into short, manageable sections to avoid overwhelming the user with too much information at once. This means no more than 1 – 2 sentences per paragraph.**

## b) Images and videos

Use multimedia to enhance the chatbot's educational content. Images and videos are especially useful for helping users better understand complex concepts or adding a visual element to lessons or notions. For instance, an infographic explaining puberty could complement text-based lessons on the same topic.


**Ensure all media is royalty-free, and where attribution is not possible, create your own content to add to the chatbot.**

## c) Quick replies

Quick replies are meant to simplify interactions for users. By offering users predefined choices, you keep the conversation flowing while reducing the need for them to type long responses. In addition, quick replies break the monotony of just providing walls of text for users to read, so use them as a way to "check-in" that the user is still engaged and interested in learning.

Quick replies are particularly useful in quizzes or when navigating through different sections of the chatbot.


**Chatfuel does not offer more than 13 fields for quick replies, so if you have a need for more (such as presenting the user to 20 titles of lessons they can choose from), categorise your options into groups for users to narrow down a few relevant fields.**

## d) Quizzes

Quizzes are forms of content that you can create on Chatfuel by incorporating a series of text blocks and quick replies, to offer an interactive way for users to assess their learning or to engage in myth-busting exercises (in the form of True or False quizzes).

For example, ALEX uses quizzes for users to identify the building blocks of a healthy relationship, determine the best etiquette for breaking up with someone, decoding normal and unusual sensations related to sex, figuring out how STDs are contracted, and many more instances.

**Pro-tip!**

**Once users choose one of the quizzes options (shown as a quick reply), provide immediate feedback, but pair it with multimedia such as a GIF to keep the interaction light-hearted. For incorrect responses, either give them the option to try again, linking the content block back to the text block with the quiz question, or offer words of encouragement and proceed further.**

## Creating and linking your content

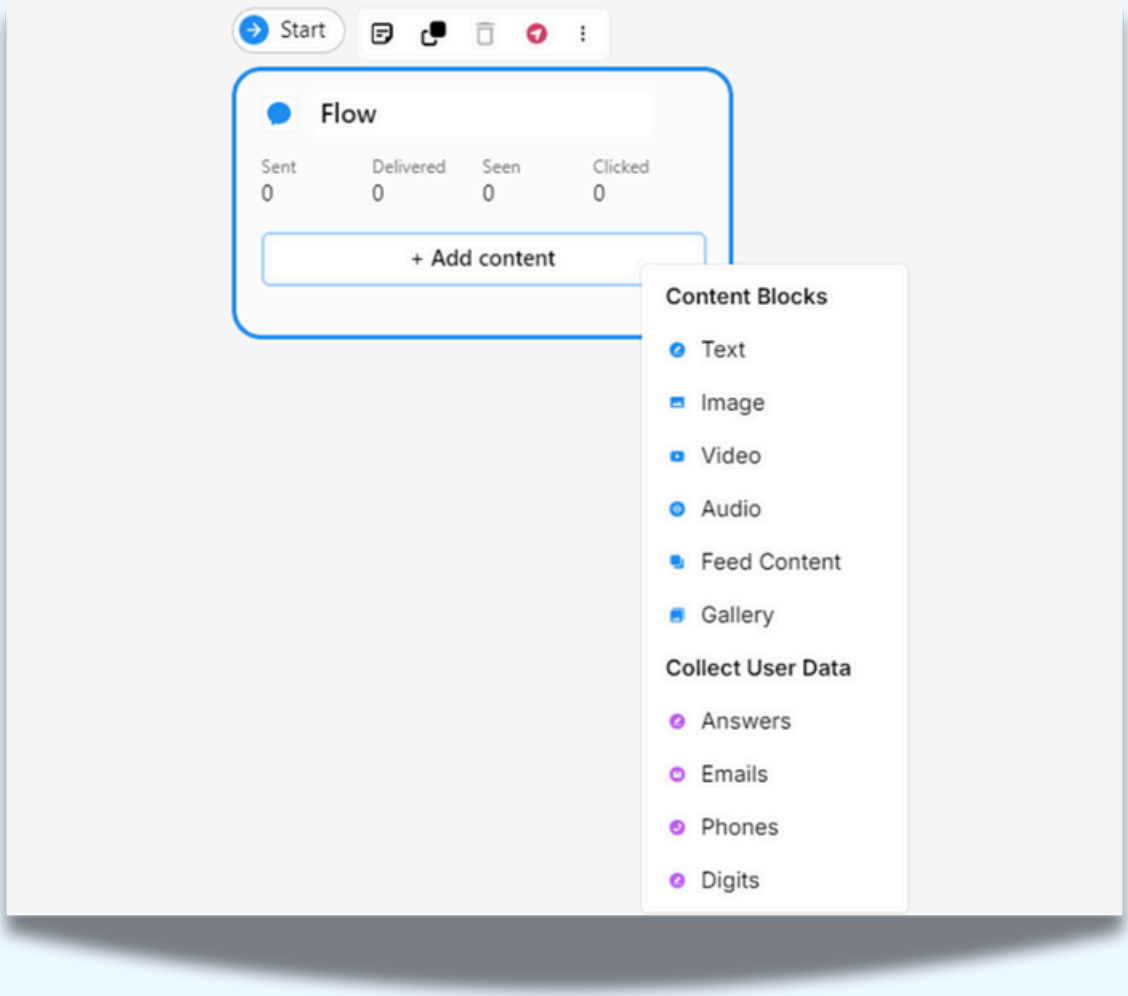
As previously mentioned, adding your content or creating new content on Chatfuel should respect a logical and clear structure, which, for the purposes of pedagogy, may look like first introducing a topic with a series of text blocks, then complementing the information with an image, and finally assessing knowledge with a quiz (made up of texts and quick replies).

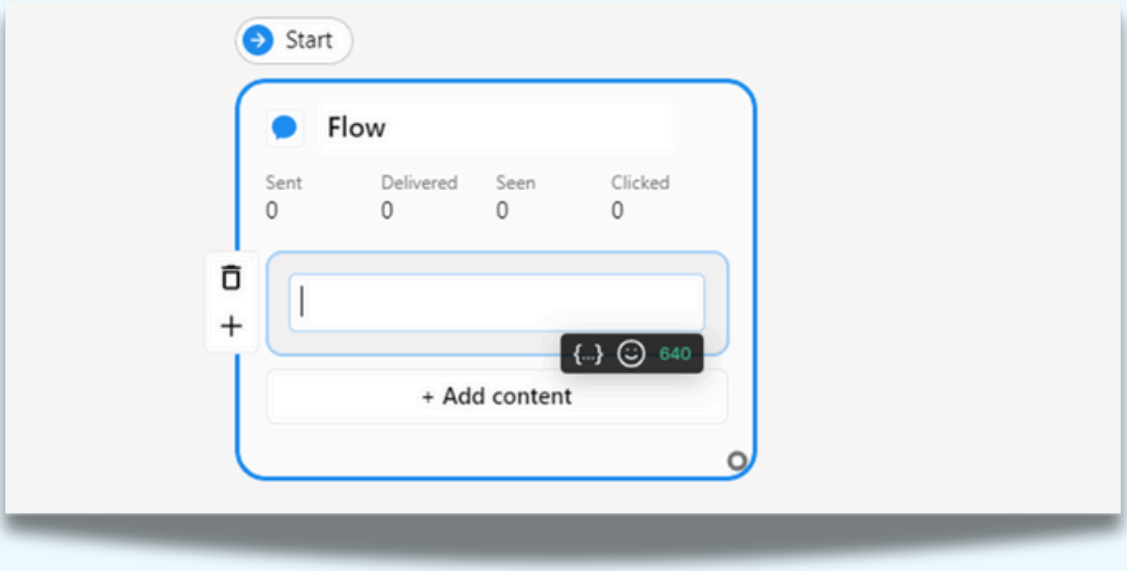
### Beginning with your first text block

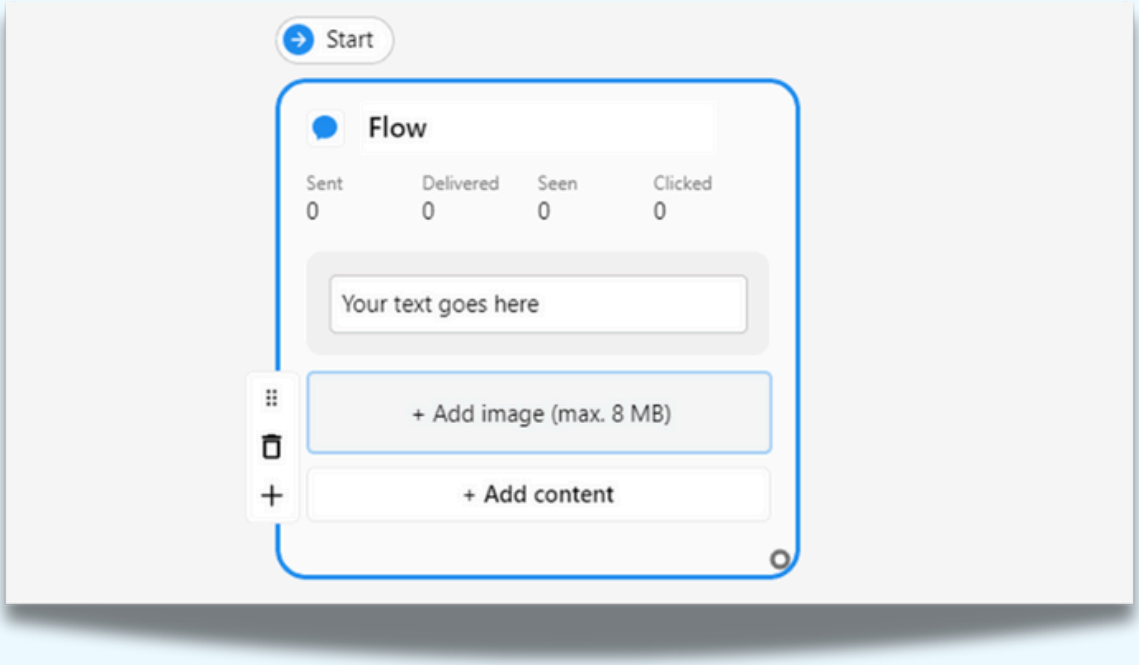
Text blocks are the simplest form of content, but they play a crucial role in any chatbot. Each text block can hold up to 640 characters, and the key is to keep your messages short and clear. In educational chatbots, especially on sensitive subjects like sexual health, it's important to ensure that text is easily digestible and respectful in tone.

Instead of presenting long paragraphs, break down information into smaller, bite-sized pieces to maintain user engagement.

Below are screenshots of how to make your first text block.



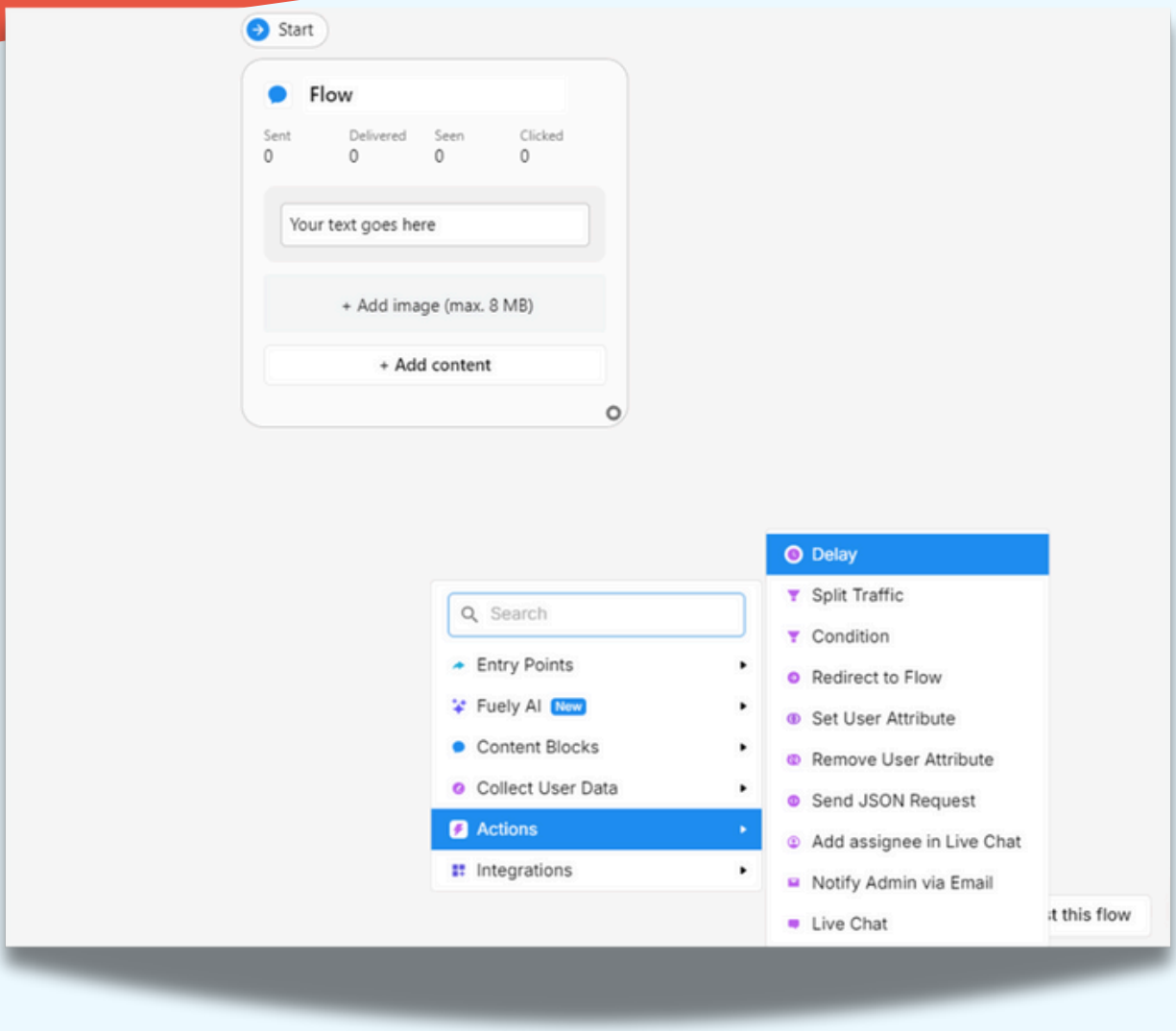



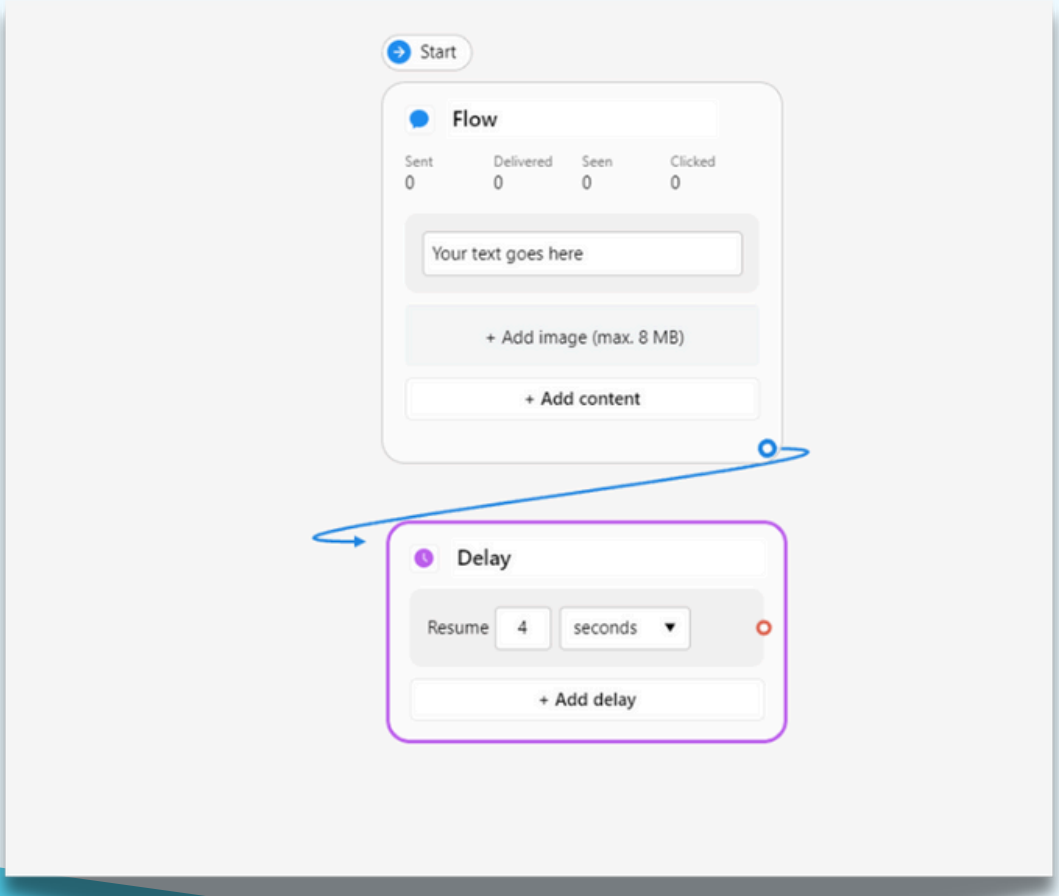



## Continuing your flow with more blocks (text or media)

After you've added your first block of educational content, you can use a series of linked text blocks to guide users through complex topics. In addition to text, you may also choose to include various forms of media in your chatbot, such as images, GIFs, audio, and videos. For example, if your bot is teaching about puberty, a diagram representing female anatomy can help clarify certain concepts that might be difficult to explain through text alone.

Linking blocks on your bot integrated to Instagram is done with the use of Delays (Actions -> Delay). A delay is meant to account for the natural time needed to digest the content that came beforehand. If a short sentence came before the next piece of content, a delay of a few seconds is sufficient. This may look something like this:


Start
Flow
Sent
0
Delivered
0
Seen
0
Clicked
0
Your text goes here
+ Add image (max. 8 MB)
+ Add content
Search
Entry Points
Fuely AI
New
Content Blocks
Collect User Data
Actions
Integrations
Delay
Split Traffic
Condition
Redirect to Flow
Set User Attribute
Remove User Attribute
Send JSON Request
Add assignee in Live Chat
Notify Admin via Email
Live Chat
this flow

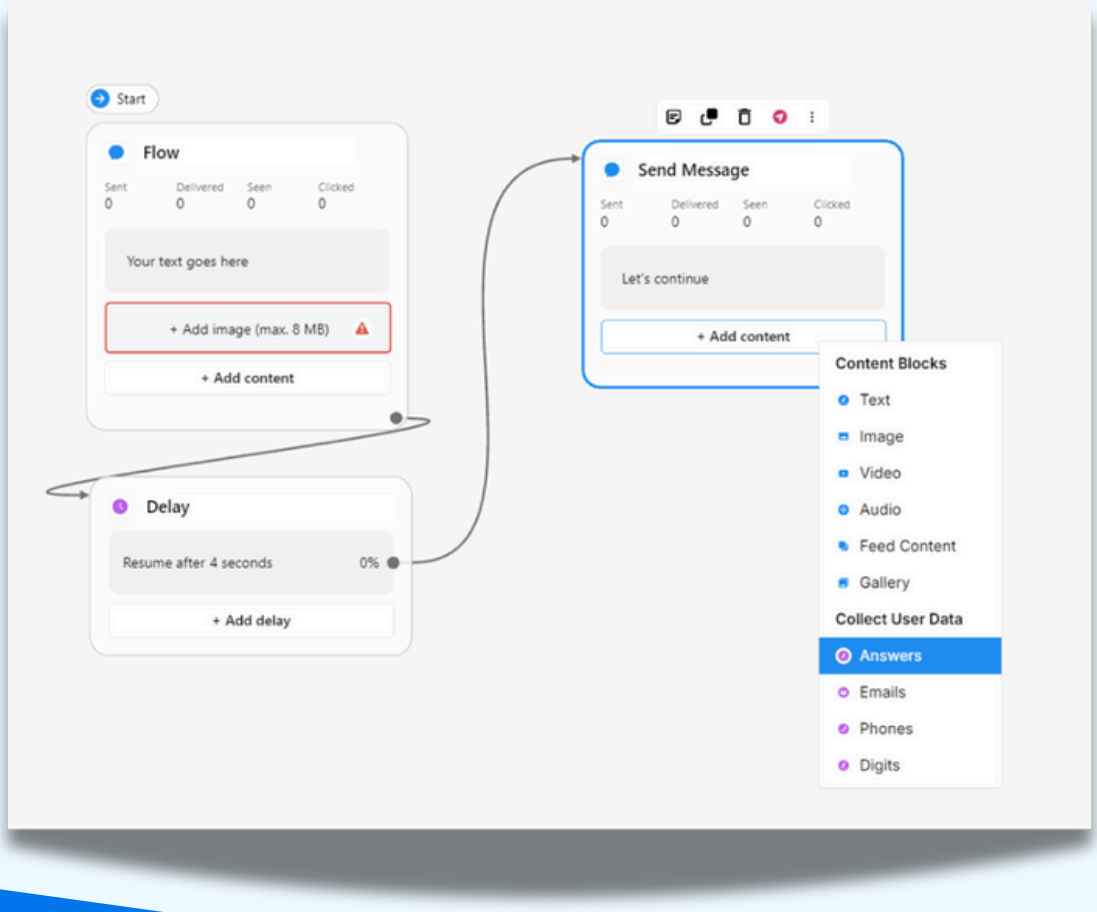

Start
Flow
Sent
0
Delivered
0
Seen
0
Clicked
0
Your text goes here
+ Add image (max. 8 MB)
+ Add content
Delay
Resume
4
seconds
+ Add delay

Connecting from the first block is as simple as clicking the cursor on the lower right side of the block (marked with an empty circle) and dragging it to the upper left side of the next block (the Delay block). This marks your first sequence, made up of a text block (Your text goes here) and a Delay block of four seconds.

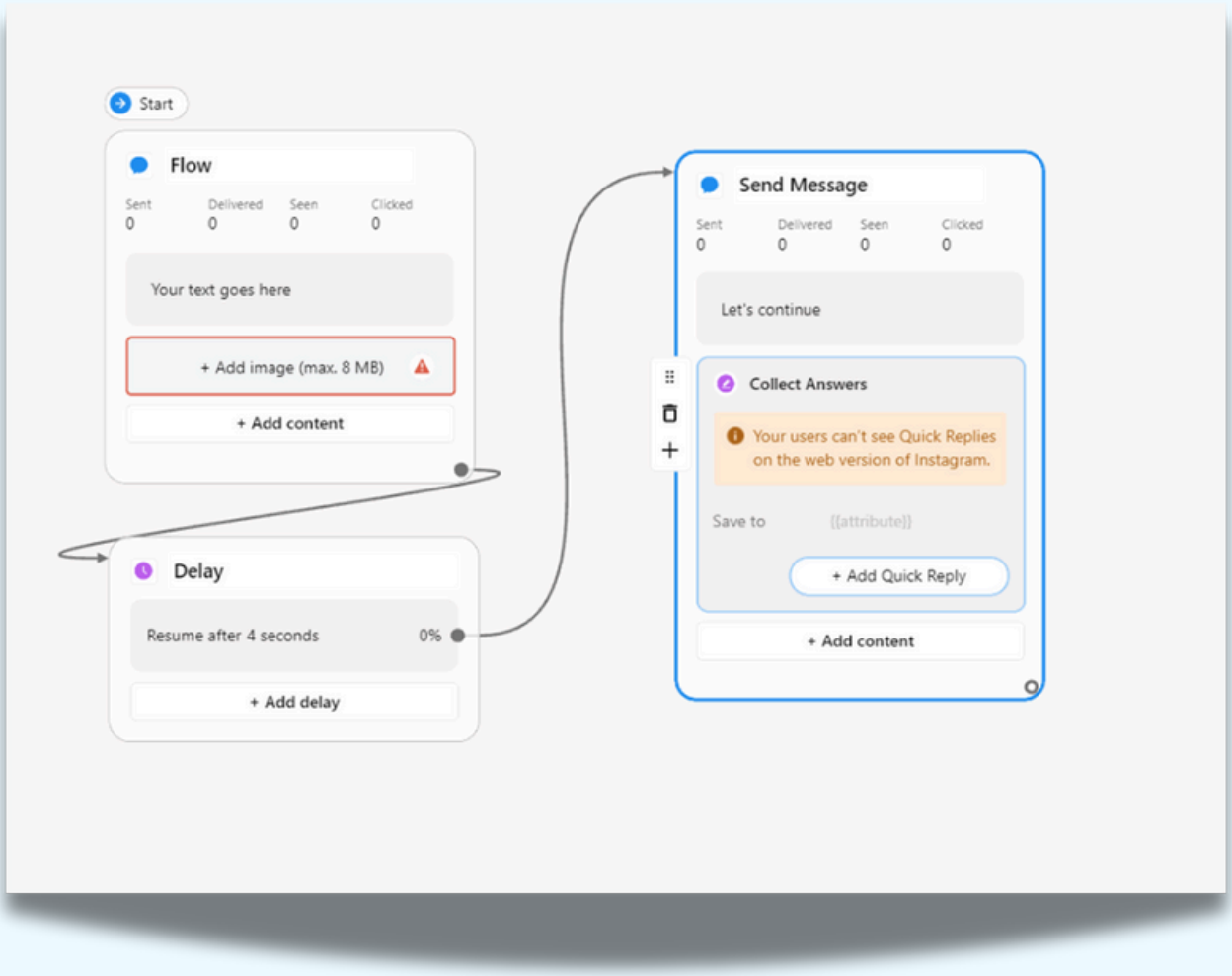
In the screenshots above, the creator could choose to Add an image within the same text block (+ Add image of up to 8MB) or add another block in the form of a standalone Image that appears after the Delay block.

## Creating a quiz with the use of quick replies

Quick replies are predefined buttons that users can click on to respond to a question or prompt. They streamline the user experience, making it easier for users to engage with your chatbot without needing to type a full response. After choosing to Add content as part of your text, adding a Quick Reply means choosing the option Answers within the Collect User Data option in the platform.

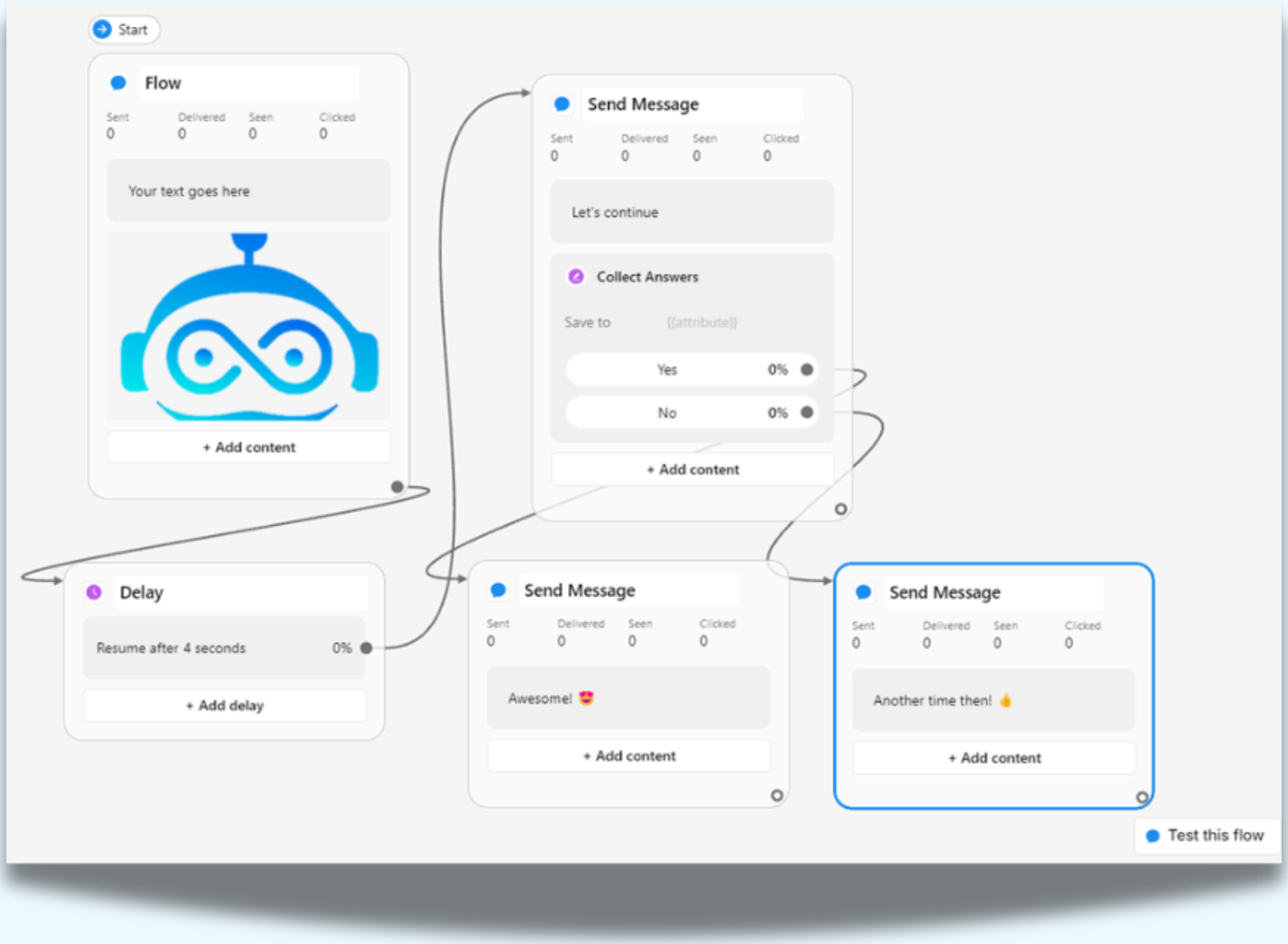


What appears is the option + Add quick reply. However, as the name says, quick replies must adhere to a 20-character limit.




Quick replies are especially useful for quizzes or surveys, as they allow users to choose between multiple options. For example, if you're asking users about contraceptive methods, you can offer quick replies for different types of contraceptives and provide detailed feedback based on their selection.

Each quiz question can be presented through a text block, as shown in the screenshot below with the options "Yes" or "No".




After a user selects their answer, the chatbot automatically provides feedback according to the chosen option.

Depending on the nature of the quiz, a good practice would be to personalise the feedback based on the user's responses.

For instance, if a user answers a question incorrectly, offer additional resources or explanations to reinforce their understanding of the topic.

## DEPLOYING THE CHATBOT

A key step in making sure the chatbot delivers the most value is integrating it with the current platforms. To integrate the chatbot for example into a school website, copy and paste the embed code from Chatfuel into the HTML code editor of the website. This makes it possible for users to get prompt answers to their questions whenever they need them.

By linking the chatbot to the school's or other educational institute's Facebook and Instagram pages, it can engage users where they are most active on social media and communicate with a larger audience. To accomplish this, go to the Chatfuel dashboard's integration settings, choose the preferred social media network, and then follow the instructions to link the account and provide the required permissions.

Chatbot integration with learning management systems (LMS) such as Moodle or Blackboard simplifies repetitive processes including content submission, user registration, and questions. This reduces the administrative burden while giving users immediate support. In order to do this, one would go to the applications or API settings section of the LMS, set up the Chatfuel bot, and test the integration to make sure everything functions properly.

# TRACKING USER ENGAGEMENT AND FEEDBACK

Monitoring engagement and getting feedback are crucial steps in ensuring the chatbot stays efficient and keeps meeting user demands.

## ANALYZING ENGAGEMENT METRICS

When assessing the chatbot's effectiveness, engagement measures like user satisfaction, answer accuracy, and engagement rate are very helpful. Compare the number of users who engage with the chatbot and the number who leave it. Evaluate the precision of the chatbot's replies and examine comments and survey outcomes to figure out the general level of user contentment. Finding frequent patterns in comments can assist you in identifying areas that require development.

## USER INTERACTION ANALYSIS

Make use of Chatfuel's integrated analytics to keep an eye on user interactions, such as the total number of users, most frequently asked questions, and interaction times. Use feedback boxes and surveys in the chatbot to get suggestions and comments from users. To guarantee continuing insights, this feedback can be collected either after certain contacts or on a regular basis.

## CONTINUOUSLY IMPROVING THE CHATBOT

If you want your bot to be as relevant and effective as possible, prioritise regular updates and content additions. Update the chatbot's knowledge base regularly to reflect the latest information, events, or changes. Introduce new content and features based on user feedback and technological advancements, such as new topics, interactive quizzes, or multimedia content to keep users engaged.

Adapting to user needs also involves implementing personalisation features to tailor responses based on user preferences and past interactions. This improves user experience and engagement. Regularly review user questions and feedback to identify common issues or areas of confusion, and update the chatbot to address these issues more effectively.

Launching and maintaining an educational chatbot using Chatfuel involves careful planning, continuous monitoring, and regular updates. By integrating the chatbot with existing platforms, tracking user engagement and feedback, and continuously improving its features and content, you can create a valuable tool that enhances the learning experience. Choosing this proactive approach will allow your chatbot to remain an effective and engaging resource over time.

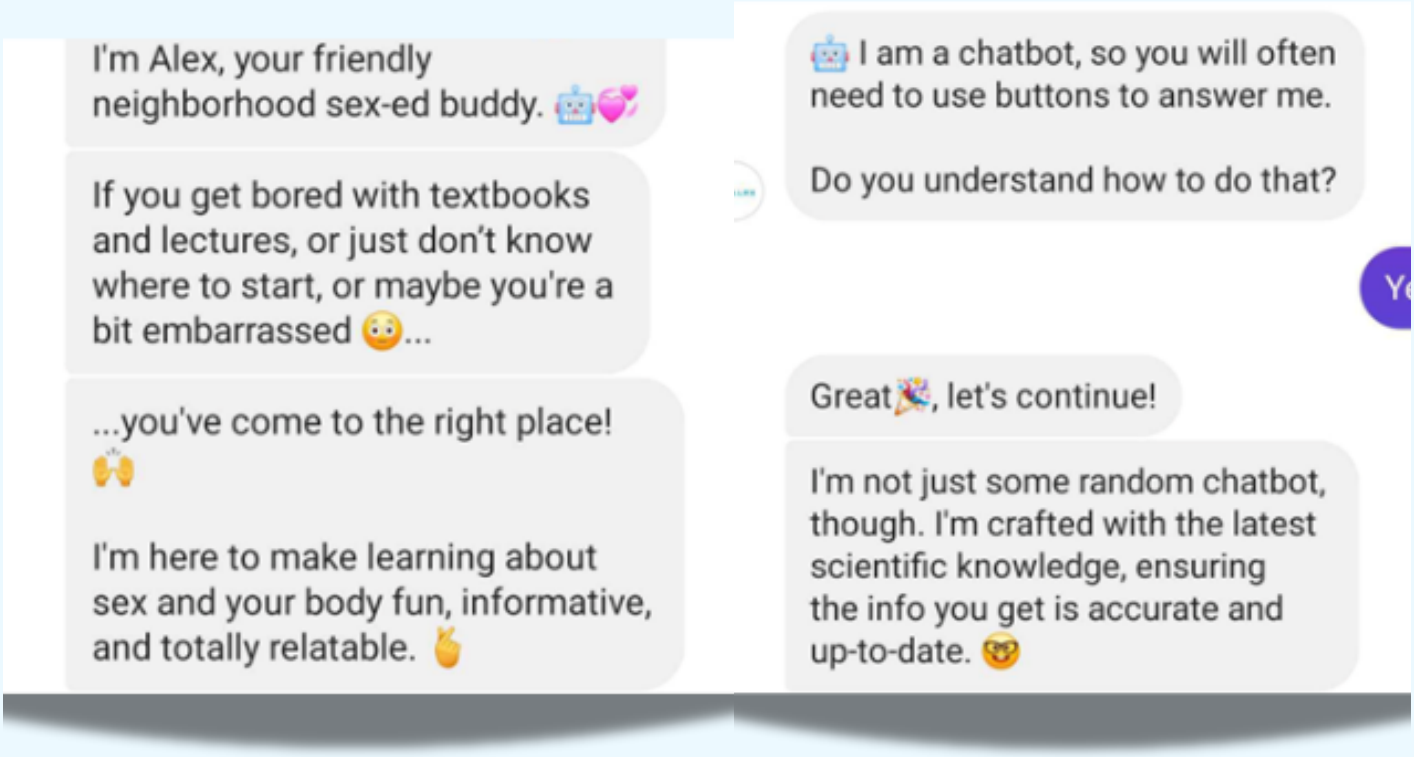
# < CHATBOT CREATION BEST PRACTICES / >

- **Tips for communicating your content**
- Tips for enhancing the user experience
- Tips for ensuring chatbot accessibility

## PROVIDING FACTS ABOUT THE CHATBOT – AVOIDING ANY MISUNDERSTANDINGS

Firstly – make sure the users know they are talking to AI, a computer program, and not a real person, even if it looks like it. Explain to users the functionalities of the chatbot, how to interact with and what to expect. This can be done by introducing the chatbot with some text, or if you are presenting the chatbot in a group (for example in a classroom), you can say a few introductory words about it.

In the example below you can see the introduction part of AlexBot, sparking interest for users and providing them with some guidelines to start and chat with it.




Source: Alex chatbot – the starting conversation

The functions of any chatbot should be explicitly detailed and users should decide how they would like to interact with the bot. Understanding the user's expectations of a chatbot is critical for avoiding abuse of user trust, which is even more important when using chatbots for educational purposes with young people, especially when it comes to the sensitive topics tackled by AlexBot.

## WRITING CLEAR AND CONCISE DIALOGUES

The communicated content should be adapted to the chosen topic and the needs of the target group. For AlexBot the topic is SRH education, which may be sensitive and can cause discomfort and embarrassment for the youth target grou. For this reason, the information given via chatbot needs to be very precise, non-judgmental and friendly, staying appropriate for their age group.

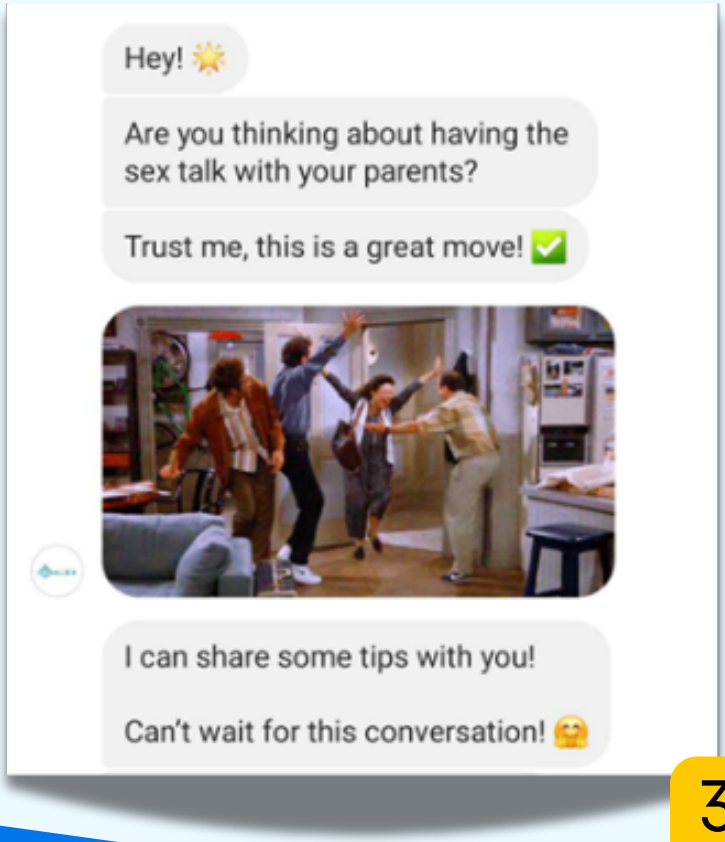
## Some best practices are to:

Aim for short, simple sentences that are easy to understand.

Avoid jargon and overly complex language.

Adapt the content and the language of the chatbot to your target group. If your target group are younger children, they may not read fast or understand complex words and terms. To ensure this is not an issue, you need to pay attention to the structure of sentences and word choice – simple keywords, and simple sentences in addition to offering sufficient time for topic reading and comprehension.

The example below shows text that is not condensed, but rather separated into more lines to improve readability. It is supported by the use of a GIF to display emotions and create interaction.




Source: Alex chatbot –
Topic: Talking with parents

## FOCUS ON THE KEY MESSAGE YOU WANT TO DELIVER

When you decide the kind of content you'd like to communicate, prioritise the most important information and make an engaging and clear dialogue about it. Delivering a clear, single message with a dialogue avoids overwhelming the user. The words you are using (if there are any new or difficult words) need to be explained – the consistent use of words with the same meaning is encouraged for better understanding.

In order to come across as concise and clear, we recommended using bullet points or lists when conveying multiple points. This can improve readability, comprehension and engagement in chatting with a chatbot.

The example below shows the structure of the content – the topic is divided into subtopics, presented with points. Users can choose, where they want to start the conversation with the click of a button.


Source: Alex chatbot – Topic: Talking with parents

The dialogues you write also depend on the type of chatbot you are creating, and what would be most suitable for it. For a chatbot like Alex, the use of buttons that allow the user to continue the dialogue and lead them to different information is very important. Include buttons in the dialogue in such a way that the chatbot offers the user a choice in navigating the dialogue and not just the reading of simple text dialogue. This will help to give the user a better sense of the dialogue with the chatbot, as if they were talking with a real person.

Remember that when reading, the user cannot perceive another person's body language and facial expressions, as would be the case if the dialogue was done live with a real person. For this reason, the "feelings" expressed by the chatbot must be very well expressed with clear wording, and with the addition of emojis or appropriate GIFs to make the user feel as respected as possible.

The example below shows the usage of emojis or gifs to underline the respect of the user from the chatbot.

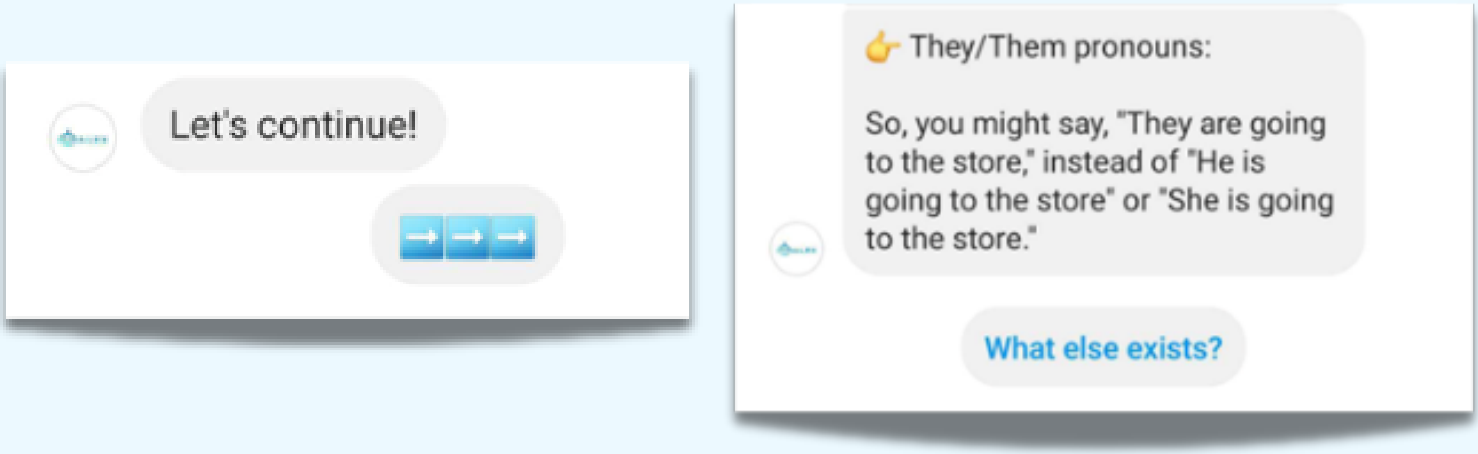

Source: Alex chatbot – Topic: Should I ever feel forced to have sex?

## USING A CONVERSATIONAL TONE AND ENCOURAGING INTERACTION

Writing the dialogue as if you are speaking to a friend creates a more engaging and relatable experience for users who might be prompted to be more open to different types of discussion. When we talk about the topics addressed by AlexBot, such as SRH topics, it's crucial to give users a sense of feeling safe and secure, without shame or any restrictions.

Encourage users to ask questions or choose from options using phrases like "Do you want to learn more about...?" or "Would you like an example?", or simple “Is everything clear until now?” or “Do you want to continue?” questions are good practices as the break up the flow of reading and help to keep the user focused and engaged in the conversation. In addition, the chatbot platform usually has a limited number of characters that can be entered in a single text frame or button, so the interactivity of the text is practically unavoidable.

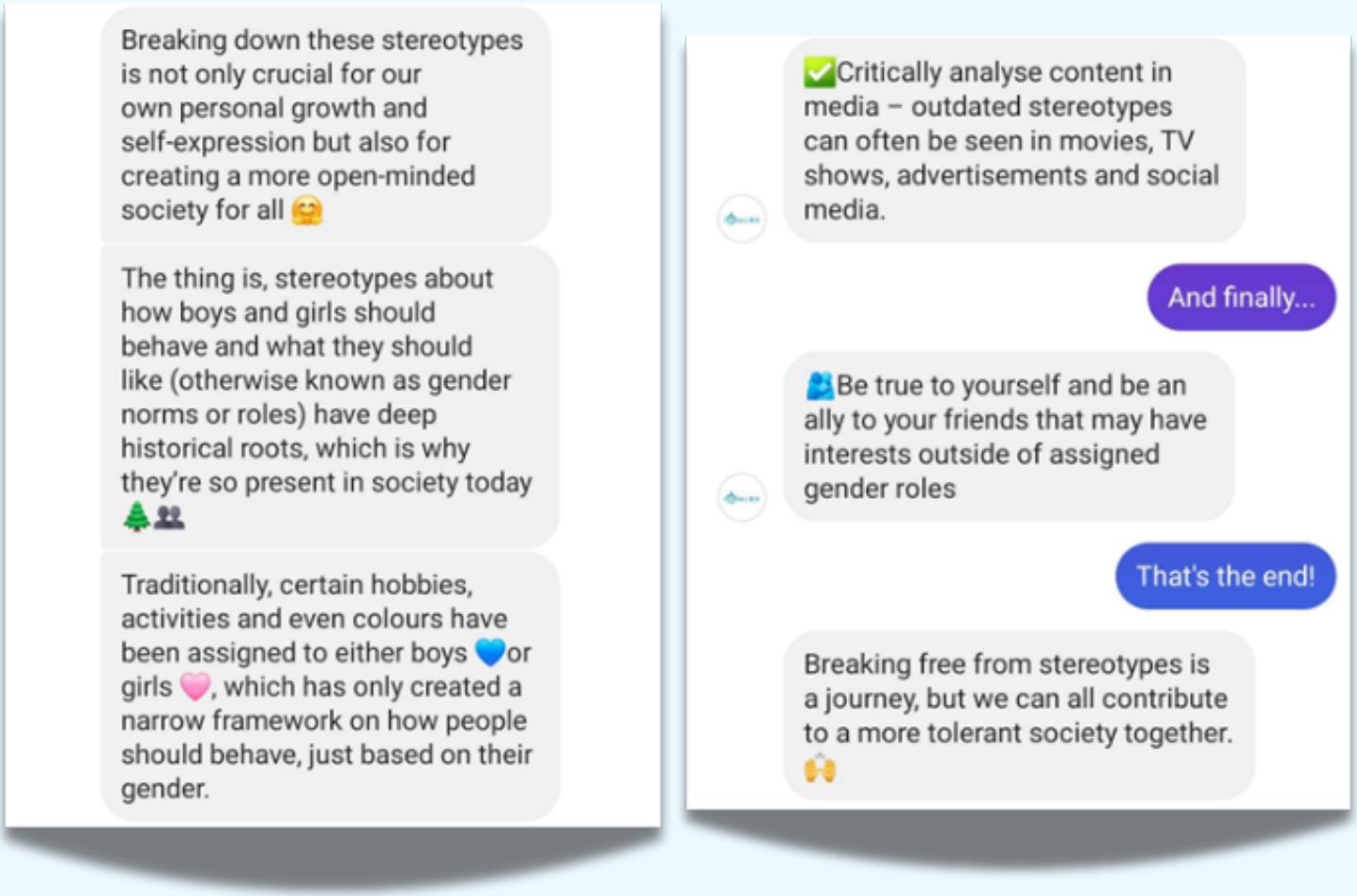
The example below shows two types of buttons that can be used to break the text and to give to users the possibility of interaction:




Source: Alex chatbot – Topic: What does it mean to be nonbinary?

Address sensitive topics with empathy. Use supportive and non-judgmental language to make users feel safe and understood. Always think of all possible scenarios related to why someone would ask or seek information on a topic. This is the only way to provide information that will have a positive impact on everyone. Create a dialogue that is accepting and encourages positive solutions.

The text in the example below shows the type of language that can be used to tackle sensitive topics, offer support and at the same time present relevant information.




Source: Alex chatbot – Topic: Can boys like girly things and girls like boyish things?

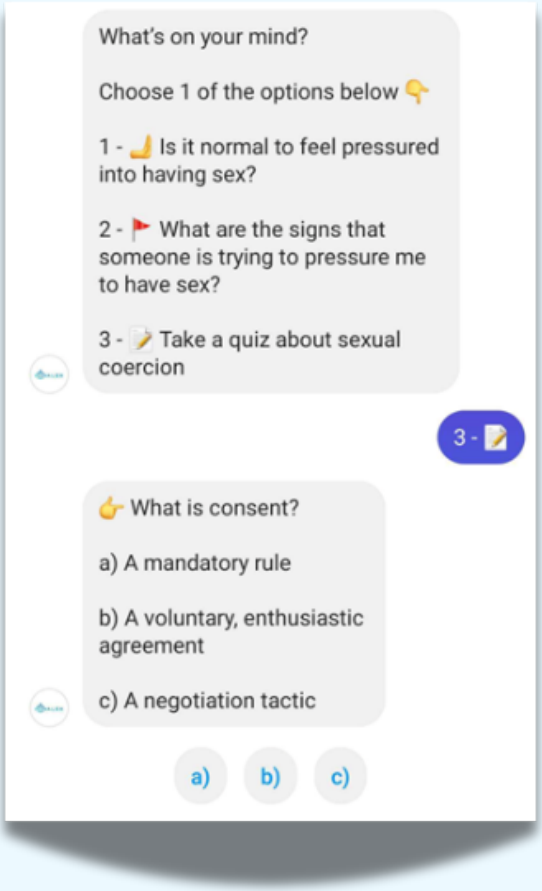
Implement mechanisms to identify keywords or phrases that indicate a user is in distress or applying some buttons directly to the dialogue can be considered. This allows the chatbot to respond appropriately or refer users to reliable support services.

Pay attention to the use of gender if your language is strongly binary. When creating dialogues, try to be as inclusive and generic as possible to include the widest possible range of users.

## INTERACTIVE ELEMENTS

Use quizzes, polls, and interactive scenarios to make learning more engaging and to reinforce key points. Prepare dialogues in the form of questions so that users can use the answers to guide their understanding of the topic and keep their attention. This can also help users to emphasise the main points of the topic, facilitating understanding and learning.

The example below shows a type of quiz the user can choose. To play the quiz, user needs to interact with the buttons.




Source: Alex chatbot – Topic: Should I ever feel forced to have sex?

## ADDING MEDIA SOURCES

Different media resources can be included in the chatbot to explain complex topics or provide visual examples. This provides additional resources for supporting the understanding of the chosen topic. These can be images, infographics, videos, texts or other online resources. Some resources can be added directly to the platform where the chatbot is being built, or a 'link' can be used to connect the user to an online resource uploaded somewhere else (e.g. a video on a YouTube channel or a website).

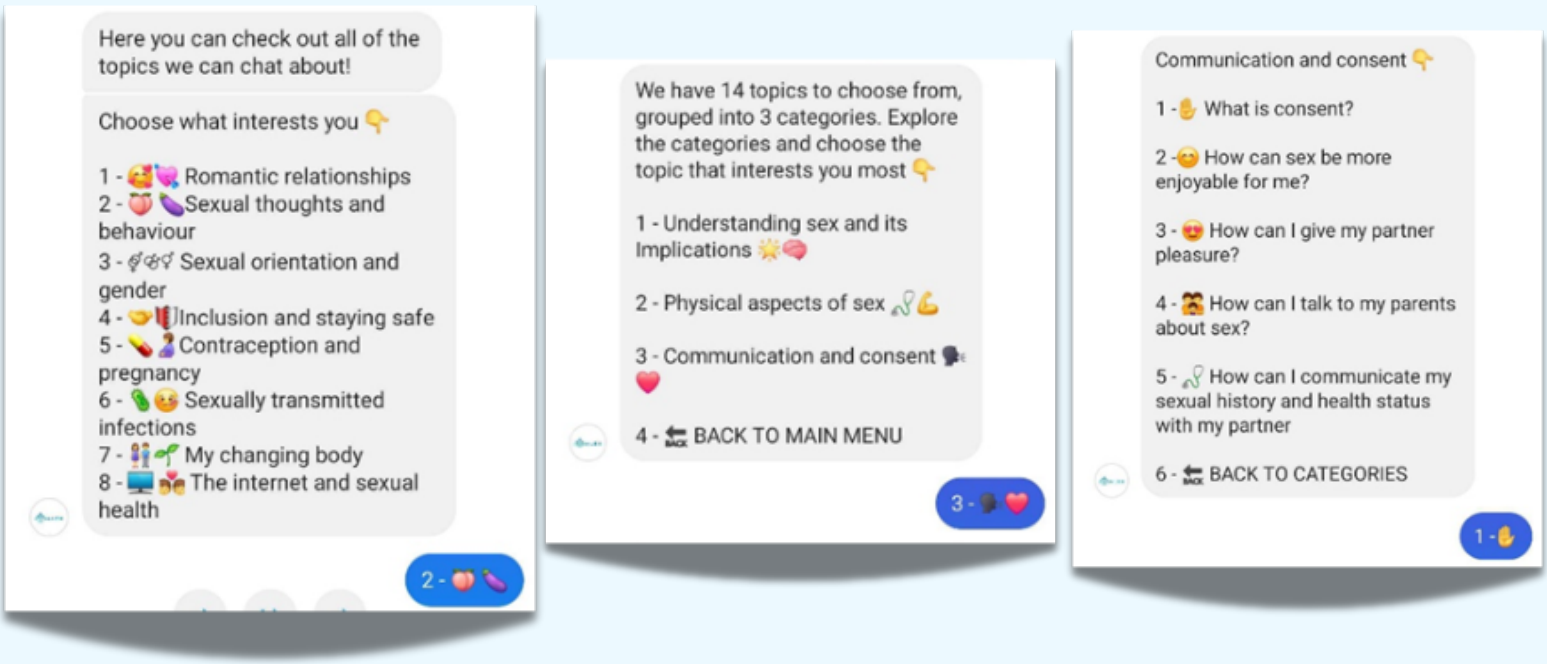
AlexBot includes materials that have been created in the lifetime of the Alex project. All these materials are seamlessly integrated and linked in the chatbots' structure, which offers to the users a range of possibilities for learning. Also, the PDF versions of the lessons are available (links to them are integrated in each topic of the chatbots' dialogue).

- Ensure that all media types are seamlessly integrated into the chatbot's flow, enhancing the learning experience without causing distraction.
- Pay attention to where you place additional resources. They should not be too condensed, but at the same time not too far apart in the dialogue.
- Take into account the viewing time of the additional resources, as many additional resources also mean a longer lesson time.
- In addition, allow the user to view the additional media resources later or skip them if they are not interested at the moment.

## PRIORITISING THE RIGHT LAYOUT

The content you want to provide with the chatbot needs to be structured and broken down into manageable sections. Use headings and subheadings to guide the user through the content, if possible. If the platform doesn't allow the differentiation of the font, you can use different symbols (*, -, ..., ;, #...) or capital/small letters to provide the heading/subheading status of the content.

The example below shows the topics, broken down into subtopics for easier content management. The main menu is shown first, and then the possibility to transition to one of the subtopics.

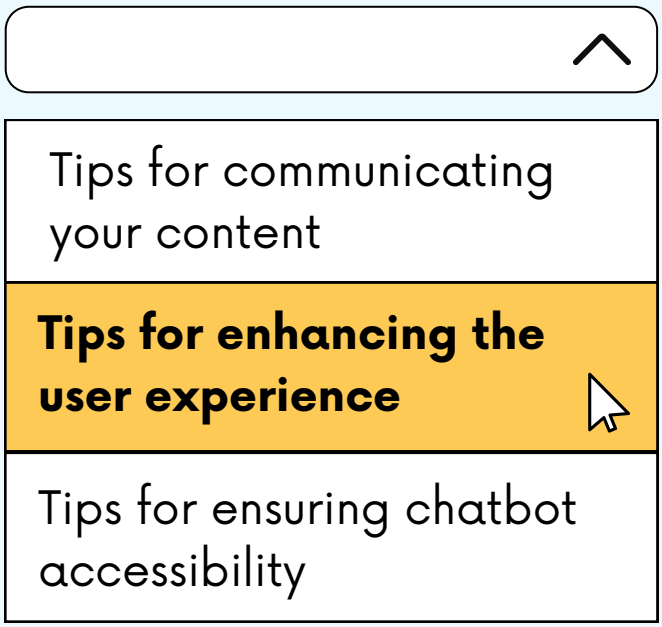



Source: Alex chatbot – Main menu / Sexual thoughts and behaviour / Communication and consent

- Offer a structure that will allow the user to transition between different topics. Divide the topics from the main menu into sub-topics, which you can connect, even between flowing dialogue, if you discover a connection to it. This makes it easier for the user to get to their answers as quickly as possible and offers them topics already related during the dialogue.

- Dividing the content into a few sections within the lesson should also be considered, especially if it is longer. The user can easily jump to the wanted section. The content can be divided by a topic or by type (a quiz, media resources, text content...).

- Ensure there is enough whitespace to avoid clutter and enhance readability. This helps in making the content less intimidating and more approachable. As written above, take into account the reading and comprehension skills of your target group and follow the inclusivity guidelines for writing appropriate for people with reading or learning difficulties.




The main goal when creating a chatbot is to make it as efficient and useful as possible for users. However, to make the user experience as simple and efficient, we need to follow a few guidelines.

## Give the chatbot a personality.

To give the user the feeling of talking to a peer and not a robot, give the chatbot a name and some human characteristics. Based on the topic the chatbot specialises in and the target users, create personality traits for the chatbot. You can choose to give it an age, an occupation, a favourite colour, as well as character traits such as trustworthiness, openness, acceptance, inclusiveness, support... You can build the character with emojis that will add visual impact and thus make the interaction more alive and less robot-like.

If the chatbot platform allows us to do so, a chatbot can name the users and remember some previously selected choices (e.g., which topics the user has read and which ones they have not). This offers a more personalised and engaging experience for the user.

An example of offering different languages from AlexBot:


## The structure's key points.

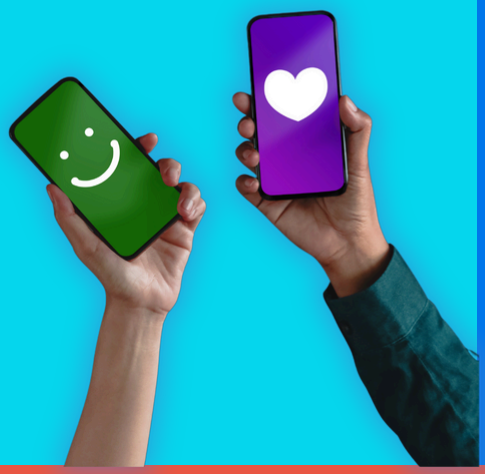
The structure should be intuitive and suitable for a wide range of users so they can quickly learn to use it. Important points to consider here are the use of:

- Control buttons - navigation buttons (stop, start, menu, help ...)
- Main menu (to offer the main topics and choice of languages...)
- Quickly accessible help - if the user gets lost, the chatbot offers help as quickly as possible and guides the user to the desired destination
- Balancing the text and multimedia material for better engagement and more interactive experience, together with connections among flows.
- Using clear and simple language.

When the user starts the dialogue with the chatbot, the option for the language choice must be given at the beginning if a chatbot offers different languages. Then the dialogue continues with the main chatbot characteristics and prompt's presentations (start, stop, menu, help...) as an introduction for navigation through the chatbot. In the next step show the users the main menu and give them an option to choose the topic. If your chatbot offers other options, structure them in a meaningful order.

## Maintain a consistent layout and design throughout the chatbot to provide a familiar and comfortable user experience.

The structure of the dialogue is important to make it easier for the user to follow and manage the content.



## Ensure smooth functioning by gathering feedback.

Feedback can be gathered from users with the option to send feedback, which allows them to immediately report a possible error or malfunction of the chatbot. For example, when someone finds a bug to fix, you can be informed via e-mail. This way you can act quickly and provide the necessary support to get the chatbot working properly again. We have not taken advantage of this option when creating AlexBot, as we tested the chatbot in advance and any necessary corrections were made before the chatbot was given to the users.

## Ensure compliance with relevant data protection regulations for data security and assure users their conversations are confidential.

Additionally, it is recommended to limit data collection and educate users. Avoid storing sensitive information unless necessary and educate users on the required information type and alert them against sharing sensitive data or passwords. Teach young users about the importance of protecting their personal information. Encourage them to share only what they are comfortable with and to be cautious of the information they provide.

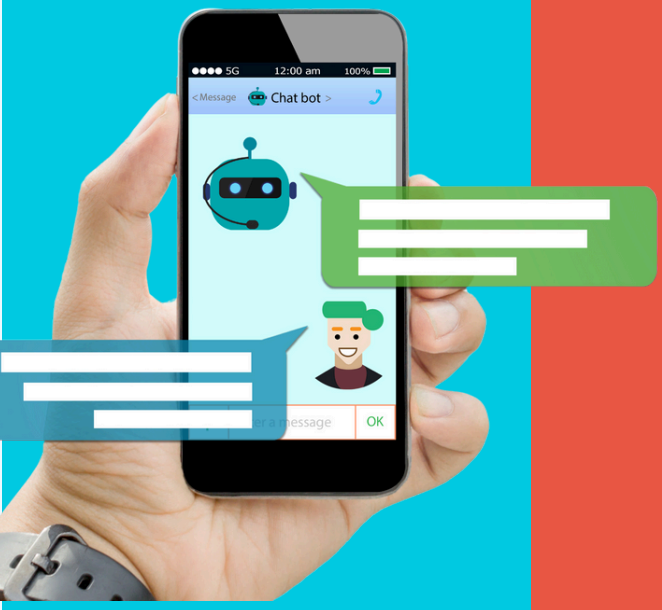
## Test it!

Test everything before submitting for actual use. Reduce images or add reading time with delays or shorter texts if necessary. Make sure that the chatbot is still responsive and quick to load after adding all of the content.

## Optimizations for different environments and users.

Mobile devices, often the primary access point for youth, require a responsive design with touch-friendly interfaces, quick load times, and minimal data usage. Desktops and tablets may offer more screen space, allowing for richer media and detailed information, but must still maintain simplicity. Consider diverse internet speeds to provide wide accessibility; the chatbot should function smoothly even in low-bandwidth settings.

ALEX




## Choosing the right platform for chatbot creation depends on the chatbot's complexity, intended use, and target audience.

Platforms like Dialogflow and Microsoft Bot Framework offer advanced natural language processing (NLP) capabilities, enabling more sophisticated, conversational interactions ideal for complex SRH topics. On the other hand, simpler platforms like ManyChat or Chatfuel focus on ease of use, making them suitable for quick deployment with rule-based interactions. Check also integration options you prefer, some platforms seamlessly integrate with social media channels, while others are better suited for websites or custom apps.

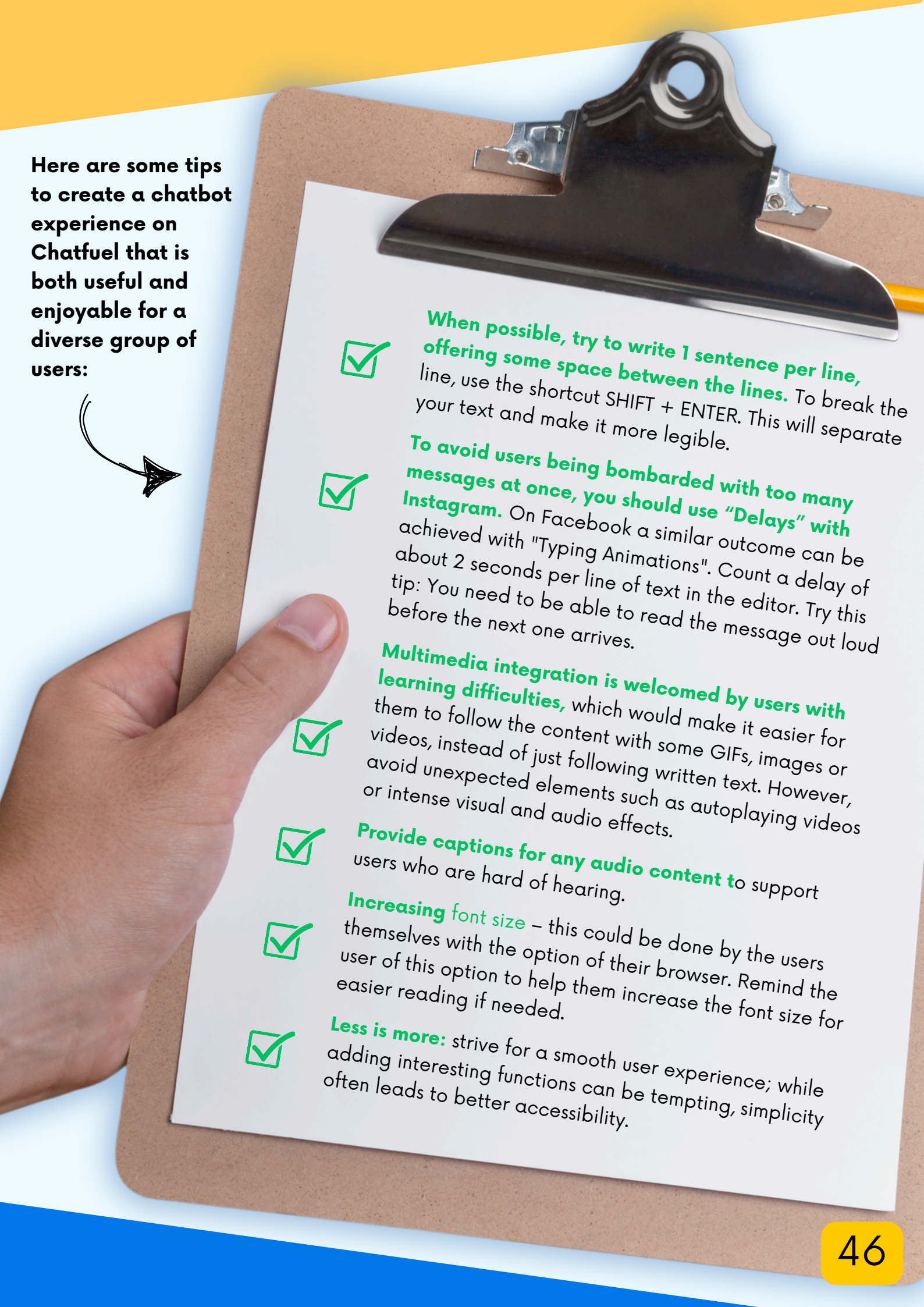


When planning your educational chatbot, consider how to make it accessible to the widest audience, including people with disabilities. Ensuring accessibility is not merely a technological concern but foremost a value-driven choice that advocates for fairness in society by acknowledging diversity in abilities. The concept of inclusive design stems from this principle.

Inclusive design means creating a service or product that considers the diverse needs of the population, making it usable for as many users as possible. Besides offering various adaptations of content, inclusive design recognizes diversity and uniqueness, respecting differences in language, gender, culture, age, and other dimensions.

In the context of a chatbot, inclusive design serves a dual purpose: ensuring content accessibility for users with disabilities while keeping the interaction fun and engaging. The point is: a chatbot should be easy to navigate and understand for everyone, regardless of their abilities, without sacrificing the enjoyable elements, hence it is meant to be an interesting interaction besides being educational. With a good balance of functionality and entertainment, an inclusive design can cater to a wide range of users, ensuring that most of the individuals, including those with some disabilities, have a positive and experience.

**Here are some tips to create a chatbot experience on Chatfuel that is both useful and enjoyable for a diverse group of users:**



- **When possible, try to write 1 sentence per line, offering some space between the lines.** To break the line, use the shortcut SHIFT + ENTER. This will separate your text and make it more legible.
- **To avoid users being bombarded with too many messages at once, you should use "Delays" with Instagram.** On Facebook a similar outcome can be achieved with "Typing Animations". Count a delay of about 2 seconds per line of text in the editor. Try this tip: You need to be able to read the message out loud before the next one arrives.
- **Multimedia integration is welcomed by users with learning difficulties,** which would make it easier for them to follow the content with some GIFs, images or videos, instead of just following written text. However, avoid unexpected elements such as autoplaying videos or intense visual and audio effects.
- **Provide captions for any audio content** to support users who are hard of hearing.
- **Increasing** font size – this could be done by the users themselves with the option of their browser. Remind the user of this option to help them increase the font size for easier reading if needed.
- **Less is more:** strive for a smooth user experience; while adding interesting functions can be tempting, simplicity often leads to better accessibility.

If you are uncertain about any of these solutions and individuals with disabilities are not involved in the design phase, take the time to have your chatbot tested by peers who face the suggested limitations, and listen to their feedback. This user testing will provide valuable insights into the real-world usability and accessibility of your chatbot, helping you identify potential issues that you may have overlooked. Additionally, the feedback received can lead to significant improvements, ensuring that your chatbot meets the needs of a diverse user base more effectively.

**It's important to note that despite all efforts, your chatbot may not be accessible to everyone. Inclusive design does not mean that every person, regardless of their abilities, must be able to use a service. Instead, it is an approach that enables accessibility for a broader range of users, demonstrating a commitment to inclusion and diversity.**

# < CONCLUSION / >

**As artificial intelligence becomes a core part of various fields, the use of chatbots, particularly for educational purposes, is increasingly seen as the norm. However, when it comes to sharing knowledge with young people, this norm must also be viewed as a responsibility. That responsibility lies primarily with the professionals this manual addresses: youth workers, educators, teachers, and others involved in youth education. At the same time, our partnership, as a group of experts working on the topic of sexual and reproductive health, acknowledges our own duty to approach this issue with care and integrity. Therefore, we have given clear, multifaceted and practice-based guidance in the proposed manual.**

We've based our guidance on our experience in the process of creating the Alex chatbot and all the content produced in the project during its development. First and foremost, we see great potential in the use of chatbots for education, not only for the teaching of sexual and relational health. A chatbot, thanks to its privacy of use, can become a kind of tutor, mentor or simply a guide to worlds not entirely clear and known to young people. Nevertheless, we consistently emphasise to young users that a bot is not a human being, which they must not forget in the process of interaction. Especially when its application concerns a topic as sensitive as sexual and reproductive health.

In the chapters covered in the manual, we have explained in condensed content what a chatbot is and what it is based on. We have demonstrated that chatbots are particularly useful in sex education for a number of reasons, providing users with the confidentiality and security of a conversation that they can withdraw from at any time without consequences. They can also fill a gap in those educational systems where there is little or no room for topics addressing sexual activity.

Accordingly, we have allocated space in the manual for a step-by-step description of the procedure for creating a chatbot using the Chatfuel platform. We started with a suggestion to think about the goals for which we want to create an educational chatbot, went through the technical aspects of creating and developing an account, and ended with a suggestion to regularly review the application and adapt it to rapidly changing technical conditions. We enriched our guidance with helpful images as a visualisation of the given content and a facilitator for its understanding.

As a conclusion, we have included in the form of best practices all the insights and actions we implemented during the creation phase of Alex: a bot for sex education. In these best practices, we focused on tips for content, language, structure, multimedia, navigation and interactive elements in the app. We did not forget to point out the need for accessibility and inclusivity of chatbots for users with special needs.

**What will the future of chatbots in education look like? It is difficult to answer this question unequivocally, but certainly their potential is growing every year. The development of technology and the fact that the incoming generation Alpha cannot recount a world without the everyday use of these tools from an early age indicates that neither formal nor non-formal education can do without chatbots as a tool to support the learning process. AI in the education market is expected to exceed $20 billion in 2027.[2]**

One might be tempted to say that chatbots will become increasingly personalised, which is also mentioned in the manual. And the one thing we can certainly look out for is to maintain and insist on the incorporation of an ethical dimension in the use of artificial intelligence and to give such direction in youth work to education professionals. Therefore, the use of chatbots in teaching young people is encouraged, but with constant awareness about the various possibilities of this tool and the application of a common-sense approach. We wish all readers interested in the implementation of chatbots in their own practices the best of luck in the creation process and the practical use of bots in everyday practice!

[2] Inc., Global Market Insights. "Ai in Education Market Revenue to Cross $20B by 2027; Global Market Insights, Inc.." PR Newswire: press release distribution, targeting, monitoring and marketing, June 23, 2021. https://www.prnewswire.com/news-releases/ai-in-education-market-revenue-to-cross-20b-by-2027-global-market-insights-inc-301318889.html.

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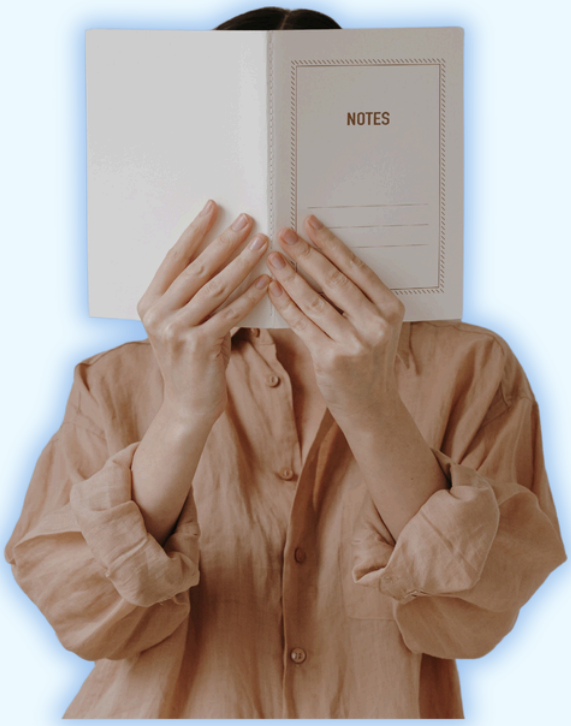



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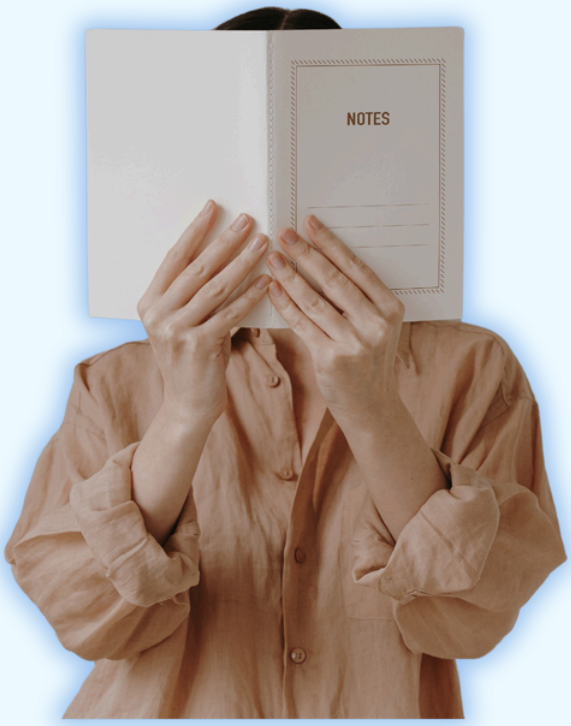

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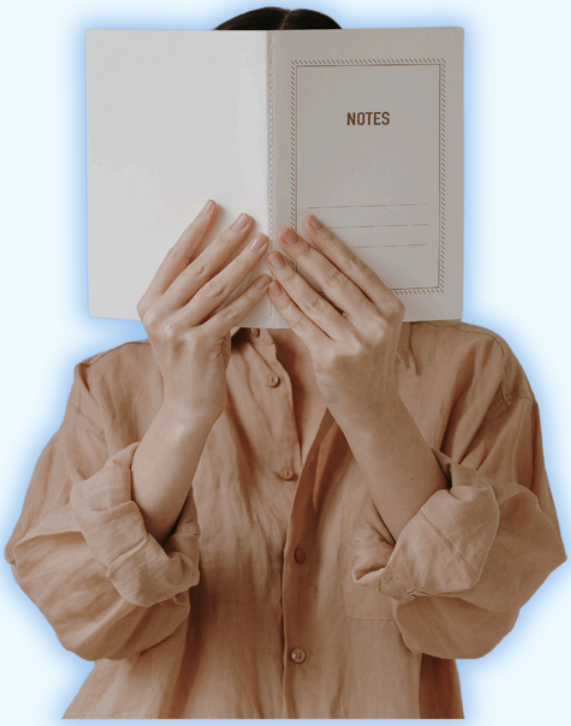

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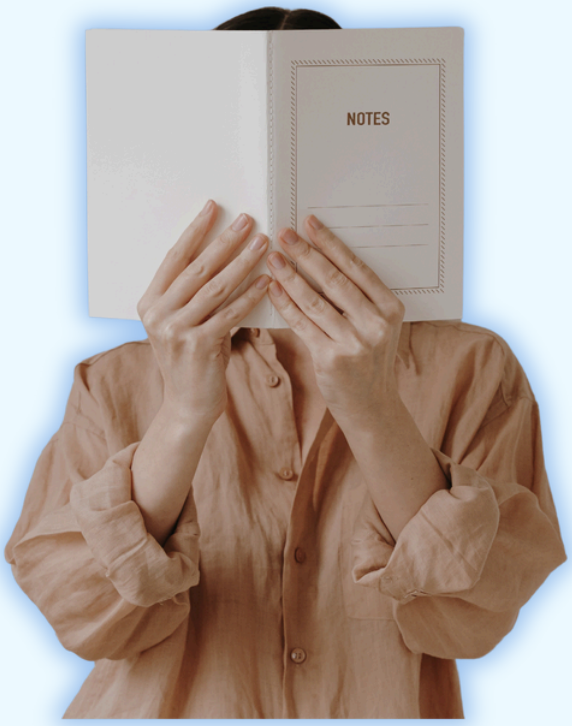

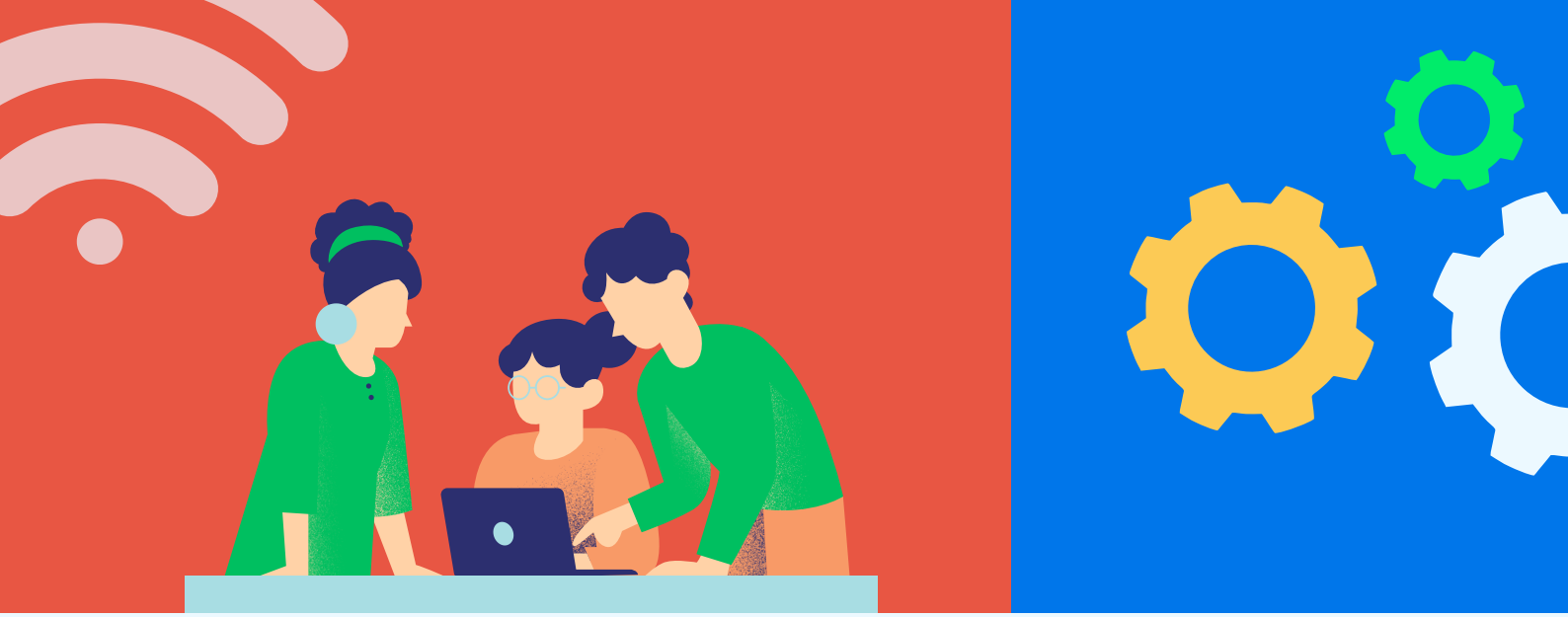

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