EMOTIVE Dialogic Chatbots: A How To Guide

Working Draft

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Introduction

This toolkit is a result of research completed by the EU-funded EMOTIVE Project. EMOTIVE believes cultural sites are highly emotional places. Regardless of age, location or state of preservation, they are seedbeds not just of knowledge, but of emotional resonance and human connection. Affective experiences containing careful reference to a site’s cultural content have the power to transform heritage and museum visitor experiences, encourage repeat visits, facilitate direct and ongoing interaction between people, and improve educational impact.

An EMOTIVE experience is engaging, social, and collaborative while remaining personal to the individual visitor. EMOTIVE’s goal is to provide useful tools and frameworks to help anyone create experiences that foster this type of emotional experience. One such tool is the chatbot. As a form of intervention, chatbots are an inexpensive (or free as shown here) and innovative method of reaching your visitors where they are, whether that be on your social media pages, website, or as a companion to a physical visit to site. However, we feel their true strength lies in their inherently communicative nature, as tools that prompt conversations and challenge users through active engagement.

The approach presented in this kit is based on the facilitated dialogue methodology created for the International Coalition of Sites of Conscience known as the Arc of Dialogue\(^1\), as well as the tenents of historical empathy developed by Endacott and Brooks\(^2\). Using these methodologies as a framework for bot design we aim to create a tool that fosters collaborative and social interactions, and challenges visitors to connect the past to their own personal experiences.

Within this toolkit we hope you will find useful instructions and guidelines to enable the creation of affective dialogic chatbots. Following a (very) brief introduction to chatbots, dialogue and historical empathy, you will find a how-to guide including a series of suggestions and technical step-by-step walkthroughs to build your own bot on SnatchBot, a free web-based service. Additionally, an example chatbot developed by EMOTIVE for our Digital Education Kit is weaved throughout the guide to provide further clarity.

Thank you for your interest in fostering an EMOTIVE experience.

Best of luck!

Sincerely,

Sierra McKinney on behalf of the EMOTIVE Team

Chatbots

**Definition**: A chatbot (shortened from chatter robot) is a ‘conversational agent’ that engages users in conversation in a text-based medium.

Chatbots have become extremely popular in recent years as they can offer immediate and innovative engagement through a familiar method of communication. As chatbots can be developed for multiple platforms, including websites, email, and social media applications, in addition to physical installations, there is no need for users to install extra software or learn how to operate new applications.

During our research we identified two types of bots: information or info-bots, and bots of conviction.

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<th>Information Bots</th>
<th>Bots of Conviction</th>
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<tr>
<td>• Primary aim is to offer information.</td>
<td>• Primary aim is to challenge and provoke.</td>
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<td>• User directs conversation.</td>
<td>• Bot directs conversation.</td>
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<td>• In heritage settings, act as informational guides or visit aids.</td>
<td>• In heritage settings, act as imaginative/creative interpreters.</td>
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While info-bots can be useful to provide factual information and answer visitor questions regarding practical matters such as opening hours or prices, we feel that to truly challenge visitors and generate affective engagement it is necessary to use a bot of conviction.

**Extra Credit**: Chatbots are still relatively rare in the heritage sector and where they do exist they tend to be information bots. If you would like to learn more about existing bots check out the following:

**The Anne Frank House Chatbot**
Available at [https://www.facebook.com/annefrankhouse/](https://www.facebook.com/annefrankhouse/).
This is an excellent example of a heritage information bot in action. This Facebook Messenger bot provides both practical details to help users plan their visit and information about Anne Frank and her history.

**Can Heritage Bots Thrive? Toward Future Engagement in Cultural Heritage**
This open access paper provides a comprehensive overview of three chatbots used in the heritage sector. The author reviews common limitations and the future potential of bots.
Historical Empathy

**Definition.** Historical empathy involves cognitively and affectively engaging with historical figures in order to better understand and connect with the past. It aims to foster a sense of care and cultural understanding that have relevance both to the past and to one's present-day life.

Initially developed for use in formal history education, historical empathy’s structure provides a useful framework to generate emotionally resonant experiences. As defined by Endacott and Brooks, it consists of three key components:

- **Historical Contextualisation:** The understanding of the social, economic, political and cultural context of the time period and location to assist in understanding historical perspectives and worldviews.

- **Perspective Taking:** The process of understanding the lives of people in the past through the point of view of the personal experiences, attitudes, and beliefs of historical individuals in order to try to understand how a historical individual may have viewed their own circumstances.

- **Affective Connection:** The development of a personal connection to the past, through the recognition of a shared humanity. This can include the consideration of how individuals in the past may have been affected by emotions such as joy, fear, and love.

In our work we have extended the application of affective connection and perspective taking to encompass contemporary individuals, including family, friends, and others partaking in the experience.

We feel that this creates a more holistic historical empathy, in which empathy is garnered for historic and contemporary people by developing deeper connections between the past and present.

Historical empathy is a powerful tool. When used, it can result in an increased interest in history, improved knowledge retention, and can help individuals appreciate the variety of human experiences in the past and the present.

**Extra Credit:** For further reading we recommend the following foundational texts as an introduction:

- **An Updated Theoretical and Practical Model for Promoting Historical Empathy.**

- **Teaching History for the Common Good.**
 Dialogue

**Conversation:** Sharing information and ideas in order to express one’s views without any intended impact on the listener.

**Discussion:** Sharing information and ideas in order to accomplish a specific task.

**Debate:** Sharing information and ideas in an effort to bring others into agreement or alignment with one’s position or belief.

**Dialogue:** Sharing ideas, information, experiences, and assumptions for the purposes of personal and collective learning.

Definitions by Bormann and Kempt (Smithsonian Beyond Bollywood, (n.d.) p.4)

Facilitated dialogue is an excellent tool to foster the aims of historical empathy and create EMOTIVE experiences. Dialogue invites individuals of all backgrounds, experiences, ages, and heritages to engage with one another in a ‘brave space’ that encourages self-reflection, self-discovery and collective learning. To participate in true dialogue, individuals need to keep an open mind and actively listen to others without passing judgement or making assumptions. In open dialogue, multiple perspectives are appreciated and different ‘ways of knowing’ are considered.

Traditionally, dialogue is guided by a neutral facilitator to ensure communication occurs in a safe space. However, EMOTIVE has taken a slightly different approach.

**The Question of Neutrality**
Neutrality can be difficult (or impossible) to achieve when the facilitator is also providing the content knowledge and is in a position of authority. Facilitators can be authorities, however they should acknowledge this role and provide space for other voices.

**A Brave Space**
Difficult conversations can result in negative feelings. Dialogue might not be comfortable. EMOTIVE argues that negative feelings should not be minimized, but rather space should be provided for participants to discover, understand and work through these feelings - a ‘Brave Space’.

**Extra Credit:** These guides provided significant inspiration for this toolkit. They clearly cover important concepts and provide an excellent example of a dialogic interpretative program for a single theme or topic.

The Smithsonian’s Americans Toolkit:

The Smithsonian’s Beyond Bollywood Toolkit:
Facilitated Dialogue
A Basic Framework

The Arc of Dialogue, developed by Tammy Bormann and David Kempt for the International Coalition of Sites of Conscience, is a useful framework for structuring dialogic experiences. The Arc consists of four phases: Phase 1 - community building, Phase 2 - developing personal connections, Phase 3 - exploring alternative perspectives, and Phase 4 - synthesis and summary. With this structure, the Arc aims to foster a ‘brave space’ where participants are able to explore their own and others’ perspectives about a topic or shared experience.

Defining the EMOTIVE Chatbot

Now that we have reviewed the basics of chatbots, historical empathy, and dialogue, it is time to put it all together to define exactly what makes an EMOTIVE chatbot different. At their core, EMOTIVE chatbots are affective, challenging, and social. These chatbots are designed to be used by groups of individuals together. In this way, the chatbot acts as a guide to facilitate conversation between individuals. The group uses the information and questions provided by the bot to provoke new ideas, examine members’ different beliefs, connect to the past, and work together to continue the conversation with the bot as a team.

Throughout the rest of this guide, you will see examples from one of our EMOTIVE chatbots, Bo. Bo was the final stage of a multi-part education kit designed for use by children ages 8 to 16. We tested the bot with groups of four to six members from the UK’s Young Archaeologists’ Clubs. The details of this kit can be found on our website at http://athena.emotiveproject.eu/schoolkit/.

Over the next few pages we will work through the facilitated dialogue framework and our own EMOTIVE models in detail to create a social and EMOTIVE bot experience.

Phase 1: Community Building

**Aim:** To introduce the topic, foster community and create a 'brave space' in which participants feel they are able to engage.

**Components:**
- Introduce the topic and facilitator (i.e., The Bot).
- Identify the goal of the dialogue.
  - Traditionally this is to explore alternative perspectives through listening and engaging with one another.
- Establish guidelines for participation.
  - These may include:
    - Be respectful and listen carefully.
    - Remain open to the opinions of others.
    - Allow everyone to participate.
- Introduce the participants and get to know one another!
  - Icebreaker activities are a helpful tool here. Ideally every member should contribute at this stage.

**Questions:** The questions asked during this phase should be welcoming, non-threatening, and allow everyone to participate. Try asking about personal experiences or thoughts as these don’t require the participants to have pre-existing knowledge.

**Examples:**
1. Tell us about your favourite fairytale? **Topic:** Storytelling
2. Which artefact do you think is the most useful? The most beautiful? **Topic:** Decoration and Art
3. What song, if any, do you listen to on repeat? **Topic:** Music
4. If you could live anywhere in the world where would you go? **Topic:** Immigration
5. Which birthday milestone do you think is the most important? 1? 16? 50? Why? **Topic:** Rites of Passage
Phase 1: A Chatbot Example

The following are Phase 1 example statements from our chatbot, Bo. In this phase, the bot gives an introduction to the topic, and provides an opportunity for the participants to begin to get to know each other. Due to the amount of information shared by the bot, this is the phase with the least amount of user engagement with the bot.

Hi!
You can call me Bo.
It's short for Bot.... ChatBot that is.
I’ll guide your discussion about egalitarianism (e-gal-e-terry-in-ism)
In a discussion, it’s important that everyone feels comfortable sharing their thoughts and experiences.
Our goal is to learn from each other and think about the past in different ways.
To do this we need to agree to listen to others and be respectful of their opinions. So, for this conversation do you agree to:

- Let everyone have a chance to talk?
- Listen when others are speaking?
- Be kind and respectful?
  - Yes
  - No

**Top Tip:** Always provide options (even if you know which answer you would like the participants to select) and be prepared for the non-ideal response. For example, if ‘No’ is selected, Bo responds with a bit of humour before directing the students back to the task at hand.

I see we are feeling sassy today....
As I’m sure you’ve learnt in school, sharing is caring... and caring is agreeing to be nice to make a poor ChatBot's life easier.
All joke's aside, discussion only works when everyone is respectful.
Now quick! Starting with our narrator, go around the circle and say which object from the experience was your favourite or you found the most interesting.
Phase 2: Developing Personal Connections

**Aim:** To develop a personal connection to the topic and create a sense of personal investment or attachment. This phase also provides an opportunity to explore how various personal experiences may share similarities or differences with other people in both the past and the present.

**Questions:** The questions asked during this phase should try to connect the lived experiences of participants to the topic and the past. Focus on questions that are open-ended, and refer to general themes and concepts surrounding the topic and participants’ daily lives rather than their knowledge of historical facts.

**Examples:**
1. What impact has art had on your life? **Topic:** Decoration and Art
2. Can you remember the first time you experienced fear? **Topic:** Storytelling
3. What do you consider to be your heritage? Why? **Topic:** Immigration
4. How do you define family? **Topic:** Social Organisation

**TOP TIP:** Some of these topics may be very personal and people may be hesitant to participate. That is why creating an environment in Phase One, where people feel open and listened to, is so important. If challenges do arise, it is important for a representative person to also be physically present to provide further facilitation and guidance. This is explored further on page 17. Remember though, when individuals do respond, have the bot provide an opportunity to follow up and ask “why” to prompt further reflection.

**Examples from Bo the Chatbot**

- A house and a town hall are very different buildings with different uses, appearances, and roles in a community.
- As a group, come up with a few other buildings in your town that are of special importance or are places where people gather.
- In 30 seconds list them here. Quick, start now! a school, a grocery store, a church
- Why do we build these types of buildings? What activities take place there? What is their purpose?
- Each has its own use like religious ceremonies or education. They are all gathering places though with specific functions.
- Interesting interpretation!
- One reason archaeologists believe Çatalhöyük was an egalitarian society is because the buildings are very similar.
- Unlike in your town, buildings like a school a grocery store and a church maybe didn't exist.
- Instead activities that take place in these type of buildings were probably done in houses.
Phase 3: Exploring Alternative Perspectives

**Aim:** Prompt participants to take different perspectives and to consider alternative points of view – both related to people of the past, peers, and others participating together in the dialogue in the present.

**Questions:** The questions asked during this phase should challenge participants to examine their own assumptions and consider the contexts (social, economic, historical, etc.) that have informed the perspectives of others. It is helpful for questions to be direct and focused in their scope, however you should avoid yes or no responses. While it may seem difficult, questions in this phase should, to some extent, provoke the participants to question their preconceptions.

**Examples:**

1. What values have you learnt from the stories you were told as child? What morals were presented in the stories you heard today?
   *Topic:* Storytelling.

2. How can art represent culture? How does the type of art something is affect how society values it? *Topic:* Decoration and Art.

3. What activities do you think were done in the Palaeolithic by women? Why do you think this? *Topic:* Gender Equality.

**Example from Bo the Chatbot (Responses removed)**

- *People used the roofs as their streets!*

- How would it affect your relationships with your neighbours? Do you think you would be closer with them? Share more? Do you think it would you be difficult or frustrating?

- Unlike in apartments, townhouses or terraced houses of today, where your neighbour lives right on the other side of the wall, houses in Çatalhöyük would build two walls immediately beside each other.

- Even though these walls were almost touching, they would still build two separate walls!

- So each individual house was a completely separate unit. Houses also seem to have stored their own food and made their own tools.

- Discuss if this changes how you view the relationships between neighbours. Why would they always build two walls? Does having two walls mean they weren’t as close? Do you think this was for social reasons or practical ones? Why do we share walls?

- Now I’m curious! Did your discussion make you think about anything differently?
Phase 4: Synthesis and Summary

**Aim:** Summarise the dialogue, lessons learned, and topics explored. This is also a space to ask the participants to reflect on their initial thoughts and consider how the dialogue may have altered their perceptions about themselves, the past, and each other.

**Questions:** Questions in this phase should prompt reflection. This can be done by revisiting earlier statements and re-asking earlier questions, identifying what participants learned and how their beliefs were challenged, or exploring how the dialogue may affect their actions in the future.

**Examples:**

1. What have you discovered today that you would like to learn more about? **Topic:** General Summary Question
2. In what ways did our discussion make you think differently about the history of Canada? **Topic:** Canadian History
3. How have you changed your mind about the impact of the media on our perceptions? **Topic:** Immigration
4. What did we discuss that challenged your ideas? What did we discuss that reinforced things you already believed? **Topic:** General Summary Question

**Example from Bo (Responses removed)**

At the beginning of our conversation, you listed the following as benefits of egalitarianism:

- Everyone would have access to the goods and resources they needed
- During our discussion we learnt that each household stored their own food and everyday tasks like cooking and tool-making were done in each house.
- Now that we know all of this, it's time for one more vote! Would you like to live in society like Çatalhöyük?
  - Yes!
  - No!
  - We can't agree!

So you like the egalitarian system! I'm sure the people of Çatalhöyük gladly welcome you in their community!

What made you that this would be a nice way to live? How would you convince others that an egalitarian system would be positive?

That's very interesting. Thank you for sharing!

To finish, as a group let's return to the present and look to our future.

Are there any parts of egalitarianism you think we should include in our society? What are they?

**Revisiting initial thoughts.**

**Summarising new knowledge.**

**Reflecting on the topic, evaluating change in beliefs.**

**Applying lessons to the present.**
Modelling Content

Having examined the Arc of Dialogue, it is time to start thinking about how it can be applied in your bot. While the Arc of Dialogue serves as a fantastic base, this is your opportunity to be creative. How you apply the Arc can change depending on the topic and the goals you hope to achieve. For Bo, we followed the Arc, however at the third phase we asked participants to select one of three exploration cards. This gave the participants a sense of choice and also required them to come to a group consensus, fostering team work.

Over the next few pages we explore alternative models. How you apply these is completely up to you! What matters most is: don’t be afraid to get creative! An example of each model can be found on our website at: http://athena.emotiveproject.eu/chatbot.

The Nesting Doll Model

Description: In the Nesting Doll Model, the Arc of Dialogue is repeated again in its entirety within the third phase of the larger Arc.

We used Exploration Cards as an opportunity to investigate specific topics related to the theme in more depth (i.e., gender equality, architecture, etc.). As all four of the Arc of Dialogue phases were included within each individual Exploration Card, each began with theme related community building and concluded with a topic-specific summary. Examples of the second and third phase of our architecture Exploration Card can be found on pages 10 and 11.

Key Considerations:

- Provocation should occur slowly, as participants are challenged to directly consider alternative perspectives in the third phase of the Arc.
- The Nesting Doll Model allows users to reinforce personal connections as new information and alternative perspectives are brought forward.
- As the provocation is relatively gentle and conversation tends to flow, this model is best used in instances where you want participants to explore a topic more deeply.
The Funnel Model

Description:
The Funnel Model asks participants to convince the bot. It begins with a question after which the bot asks a follow up question. Following this, the bot disagrees ("I’m not sure about that" “I might disagree") and ends with the phrase (or a variant of) ‘convince me'. This provocation makes the participants argue their cause, and in doing so, truly evaluate their beliefs. Whether or not they succeed is up to you!

Key Considerations:

• Provocation occurs approximately half way through the dialogical exchange.

• This challenges users to appeal to an alternative perspective (the bot’s). The questions will likely be in the third person and refer to topics that apply to the group as a whole, rather than a single person’s beliefs (i.e., Should we bury our dead under our beds?).

• While the bot is able to hold a final stance of whether or not they agree, they still need to be ‘unconvinced’ by both sides. Make sure that the topic is one that can and should be debated (i.e., avoid having the bot argue against gender equality – if you’d like to do this, perhaps alter this model to only use one ‘side’).

• Try questions that examine multiple theories or explore hypotheses we don’t have clear answers to!
The Figure 8 Model

Key Considerations:

- Provocation occurs near the beginning of the dialogue.
- Primarily uses statements which apply to the individuals in the group and the actions they would take or beliefs they hold (i.e., You would bury someone under your bed, right?).
- As the bot makes a provocative statement with which participants either agree or disagree, this model results in a clear binary. It is best used if you want to shock participants into considering an alternative view on a specific topic.

Description:

The Figure 8 Model starts by challenging the participants with a provocative statement or question.

After a few interactions (which differ depending on if the group agreed or disagreed), the group’s conviction is challenged again.

After another set of interactions, determined by the group’s negative or positive response, a final summarizing statement is made.

EMOTIVE Templates:

To help start the bot building process, EMOTIVE has created a sample template for each of these models. They can be found on the EMOTIVE website: http://athena.emotiveproject.eu/chatbot.
Digital Dialogue

Traditionally, facilitated dialogue occurs without digital interventions. However, the inclusion of a chatbot, supported by in-person facilitation, provides numerous benefits, including the ability to simultaneously lead multiple small group dialogues, a novel and engaging experience, and a sense of distance that alters the group dynamic to foster collaboration, as it positions the discussion as between the group and the bot (or the group versus the bot) rather than individuals in the group versus other group members.

However, chatbot based dialogue does have its challenges! Here are a few things to remember.

**Top Tip: Planning**
As a bot’s dialogue is pre-programed, planning is key in order to guide the conversation in engaging ways.

- In instances where the bot needs to respond to a variety of potential user statements, use open ended responses (e.g., “I hadn’t thought of it like that”), but try to avoid repetition.
- To encourage further discussion, refer to earlier parts of the conversation, include participants’ own words, and build in spaces for their ideas to be brought back into the discussion (e.g., “When I asked you earlier you thought…”).
- Try to ask follow up questions (e.g., “Why does your group believe…?”).

**Top Tip: Personality**
It’s important for your bot to have a bit of personality! But the tone you take might vary depending on your topic.

- Who is your audience? What is your topic?
- Can your bot be silly? Stern? Naive?
- Give them a name! And a photo – remember it doesn’t have to be a person.
- Embrace the use of photos, emojis, videos and other media.

**Top Tip: Platform**
When developing a chatbot it is important to choose the right platform.

- Who is your audience and where can you reach them?
- What platforms are you already using? (i.e., do you have a website, Facebook page, or Twitter account?)
- Access practicalities: are users required to login (i.e., Facebook)?
- Who has access to the collected data? How is it stored? What data, if any, do you want to collect?
- How will the chatbot be hosted? What is the long term plan for upkeep, use and further development?

Our Bo: A sassy plaster artefact from the New Stone Age site of Çatalhöyük.
Doing Work in a “Good Way”: Ethical Considerations

Facilitated dialogue is, without a doubt, a powerful tool. However, as with all heritage interpretation, it is our duty to ensure we use this technique in a good and ethical way. This duty is further complicated by the inclusion of digital technologies such as chatbots. While each project you work on will have different ethical considerations, here are a few of the lessons we have learned and challenges we have encountered along the way.

**Human and Digital Facilitation?**
While the chatbot is a valuable tool in facilitating and fostering dialogue, we have found that it works best if accompanied by an in-person facilitator (i.e., a teacher, museum worker, etc.). In these instances, the human does not lead the dialogue but rather ensures that it occurs in a manner that is respectful and beneficial. The human facilitator is available to step in if it appears that the dialogue has become harmful to a participant. This does not necessarily mean avoiding participant discomfort, but ensuring that dialogue continues without cruelty or aggression. In our case, the human facilitator had to ensure sibling rivalries were left at the door!

Additionally the human facilitator can collaborate with the bot to prompt further discussion, follow up questions, and if necessary correct misconceptions that arise during the dialogue. We have found that the chatbot is excellent at revealing an individual’s preconceptions and, while many of these can be programmed into the Bot’s dialogue, a human facilitator can help work through the assumptions that arise that weren’t planned for! An list of example preconceptions that we discovered when we were testing our Digital Education Kit can be found on our website: [http://athena.emotiveproject.eu/schoolkit/ExplorationofEgalitarianismInstructions.pdf](http://athena.emotiveproject.eu/schoolkit/ExplorationofEgalitarianismInstructions.pdf)

**Ethical Technology:**
Working with technology can be quite difficult. During the creation of our chatbot, we discovered many potential ethical roadblocks. Our chatbot, Bo, was designed to interact with children, so we wanted a platform that would not require a log-in ID or an existing social media account. Further, we wanted to ensure that the only data collected were group responses and that our participants remained anonymous. For these reasons, we decided to avoid 3rd party social media platforms, such as FaceBook Messenger. Instead we hosted our Bot on a purpose-built website. We explore how you can do this later, in our technical guide.

At times, social media platforms may be the best option for your Bot. That is ok. But before using them, remember to consider what data are being collected, who is collecting them, and how the data will be used by those companies.
Activities, Ideas, and Suggestions

To encourage interaction between participants, it is helpful to incorporate various types of communication. These can be applied throughout the various phases of the Arc of Dialogue, however we have found that it is helpful to include a variety of different activities to lessen repetition and encourage continued use. This is an excellent way for your bot to engage the audience, demonstrate its personality, and foster dialogue. So be creative!

Top Tip: We use the following,

- **Selection of Cards**: This provides the opportunity for participants to select their own path. What each card represents can be known or a mystery! It has the added benefit of making the group come to a consensus by agreeing on one card to explore together.

- **Voting (followed by discussion)**: Each participant votes on a statement (either by secret or known ballot). Then the group discusses the results.

- **Small Groups**: Have participants break into smaller groups of two or three. In these groups, have them discuss a topic and come to consensus before presenting their thoughts to the larger group.

- **Argue Another’s Opinion**: Have each participant provide an opinion or thought on a topic. Then have another group member argue for that perspective (whether they agree with it or not).

- **Compare Lists**: Have each participant write a list or answer for one part of the topic (e.g., What tasks do you do everyday?), then write a second list to answer a follow up question (e.g., What did people in the past do everyday?). Have members compare their lists and discuss.

Other Ideas From the United States’ National Park Service³ (2019, p.27-30)

- **Popcorn**: Capture participants spontaneous thoughts by having them write them down ideas as quickly as possible for everyone to see.

- **Gallery Walk**: Participants read over several quotes or statements. After reading each quote, invite participants to write on a piece of paper which quote/statement moved them the most or that they agree with. Everyone then reveals their choice to the group.

- **Graffiti Wall**: Allow participants to illustrate their response/reaction to a question, statement, or quote rather than describe it in words. After everyone is complete, they then review the creations as a group.

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In this section of our guide we walk you through the individual steps to create your own EMOTIVE chatbot using SnatchBot. SnatchBot is a free online tool that is easy to use and requires little to no previous programming experience.

We are not associated with SnatchBot, but it is the tool we used to create our bots. SnatchBot’s bots can be used on multiple platforms, including websites and popular social media channels such as Skype and Facebook Messenger. While we recommend using a web based approach, the same steps are used for whatever platform you decide is right for you. Ultimately we hope that this gives you the flexibility you need to reach your audience!

Bots can be as simple or as complex as you want to make them. Throughout the rest of this guide, we start with the basics, then slowly introduce extra tools to help create a bot with visual interest and increased user engagement. We end with information about how to publish your bot to the web.

If at any point you would like extra information, please refer to the appendices at the end of this guide. We have included a visual dictionary that defines underlined terms. There are also comprehensive guides that explain the on-screen selection menus you will use throughout this process.

We have also created example templates that you can use as you work through this guide. They can be found on the EMOTIVE website: http://athena.emotiveproject.eu/chatbot.

Finally, if you have any additional questions, please refer to SnatchBot’s FAQs, which can be found at https://support.snatchbot.me/docs.
In this section we explain how to set-up a SnatchBot account and walk through the first steps required to build your chatbot! To begin, let’s orient ourselves to the SnatchBot Home Page. The option to create a bot is front and center. We explain the options shown on the two menus below in more detail on pages 40 and 41.

Website: [https://snatchbot.me](https://snatchbot.me)

To start, visit the SnatchBot website (link above) and login or register to access the program. This will require an email address and a password.
Building a Bot
Create a Bot

**Step 1. Select “Create Bot”**.
After you login you will see the screen to the right. If you need to access this page it can be found under **My Bots** on the side bar.

This screen will appear.

**Step 2. Fill in the information as appropriate.**
Remember, the name of your bot and its icon will be visible to your audience.

**Do NOT select “start with template”, as this feature is primarily targeted toward users who want to create chatbots for business.** It includes numerous functions that we won’t use, such as payment methods, telephone support, and prompts to gather personal information.

While we will not use it in this guide, if you are interested feel free to explore the available template options.

A new **chatbot** should appear on your home screen.

**Step 3. Access this bot by clicking on the icon.**
Now that we have created our bot, we will explore how to build an interaction. Interactions are what make up the content of a bot. This is where we can create a conversation.

An interaction consists of three components.

1) The bot’s message. This can appear to the user as a single or as multiple chat bubbles.

2) The users’ reply. The users can only reply with a single text entry after the bot’s message has been sent.

3) The connections to other interactions. These are If/Then statements and Fallback statements that determine the next interaction the user will be routed to.

Each of these components, including If/Then and Fallback statements, are explored in more detail on the following pages. First, we create and name an interaction. Next, we discover how to write a message on behalf of the bot. Lastly, we examine how to connect the interactions to create a longer conversation.

The Build Screen

Detailed explanations about these menus can be found on pages 40 and 42.
Creating Interactions
The Basic Bot Building Blocks

Now that you are familiar with the structure of an interaction, it is time to make one.


Step 5. Press “Add new interaction”.

Step 6. Select “Bot Statement”.

This is the interaction type we used to create Bo, an EMOTIVE chatbot. However, if you are interested, more information about other types can be found at [https://support.snatchbot.me/docs/interactions](https://support.snatchbot.me/docs/interactions)

Step 7. Add an interaction name.

How you name your interactions is entirely up to you. Do what works best for your own system and practice. However, as there can be dozens of interactions for a single bot, it may be useful to create a shorthand.

Step 8. Select “Add”.

Naming Top Tip

We use a P#.# naming convention. The P# identifies the part of the conversation or Arc of Dialogue phase (Phase One, etc.). The second number identifies where the user is within this phase (i.e., P1.2 is the second interaction of Phase One). If there are multiple interactions which represent the same part of the conversation, this is differentiated with a letter marker (i.e., if there is a yes and no version, add a Y for Yes or N for No).

Therefore P1.2Y is the Yes version of the 2nd Interaction of the first phase.
Creating Interactions

The Building Menu

Once you have created an interaction you will see the following screen. This is the Building Menu. It is where the interactions are built.

**Bot Message**

This is what the bot will say to the user. While there might be multiple lines to the bot’s message, they are all part of a single interaction.

The user cannot reply until every line of the bot’s text has been sent.

**Connections**

This is where we create *If/Then statements* that tell the bot how to react to the users’ response.

The *Fallback Statement* is written to determine what happens if the conditions of the *If/Then* statements are not met.

*This isn’t the bot’s reply to the user* (that would be the start of the next interaction). Instead this is a set of rules that the bot uses to determine the interaction the users should be sent to next.

It is like the instructions at the bottom of a choose your own adventure book (i.e., “If you respond with YES then go to page 6”).
Creating Interactions
Adding Text

Step 9. Add your text to the Bot Message box.

Text will appear as a single chat bubble unless separated by the following notation:

::next-#::

The number included in the code (shown here as #) will determine the time (in seconds) the bot will wait before sending the text written after this notation.

**Top Tip.** When developing your bot, have someone read messages out loud to determine how long a delay you should include between each message. We found that it may be much longer than you would expect!

The text in the box above will appear to the user like this.
Creating Interactions
Making Connections

Step 10. Under the Connections tab scroll down and select “Simple Connection” to create an If/Then Statement.

A new box, shown above, will appear.

Step 11. Under Item, select “response to this interaction”.

Step 12. Under Condition, select “contains (any part)”.

Step 13. Under Keyword, enter the words or phrases you would like the bot to look for.

Leave the Webhook option blank as we will not use this feature in this guide. Once you have entered your keywords an new box will appear.

Step 14. Select the interaction that the user will go to if the conditions of the If/Then Statement are met.

The selection boxes contain multiple options. Any of them may be useful depending on what you wish to do. We recommend trying different options. However, in our experience you will normally use “Contains (any part of)” and “Response to this interaction”.

The various options are explained on the SnatchBot support page: https://support.snatchbot.me/docs/connections
Creating Interactions
An Example

In this example, if the user’s response includes no or “Let’s wrap up”, then the user will then be taken to Interaction P4.1.

If the user’s response includes Card or “Another card please”, then the user will be taken to the interaction titled “Card Selection”.

While this example offers two options, you can create as many connections as you would like. This means you can create a wide variety of options to direct the conversation.

Returning to the “Choose your Own Adventure” example, each category of response leads down its own path, changing what the user sees or does. These paths may diverge, re-connect, or cross one another. If you are making a bot with a lot of potential paths, a diagram or mind map may prove useful! An example can be found on page 20.

What happens if neither of the conditions are met is discussed on page 30.
Adding Quick Reply Buttons

Quick reply buttons are multiple choice answers. They appear within the chat as clickable buttons that the users can select. They can be very useful if you are trying to direct the discussion onto specific paths. However, be careful to avoid too many quick replies, as it can begin to feel like a very limited and restricted experience.

Step 15. Go to the Connections tab of the Build Menu.

Step 16. Select the Disable text input checkbox.
This will prevent the user from typing in an alternative response. As our intention is to direct the flow of discussion, when using quick reply buttons we make sure this is selected.

Step 17. Find the Quick Reply section and enter your chosen word or phrase.

Step 18. Select Yes on the pop up to add the connection.

Step 19. Fill in the If/Then statement with “Response to this Interaction” and “Contains (whole word)”

The Quick Reply buttons are the last to appear, after the bot’s statement and any other images are sent.
Creating Interactions
Fallback Statements

The final aspect of an interaction is the **Fallback statement**. It determines what the bot will do if none of the conditions of the If/Then statements are fulfilled.

In our previous example, the bot reacted either positively or negatively to the user's keywords. What if the user responded with "I guess," "I don't know," or any other answer which you had not planned for?

The Fallback statement is a blanket If/Then clause which applies to any **unplanned response**. The Fallback you select will depend on the question that you have asked. It could be yes, no or a new third option altogether.

**Step 20. Go to the “Connections” tab under the Build Menu**

**Step 21. Scroll down to the Fallback Section and select an interaction of your choice.**

![Image of Fallback settings in a chatbot interface]

The Fallback statement can also be used to ensure that users are sent to an interaction **regardless of their answer**. As it is impossible to plan for every potential answer, it can be more useful to create bot interactions that work for a variety of responses.

**An Example from Bo:**

*(End of Interaction 1) User Response:*  We think the kids normally did the cooking.

*(Start of Interaction 2) Bot Reply:*  Interesting…. Why does your group think that?

As the bot will reply to any response with the same question, you need to program the bot to **always** go to the start of Interaction 2.

**If you want the user to go to a specific interaction regardless of their answer, program a Fallback statement as the only connection.**
Adding Variation
Adding Images

It can be helpful (and fun) to include non-textual elements in your chatbot. In SnatchBot this is done through cards. We have found the image and gallery options the most useful. We will explore each of these over the next few pages. Information about the other cards can be found at https://support.snatchbot.me/docs/card-types

Step 22. Go to the Cards tab of the Build Menu.

Images can be added to vary the user’s experience, contextualise information, or prompt additional discussion. These images will appear last, after the text in the “Bot Message Box”.

Step 24. Select the blue arrow on the image display to upload your picture.

Step 25. Set the delay (in seconds).
This determines how long after the last message the bot will wait before sending the image.

Cards are always the last element the bot will send to the user. The image card will appear like this to the user.

An gray box will appear with the image options.
Adding Variation

Galleries

Galleries allow up to ten images to appear in a single chat bubble.

Step 26. Go to the Cards tab of the Build Menu.

Step 27. Select Gallery.

Step 28. Select Add Gallery Item.

Step 29. Select the Display mode.

Galleries can be shown “Grouped” as a single image with arrows to scroll (image on the left) or “In a Line” where they will appear beside one another (image on the right).

Step 30. Select the blue arrow to add an image.

Step 31. Fill out the information.

The title will appear under the image in bold text.

Adding a URL will make the image a hyperlink.

The description will also appear beneath the image.

A button can send the user directly to another Interaction (i.e., “Select the figurine you would like to learn more about” or “Select the figurine you believe represents a woman”).

Step 32. Select Add Gallery Item from the top of the screen to add the next photo.
Adding Variation

In-Text Media

A second option for SnatchBot is to add media in-text. By doing this, the media will appear in **between the bot’s other text statements** as a chat bubble. However, the media needs to be hosted online, as adding media in-text **requires a URL**.

**Step 33. Under the Bot Message tab select Embed Media.**

Step 34. Select the type of Media you would like to add. You are able to add links, images, audio or videos.

Step 35. Add the URL between the square brackets.

You can also just type in the following codes directly.

**Link:** \[url=LINK_URL\]LABEL_URL[/url]

**Image:** \[img\]IMAGE_URL[/img]

**Audio:** \[audio\]AUDIO_URL[/audio]

**Video:** \[video\]VIDEO_URL[/video]
Including Previous Responses

The Prior Responses button allows you to add the users’ previous responses into the bot’s messages. This can be useful when asking users to reflect on their own answers or explore a topic further. They also provide the illusion of a more intelligent bot.

**Step 36. Under the Bot Message tab select Prior Responses and then “Response To”.

![Image of bot message interface]

This will insert the following code: `[responseTo interaction=ID fallback=TEXT]`

**Step 37. Select Interaction from the menu and choose the interaction that includes the user’s answer you would like to add.

**Step 38. Remove the “ID” following “Interaction=” and add the code displayed next to the interaction.

**Step 39. Remove the “TEXT” following fallback=

**Step 40. Add the Fall Back text which will be used if there is an error and the users’ answers cannot be found.

As captured in the image below, the Fallback can be a generic line (i.e., “I hope you have learned something!”) or an acknowledgement of the error (i.e., “I can’t find that”).

```
Bot Message *
Nice to meet you [responseTo interaction=ID931980 fallback=everyone]
::next-3:: Even though I’m pretty sure I know the answer to this one, I’ll ask it anyway.
::next-3:: Do you like visiting museums and heritage sites?
```

It’s very important to test your bot prior to publishing. This is to make sure you have used the correct Interaction ID for the users’ response you wish to include.
Settings
The Configure Page

Before publishing your bot, it is important to consider a few different settings. These can be found under the Configure button on the Side Bar.

Under the Bot Profile Tab, you change your bot's basic information such as Name, Description, or Icon.

Under the Bot Settings tab you can add any of the following:

- A Restart Command line. This is a word or phrase that can be used to return the bot to the beginning of the conversation.

- The Session Expiry time. This determines how long the bot will wait for a response (in seconds) before ending a conversation. **Make sure this is long, at least 10 000 seconds.**

- A Custom Error Message. This allows you to choose what is shown to the user if something goes wrong. This is primarily for bots that use Natural Language Processing (NLP). As our bots are not designed with NLP, error messages are not a common occurrence.

Under the Backup/Restore tab you can download a copy of your bot or upload one of our templates. These can be found on the EMOTIVE Website: [http://athena.emotiveproject.eu/chatbot](http://athena.emotiveproject.eu/chatbot).
Publishing

How you publish your bot will depend on the platform you have decided to use. A SnatchBot bot can be published on the platforms shown on the right.

For this guide, we focus on how to publish your bot to a website. After you published your bot for the first time, any changes you make to the bot will automatically appear on your website.

Step 41. Select Channels from the side menu.

Step 42. Select the toggle button beside the option for Web.

Step 43. You can edit the colours that will appear on your bot under the Customize tab.

Step 44. Select the Get Embed Code tab.

Once here you will have two options.

The first is to embed the bot into your own webpage. To do this:

Step 45. Copy the Embed code <script>...> into the HTML of your website.

You can also provide users with a URL that will open a separate webpage where they can talk with the bot. To do this:

Step 46. Provide the URL listed in the second option. You can provide this to users as a link on your website, or through email, messaging, etc.
Congratulations!

You have built your first EMOTIVE bot.

If you would like more information or clarification, we have included some appendices. These include a visual dictionary and SnatchBot menu guides.

Alternatively keep an eye on our website http://athena.emotiveproject.eu/chatbot for any future developments.

The EMOTIVE Team
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bot Message</td>
<td>This refers to the section of the Build Menu where you enter the text that the bot will send to the user.</td>
<td><img src="image" alt="Bot Message" /></td>
</tr>
<tr>
<td>Chatbot</td>
<td>A chatbot is a digital tool that engages users in conversation via text.</td>
<td><img src="image" alt="Chatbot" /></td>
</tr>
<tr>
<td>Chat Bubble</td>
<td>A individual line of text, appearing in a single outline or bubble, that is sent to the user. A bot’s statement can be made up of multiple chat bubbles.</td>
<td><img src="image" alt="Chat Bubble" /></td>
</tr>
<tr>
<td>Connections</td>
<td>This is found in the Build Menu. Connections connect interactions to one another. If/Then Statements and Fallback Statements are the two types of connections.</td>
<td><img src="image" alt="Connections" /></td>
</tr>
<tr>
<td>Fallback Statement</td>
<td>This is found under the Connections tab of the Build Menu. It determines what the bot will do if none of the If/Then Statements are fulfilled. If only a Fallback Statement is created, then any response will direct the user to the interaction identified in the Fallback.</td>
<td><img src="image" alt="Fallback Statement" /></td>
</tr>
</tbody>
</table>
# Key Terms

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>If/Then Statement</td>
<td>If/Then Statements are clauses that determine how the bot reacts to a user's response and what interaction the user will see next. They work using the basic formula of &quot;If X is true (i.e., a keyword is present) then Y occurs (i.e., the user is taken to the next interaction).</td>
<td><img src="image" alt="Example" /></td>
</tr>
<tr>
<td>Interaction</td>
<td>The interaction is the basic building block of the bot. This is where you can add content and create a conversation. An interaction consists of the bot’s statement, the user's response, and the connections to other interactions.</td>
<td><img src="image" alt="Interaction name" /></td>
</tr>
<tr>
<td>Interaction Types</td>
<td>SnatchBot has created a series of interaction types. Each type looks for a specific form of response from the user. In almost every instance you will want to use 'Bot Statement'.</td>
<td>A detailed list of interaction types can be found at <a href="https://support.snatchbot.me/docs/interactions">https://support.snatchbot.me/docs/interactions</a></td>
</tr>
<tr>
<td>Keywords</td>
<td>Keywords are the words the bot will look for to determine if the If/Then Statement has been met. You are able to enter as many words as you like.</td>
<td><img src="image" alt="Keywords" /></td>
</tr>
<tr>
<td>Natural Language Processing (NLP)</td>
<td>Natural Language Processing is an alternative method to creating a bot, in which the user is able to direct the conversation.</td>
<td>More information about NLP can be found at <a href="https://support.snatchbot.me/docs/how-nlp-works">https://support.snatchbot.me/docs/how-nlp-works</a></td>
</tr>
</tbody>
</table>
Menu Overview
Side Bar

**Primary Location:** This is where you build your bot.

The Persistent Menu offers options that are always available to the user (i.e., a restart button).

This is where you select how users access the bot (Website, Facebook, etc.).

This is where you can change the 'settings' of your bot.

If you have multiple chatbots you can switch between them from 'My Bots'.

This is where you can download reports and conversation records from your bot.

This is where you can track changes that administrators have made to the bot.

This is where you can change the language for the system.

This is where SnatchBot lets you know of any important updates or changes.

This is where you find support documents, FAQs and guides.

This is your personal account profile.

*Note: Items that do not have an explanation are not necessary for creating a basic bot. More information about these items can be found in SnatchBot’s Support Centre at [https://support.snatchbot.me/docs](https://support.snatchbot.me/docs)*
Menu Overview
My Bots Icon

1. The bot’s icon. This is the image the users will see when they interact with your bot. Clicking this will take you to the Build Menu.

2. The bot’s name. This is the name that the users will see when your bot is typing.

3. Bot ID. This is primarily used by SnatchBot and will not be used by us.

4. Date of bot’s creation.

5. This will take you to the "My Channels" menu for publishing your bot.

6. This is the edit button. It will take you to the Build Menu.

7. This provides reports. It is the same as the Reports button in the Side Bar.

8. This will take you to the Configure menu to edit the bot’s settings.

9. This will create an exact Copy of your bot.

10. This will delete your bot.
1. This is where you can add a new interaction.

2. The #1 indicates this will be the first message spoken by your Bot.

3. Using these three faint lines you can drag and drop to rearrange the order of the interactions in the menu. But this will not change the order in which they appear to the user. It just helps you keep everything organised when you are creating your bot.

4. This shows if the interaction is connected or linked to another interaction. Red means it is unconnected and cannot be reached by the users during the discussion.

5. Selecting this square will highlight specific types of data. This it is not a feature we use in this guide.

6. The Test Interaction link allows you to test the bot from this specific interaction without going through the rest of the bot.
EMOTIVE
Storytelling for cultural heritage

https://emotiveproject.eu/