The Power of Storytelling in Communicating Circular Economy
Crafting compelling communications to popularize Circular Economy and incentivise action among nonexperts

Master of Science Thesis in the International Master's Programme on Circular Economy (CIRCLE)

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Abstract

Circular Economy (CE) is regarded as one of the promising solutions to sustainable future. However, CE is made upon multiple schools of thought and theories and frequently seen as a complex term with many definitions. This raises difficulties of communicating the term to nonexperts, who might understand CE on a simple level. Awareness raising and communication for general public is suggested as one of the interventions to accelerate the transition to the circular future. Storytelling is one of the effective ways to communicate complex and multidimensional terms and issues, which got interest in academia and science communication as well. Stories can provoke thinking, reflecting, and can be effective to influence people. However, human behaviour is complex to have an impact on. This master’s thesis explores CE students, as emerging experts, that have a transformative potential for the change through conversations they have with nonexperts and stories they tell around CE. If CE students dare to step in that area, this thesis attempts to support them in achieving some clarity and preparing them to tell effective stories that show the whole complex picture of CE term. This thesis covered the main research question: How can Circular Economy students, as emerging experts, craft compelling communications with the help of storytelling to popularise circular economy and incentivise action among nonexperts? After learning from literature review, interviewing experts from private sector and academia, and surveying CE students, steps on how to become a better storyteller were tested in two workshops. The data was sorted and analysed with the help of Affinity Diagramming and recommended steps were adjusted that designed into a toolkit for CE students. The toolkit provides steps, illustrated as a circular journey, that can prepare emerging CE experts to talk to general public by raising important questions.

Key words: circular economy, storytelling, behaviour, nonexperts, communications
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Natalya Amirova, June 2021
Glossary

Terms and abbreviations presented below are used throughout this thesis report.

**Nonexperts**  
In this thesis report, the term defines general public, such as peers, parents and grandparents, friends, partners, and others in the surrounding of experts, that have minor, shallow or no understanding or knowledge of circular economy.

**Experts**  
In this thesis report, this refers to individuals that have high level of knowledge or extended experience in the area of storytelling, sustainability or circular economy.

**Behavioural Science**  
According to Merriam-Webster dictionary it is “a branch of science, such as psychology, sociology, or anthropology, that deals primarily with human action and human behaviour in society”.

**Post-truth**  
According to Cambridge dictionary the term relates to “a situation in which people are more likely to accept an argument based on their emotions and beliefs, rather than one based on facts”.

**CE**  
Circular Economy
Contents

Abstract ........................................................................................................................................... I
Acknowledgements .......................................................................................................................... II
Glossary ............................................................................................................................................... III
Contents ............................................................................................................................................. IV
List of Figures ..................................................................................................................................... VI
List of Tables ....................................................................................................................................... VII
1. Introduction ...................................................................................................................................... 1
   1.1. Background ............................................................................................................................. 1
   1.2. Aim and Research Questions ................................................................................................. 2
   1.3. Approach ................................................................................................................................ 3
   1.4. Scope & Delimitations ........................................................................................................... 4
2. Literature Review ........................................................................................................................... 5
   2.1. Storytelling .............................................................................................................................. 6
   2.2. Circular Economy .................................................................................................................. 9
   2.3. Behavioural Science and Psychology .................................................................................... 12
       2.3.1. What drives people? ........................................................................................................ 12
3. Methodology .................................................................................................................................. 15
   3.1. Expert Interviews .................................................................................................................. 15
   3.2. Survey ................................................................................................................................... 17
   3.3. Workshops ............................................................................................................................ 19
   3.4. Data Analysis Method: Affinity Diagramming ..................................................................... 25
4. Findings .......................................................................................................................................... 27
   4.1. Expert Interviews .................................................................................................................. 27
   4.2. Survey ................................................................................................................................... 33
   4.3. Workshops ............................................................................................................................ 36
5. Analysis .......................................................................................................................................... 43
   5.1. Simplification and Easiness ..................................................................................................... 43
   5.2. CE Jargon ............................................................................................................................... 44
   5.3. Critical Thinking ................................................................................................................... 45
   5.4. Different Audience Groups .................................................................................................. 46
   5.5. Unlearning Assumptions ........................................................................................................ 46
   5.6. Resistance ............................................................................................................................... 47
   5.7. Convincing Stories vs Inspiring Stories ................................................................................. 48
   5.8. A dialog: Collaborative Storytelling ...................................................................................... 50
6. Discussion .................................................................................................................. 52
  6.1. Aim and Research Questions .............................................................................. 52
  6.2. Recommendations: Toolkit ............................................................................... 56
  6.3. Study Limitations ............................................................................................... 60
  6.4. Contributions ..................................................................................................... 60
  6.5. Further Research ............................................................................................... 61
7. Conclusion and Reflections ..................................................................................... 62
8. References ............................................................................................................... 64
9. Appendices .............................................................................................................. 69
   Appendix A: Methodology ....................................................................................... 70
   A.3. Jamboard ........................................................................................................ 73
   A.4. Learning to read the world “Through Other Eyes” ......................................... 75
   Appendix B: Findings .............................................................................................. 77
List of Figures

Figure 1. Thesis process................................................................. 4
Figure 2. Theories of multiple disciplines (Visualisation is created in Canva.com).... 5
Figure 3. Redesigned from Storytelling Triangle (Leinaweaaver, 2017).................. 6
Figure 4. Hero’s Journey by Joseph Campbell (Campbell, 2004)........................ 7
Figure 5. Timeline of circularity thinking (Friant et al., 2020)............................. 11
Figure 6. Environmental impacts and their immediate and behavior-related antecedents (Thøgersen, 2014)......................................................... 12
Figure 7. Emotions that inhibit and facilitate purposeful action (Ganz et al., 2010) 13
Figure 8. Experts and areas of their work and interest in relation to storytelling and circular economy or sustainability (Visualisation is created in Canva.com) ....... 17
Figure 9. Introduction page for the survey ........................................ 19
Figure 10. Steps of the workshop................................................................... 22
Figure 11. Main suggestions from interviewed experts to the question How to become better in telling stories on CE? (Visualisation is created in Canva.com) .... 31
Figure 12. Answers to Question 1 of the survey ........................................ 33
Figure 13. Main themes in addressing RQ 1, after literature review and analysis of primary data. (Visualisation is created in Canva.com).............................. 53
Figure 14. Main themes in addressing RQ 2, after literature review and analysis of primary data. (Visualisation is created in Canva.com).............................. 55
Figure 15. Steps of conducted workshops.................................................... 56
Figure 16. Toolkit for CE students: a) upper part, b) lower part. (Visualisation is created in Canva.com) ................................................................. 59
List of Tables

Table 1. Explored toolkits, frameworks, and workshops and their relation to this thesis ................................................. 20
Table 2. Two personas for conducted workshops ................................................................. 24
Table 3. Answers to Questions 2-5 of the survey ................................................................. 35
Table 4. Results of steps 1 of two workshops ................................................................. 37
Table 5. Results of step 2 of two workshops ................................................................. 38
Table 6. Results of steps 3 and 4 of two workshops ................................................................. 40
1. Introduction

“If we want to change the world then we need to change the stories that contribute to building it.”
- Bobby McCormack, Director of Development Perspectives (Bridge 47, 2020)

1.1. Background

Circular Economy (CE) concept has become popular and currently is widely used in private and academic sectors (Friant et al., 2020; Kirchherr et al., 2017; Korhonen et al., 2018). CE if applied well, there is a good chance to utilize it for transformative change in the current complex world (Friant et al., 2020). CE is a complex, new, and developing concept without a coherent understanding (Kirchherr et al. 2017; Friant et al., 2020). In general, there is a shallow comprehension of CE among nonexperts. If main actors continue to adopt a CE framing that does not take into account complexity and systemic approach of social, ecological, and economical implications in communications, there is a risk of CE concept to become a form of greenwashing (Friant et al., 2020). Concurrently, CE experts get used to their terminology bubble, so that with technical jargon that they use, it is not as effective to communicate CE and engage nonexperts.

In order to unlock the full potential of the CE, there is a need to ensure that it is widely understood and embraced not only by sustainability experts and professionals. Awareness raising and communication for general public is one of the interventions to accelerate the transition to circular future (Ekins et al., 2019, p. 47-48; Hower, 2020). Importantly, holistic and systemic thinking should be cultivated in order to achieve diversity, openness, and imagining different perspectives of circular futures and inclusivity (Friant et al., 2020). As a result, there is a need to learn how to convey the complex message of CE to nonexperts.
Despite controversial discussions in science communication around storytelling, it has gained interest in academia and has showcased as an effective way to communicate complex ideas (Fischer et al., 2018). Other results from literature review in different research areas demonstrate that storytelling can attract attention, evoke interest, and engage new audiences (Boris & Peterson, 2018; Fischer et al., 2018; Moezzi et al., 2017). Therefore, storytelling should not be overlooked when considering the communication and engagement of nonexpert groups (Dahlstrom, 2014). Nevertheless, there is a lack of data on how effective sustainability-related storytelling is (Fischer et al., 2018).

Stories can provoke thinking, reflecting, and can be powerful to influence people, however human behaviour is complex to have an impact on. Basic human drivers like needs, values, limitations (Thøgersen, 2014), automatic and emotion-driven mental processes, cultural learnings and social norms (White & Habib, 2018) can effect human behaviour greatly. Given the abovementioned points, CE students as emerging experts are in the important position in popularizing the concept. The better storytelling and communication skills are, the better CE experts can create ways to diminish destructive dominant stories of growth and consumerism (Wilson, 2021) and help inform nonexperts about the complexity of today’s issues and solutions and possibly change people’s mindsets.

1.2. Aim and Research Questions
The aim of this thesis project is to explore storytelling as an effective tool in communicating Circular Economy (CE) and engaging nonexperts by learning from private sector and academia. As a result, based on conducted research create recommendations that will be designed into a toolkit for CE students. The research question is stated as follows:

*How can Circular Economy students, as emerging experts, craft compelling communications with the help of storytelling to popularise circular economy and incentivise action among nonexperts?*
The research question is answered by addressing the following objectives:

- Explain how CE students can become better storytellers and popularise CE with the help of storytelling.
- Explain how stories CE students tell can engage nonexperts and incentivise action.

1.3. Approach

This thesis explores storytelling as a powerful tool in communicating CE through learning from literature review and expert interviews (Figure 1). With the help of the survey it was important to understand what CE students, as emerging experts, experience and struggle while communicating and explaining CE to nonexperts. Conducted workshops helped to test a framework that could motivate CE students to become better storytellers. These workshops were inspired by insights from primary research and exploration of existing toolkits and frameworks. At the same time, design data analysis method Affinity Diagramming supported in bringing key learnings into recommendations in a form of a toolkit for CE students.
1.4. Scope & Delimitations

In this thesis storytelling is explored in general from structure point of view and in the relation to sustainability, CE, communications, and behaviour science. It does not cover specific types like visual, text, oral, transmedia and other. Since CE understanding can depend on the context, country, and culture. it is important to mention that survey participants received their education in sustainability or CE majorly in European countries like Austria, the Netherlands, Norway and Sweden. Interviewed experts are representatives of private sector and academia from Austria, Belgium, Netherlands, Sweden, and UK. This thesis explores key learnings from the experts and literature review and focuses on the final recommendations for CE students, as emerging experts.
2. Literature Review

In this chapter, a review of the literature is presented in three main areas: (2.1.) Storytelling, (2.2.) Circular Economy, (2.3.) Behaviours, Needs, and Attitudes. This includes scholarly journal articles, books, and reports from Scopus and Google Scholar databases and some that were suggested by supervisors and interviewed experts.

In order to gain a more holistic understanding of the subject, it was helpful to approach it from different perspectives. This literature review had an interdisciplinary nature and was structured around key disciplines like behavioural science, communications, sustainability, and circular economy, which is shown in Figure 2. This was organized in accordance with steps and theoretical framework indicated in CohenMiller & Pate (2019) paper.

![Figure 2. Theories of multiple disciplines (Visualisation is created in Canva.com)]
2. Literature Review

2.1. Storytelling

2.1.1. What is storytelling?

Storytelling is a two-way interaction, whether it is written or oral, between a storyteller and a listener or listeners (Sundin et al., 2018). For many centuries people have passed knowledge from generation to generation through stories. Stories were there to support humankind in communication, entertainment, sharing of knowledge, dreaming and making sense of the world (Leinaweaver, 2017). Stories told by the campfire were for people’s survival and longevity as individuals and as part of a bigger human community (Leinaweaver, 2017).

Currently, stories are also an essential part of our daily life. Campfire oral stories has expanded into various digital media formats like podcasts, videos; text stories like books, reports, non-fiction stories, folk tales and other; visual stories like animation, painting, infographics and other different types. Storytelling has been a popular way of conveying messages in the different fields of practice (Fischer et al., 2019). Even though in science storytelling has negative connotations (Dahlstrom, 2014), it is getting a wider interest in the academic and scientific including sustainability related environment (Fischer et al., 2018; Polletta et al., 2011) in communicating complex topics to nonexperts (Dahlstrom, 2014).

Storytelling is a broad term that can be regarded to entertain and create value for businesses; and storytelling can be “a sacred human act” (Leinaweaver, 2017). In simple words, storytelling is a way to convey facts, information that is transformed into a narrative form, called a “story” (Fischer et al., 2019). This is where questions and problems are raised and that provides solutions and moral guidance (Fischer et al., 2019).

Figure 3. Redesigned from Storytelling Triangle (Leinaweaver, 2017)
According to Leinaweaver (2017) storytelling is when “stories are told with the right intent, at the right time and place”. It is a dynamic relationship among a storyteller, a listener and a story itself; that is referred as a storytelling triangle (Figure 3). Where story is a black box, which meaning can be interpreted and imagined by a storyteller and a listener (Leinaweaver, 2017).

2.1.2. What is a good story?

One of the common understandings of a story is something that has a start, a middle, and an end (Moezzi et al., 2017), but not always a clear ending (Polletta et al., 2011). There is a basic story matrix, called “Hero’s Journey”, which was created by Joseph Campbell (2004), and is commonly used. According to this structure, there is generally a main character, an equilibrium, and a conflict with further transformation and development of the protagonist (Figure 4).

The main character’s journey goes from the “normal world” to a challenging and “unknown world” that end the journey with a return to the regular world (Campbell, 2004). In other words, an event or a conflict occurs that disturbs the equilibrium, and this is when a hero is thrown into a search or journey that goes through various troubles. During the journey the main character can meet a mentor or helper that provides with an advice or the conflict is solved one way or another; and the protagonist returns home to the normal world. But it has been improved and the main character feels wiser and transformed. Stories often
follow this structure in many cultures, so that it becomes built into human minds and resonates with people. Therefore, it is easier for our brains to understand and retain information when it is introduced through coherent story (Sundin et al., 2018). It is believed that a good structure makes a good story.

Additionally, research suggests that stories should be crafted depending on the context and location, audience, and purpose (Moezzi et al., 2017). Therefore, a good story is not for everyone, but it is created for a specific audience that can then pass it on.

### 2.1.3. Why are stories powerful?

Stories and narratives are easier to understand and can engage people better than logical scientific facts (Dahlstrom, 2014; Fischer et al., 2018). This is because people think in narratives rather than argumentative way (Rooney et al., 2016). One of the reasons why stories are powerful is that they boost sensemaking and imagination (Rooney et al., 2016). Sensemaking helps people to understand the world around them by interpreting ideas through specific experiences of the characters in a story (Fischer et al., 2019). As a result, stories can immerse listeners into new context and help to experience new situations and ideas through characters’ journeys (Fischer et al., 2019). Therefore, it is suggested that using stories is one of the effective ways to place new ideas in the human brain (Sundin et al., 2018). Concurrently, stories can represent a reality or create one and help to imagine desirable or undesirable future (Polletta et al., 2011).

In terms of sustainability-related storytelling, Stibbe (2014) argues that some oral storytelling activities can stimulate “people's empathic capacity and pro-social and environmental behaviour”. In addition, research suggests that since storytelling can evoke emotions, get people engaged, and persuade enough to create a high response and action whether it concerns everyday life or perceptions of things (Fischer et al., 2018). Finally, stories can be effective in persuading also resistant audiences (Dahlstrom, 2014).
Since storytelling can have strong persuading effects on people, a major criticism of stories raises ethical discussions around manipulation. It is important to point out that it is not about a clash between science and storytelling, but between what is true and what is a lie (Wilson, 2021). As any other tool, storytelling is not always positive and not all storytellers should be trusted (Wilson, 2021). Therefore, it is suggested to build a community of reflective and critical listeners and storytellers (Stibbe, 2014). Because there are constructive stories that talk about empathy towards people and planet and happily co-existing with living organisms; and destructive stories that bring up greed, violence, and destruction (Stibbe, 2014). Both types of stories can motivate people into dangerous or useful choices (Stibbe, 2014). That is why, it is important for audience to recognize messages and deal with them critically (Stibbe, 2014).

2.2. Circular Economy

2.2.1. What is circular economy and circular society?
In recent years the Circular Economy (CE) has attracted a wide interest in many areas of our society, including academia, businesses, governmental and nongovernmental organizations (Friant et al., 2020). The CE concept is viewed as an idea that can help us solve challenges of resource scarcity, climate change, at the same time regenerating consumption and production systems in economy and society (Friant et al., 2020). Since the CE as an overarching concept is new, embody internal complexities and various definitions, and is under construction (Mulet et al., 2019; Marin & De Meulder, 2018). Most of the CE discourse has been constructed and prevailed by representatives from non-academic practitioners: private sector like Ellen MacArthur Foundation and governments like European Commission that have pursued their political and economic agendas (Friant et al., 2020). Friant et al. (2020) claim that these discourses failed to create a systemic and complex understanding of social side and sustainability of CE. At the same time, the
framework of Friant et al. (2020) illustrated in Figure 5 is majorly based on research from academia.

The purpose of this section is to address and show different definitions and discourses of CE while some researchers claim that not having a coherent CE concept may lead to the collapse of it (Kirchherr et al. 2017). Additionally, CE was labelled under other names and concepts that developed in the middle of 1900s (Friant et al., 2020). The concept of CE originates in “environmental and ecological economics, industrial ecology and management and corporate sustainability literature” (Bauwens et al., 2020). One of the common concepts is around cradle-to-cradle and closing the loop (van Buren et al., 2016). Another definitions include the R hierarchy, a systems perspective, and triple bottom line: environmental, economic and social well-being (Kirchherr et al., 2017). CE functions “at the micro level (products, companies, consumers), meso level (eco-industrial parks) and macro level (city, region, nation and beyond)”, in order to achieve sustainable development to support current and future generations (Bauwens et al., 2020). In accordance with Figure 5 “Circularity 1.0 and Circularity 2.0: Technofixes to Waste” periods started discussion on resource limits and the ecological impacts of human activities (Friant et al., 2020). However, during periods between 1945-2010 concepts concentrated majorly around technological solutions, waste management, and eco-efficiency, which was not a long time ago. It can be observed that starting with “Circularity 3.0”, a period from 1990s, a comprehensive socio-economic approach began (Friant et al., 2020). Conversations around circular society appeared and developed also in non-western societies.
### 2. Literature Review

#### Figure 5. Timeline of circularity thinking (Friant et al., 2020)

<table>
<thead>
<tr>
<th>Precursors to circularity</th>
<th>1945-1980</th>
<th>1980-2010</th>
<th>2010-present</th>
<th>Transformational views of circularity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste-Will Treatment (Dyson, 1950)</td>
<td>Industrial Ecology (Gross and Collepardi, 1979)</td>
<td>First holistic Circularity Frameworks</td>
<td>New holistic Circularity views</td>
<td>Transformational views of circularity</td>
</tr>
<tr>
<td></td>
<td>Product Service System (Goedegebuure et al., 1999)</td>
<td></td>
<td></td>
<td>Social Circular Economy (Schaich, 2019)</td>
</tr>
<tr>
<td></td>
<td>Industrial Symbiosis (Chertow, 2002)</td>
<td></td>
<td></td>
<td>Spiral Economy (Ashby et al., 2015)</td>
</tr>
<tr>
<td></td>
<td>Closed-loop Supply Chain (Guilde et al., 2003)</td>
<td></td>
<td></td>
<td>Conviviality (Barrière et al., 2019)</td>
</tr>
<tr>
<td></td>
<td>Bioeconomy / Bioreconomy (OECD, 2004)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>The Biosphere Rules (Ukrahi, 2006)</td>
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</tr>
</tbody>
</table>

Since there is a lot of focus on technological progress to conserve natural environment while continuing to grow economically, scientists advise on understanding complex systems. This concerns the issue of changing worldviews and perspectives towards nature, well-being, lifestyles in general, including how people work, have vacation, have fun, eat, travel, buy, and invest. (Marin & De Meulder, 2018). Therefore, for CE to develop further, researchers suggest more research to address CE as a paradigm shift (Korhonen et al., 2018; Marin & De Meulder, 2018). Donella Meadows, a well-known systems thinker and environmental scientist, addressed 12 intervention points that can lead to shallow or deep changes in a complex system (Meadows, 1999). The most transformative leverage points to make change, but difficult to achieve, are the ones around shifting the paradigm of the system and people’s mindsets (Meadows, 1999).
2.3. **Behavioural Science and Psychology**

2.3.1. **What drives people?**

Basic human drivers like needs, values, limitations, social norms, and learnings. (Thøgersen, 2014) influence human behaviour greatly (Figure 6). Researchers assert that unsustainable lifestyles are not intentional and that focusing purely on informational and educational ways will not work in driving action and change (Thøgersen, 2014).

![Figure 6. Environmental impacts and their immediate and behaviour-related antecedents (Thøgersen, 2014)](image_url)

For behaviour change firstly, it is important to understand basic human condition and context. In psychology, what goals people prioritize and aim for are considered as human values. These include broad goals like social equity, freedom, and preserving the planet systems. that can be different in importance level and steer decisions in people's lives (Thøgersen, 2014). Another aspect is human unfulfilled needs that can evoke action when people want to satisfy the need. Needs can be learned and influenced by society and marketers (White & Habib, 2018). For some satisfying the need can be obtaining what their friends have, for others starting to ride a bike, or getting married at certain age, because everyone around them are involved in these activities.
Another major aspect that needs to be addressed in relation to human behaviour is limitations. How people understand the world around them is greatly impacted by cognitive capacity: biases, traumas, and different learnings based on life experiences and hardships (Thøgersen, 2014). There are other limitations like “limited time and financial resources, limited energy for volition and self-control, limited knowledge about problems and solutions, limited skills and task-specific knowledge” (Thøgersen, 2014).

Additionally, humans have a high discount rate for future in comparison to present, especially when there are pressing costs (da Matta et al., 2012). For example, in many cases homeowners do not invest in fixes of their houses even if there are a short payback time and an attractive rate of return, so that they could avoid larger damage costs in the future (da Matta et al., 2012). Lastly, some parts of human brain are automatic. This means that most human behaviour is controlled by automatic and emotion-driven mental processes in other words rational or critical thinking is not always involved (White & Habib, 2018). As an example, a habit formation can be hard to change without deliberate motivation and effort, because it is not easy to break repeated automatic actions that are performed daily.

As mentioned above human behaviour is emotion-driven, however not all emotions can facilitate action in people (Figure 7). There are emotions that act as catalysts, others can be barriers to change. For example, hope can infuse curiosity and inspire people to explore new ways and learn that in turn can lead to intentional action (Ganz et al., 2010). As talked previously a habitual routine – inertia – can keep people ignorant, but urgency and anger can create the space and move into a new action. Fear can paralyze into thinking

![Figure 7. Emotions that inhibit and facilitate purposeful action (Ganz et al., 2010)]
that inaction is the best choice and can provoke hopelessness (Ganz et al., 2010). On the contrary, hope together with belief inspires that one can make a difference and empathy can drive people into action.

However, while creating informative messages, stories, and calls to action in relation to sustainability, one should be attentive to the context, audiences, and cultural factors. Some studies suggest that recommendations for behavioural changes can “decrease willingness to take personal actions to reduce greenhouse gases, reduce belief in the accelerated speed of climate change, and decrease trust in climate scientists” (Palm et al., 2020).
3. Methodology

This chapter elaborates on was data was collected, how participants were found, where the inspiration comes from, and how it developed the thinking process. Method for this project was based on academic and design methods and the following steps (3.1.) Expert interviews, (3.2.) Survey, (3.3.) Workshops: Existing toolkits and workshops exploration and conducted workshops, and (3.4.) Data analysis method: Affinity diagramming.

3.1. Expert Interviews

Exploratory semi-structured interviews were chosen. Exploratory because the goal of conducting interviews was to gather a detailed information about storytelling, understand how experts use, share, and create stories with diverse groups of people within different contexts, and what suggestions they might share. Semi-structured interviews gave a chance to adjust open-ended questions to expertise of interviewees and hold interviews as a discussion, at the same time interviews followed a similar structure. Open-ended questions were planned to be a bit broader and in order to get more detailed answers about relevant and interested topics and lead conversations into more depth prompts were added (Leech, 2002). As Leech (2002) points out prompts help to keep interviewees talking and rescue an interviewer when responses get unclear.

On average about 20 potential interviewees were contacted via email and LinkedIn messaging. In LinkedIn profiles of experts were searched with “storytelling” and “sustainability” or “circular economy” key words combinations. More stakeholders to interview were found after listening to podcasts. Three experts were advised through snowballing by other interviewees. One interviewee reached out after a survey was shared. More experts were introduced through suggestions of Malte Rödl supervisor on various storytelling related workshops. As a result, out of 20 experts – nine confirmed their participation and interviews were conducted accordingly.
Two types of interview experts were identified: private and academia. Private sector included five experts that work in companies, start-ups, and consulting firms, where a journalist can be regarded partially as a part of academia too. This is because his last projects around carbon neutral cities were based on scientific data. Areas of knowledge and experience of interviewed experts from private sector included supply chain and production related ecological and social aspects and communication to consumers around them, storytelling of circular services and products to different interest groups, corporate and brand storytelling, campaigning and inspirational storytelling, and communication of scientific data through storytelling. Experts in academia are or were involved in storytelling related research projects at their universities from wide range and different angles like imagination, futures, ethics, collaborative storytelling, science fiction, post-truth world, and critical assessment of current discourses. All experts have at least few years of experience in projects that combine storytelling and sustainability, circular economy, or climate neutrality, where data were mainly communicated to general public. Experience of experts in communication projects for nonexperts was an important part for this thesis project. In relation to gender, six female and three male experts were interviewed. Figure 8 provides more information about expertise and work or research areas of interviewees in relation to this thesis.
3. Methodology

Interviews were conducted during March and April 2021. Due to travelling restrictions because of Covid-19 interviews were organized online, majorly via Zoom. The duration was for 45 to 60 minutes. Interviews were recorded after permissions from interviewees were granted. Informed consent forms were created via Google Forms and filled out by the interviewed experts. Even though most of them gave consent to use their full names and company names, in this thesis their first names and project names were used mostly, which was sufficient for this report.

Interview questions were based on the literature review research. Questions focused on sub topics around CE or sustainability, storytelling, and combination of two, specifically around structure and communication of complex concepts or issues like CE, sustainability, or climate crisis. Since experts came from different areas questions were altered accordingly. A detailed outline of the questions can be found in Appendix A.1.

3.2. Survey

A survey was chosen as the method to reach a larger group of students who have taken courses in CE, including students of Erasmus Mundus Master's Programme on Circular

Figure 8. Experts and areas of their work and interest in relation to storytelling and circular economy or sustainability (Visualisation is created in Canva.com)
Economy (CIRCLE). The goal of the survey was to understand what experiences and struggles students face when leading conversations around CE with nonexperts. The survey was shared in the following Facebook groups:

- CIRCLE
- Erasmus Mundus Master's Programme in Industrial Ecology (MIND) alumni
- Industrial Ecology Master's Programme 2019-2021 at the Chalmers University of Technology, second year students
- Joint Master's Programme in Sustainable Development at the University of Graz
- Environmental Systems Sciences Master's Programme at the University of Graz.

CIRCLE students come from Chalmers University of Technology in Sweden, University of Graz in Austria, Norwegian University of Science and Technology in Norway, Leiden University and Delft University of Technology in the Netherlands. CIRCLE university network gave access to abovementioned universities and student groups. The survey was open for about three weeks from the middle of March 2021.

The survey consisted of one multiple-choice question and four open-ended questions. The survey was designed to be answered within on average from five to eight minutes. The Typeform was used as a platform for the survey. The website provided all the necessary tools to construct fun and colourful visual questions, in order to get respondents' attention and give them a reason to enjoy finishing the survey. Figure 9 shows the introduction page as an example of the interface. Below are questions that were included in the survey and the designed screenshots are placed in the Appendix A.2.
3. Methodology

1. I am a/an (multiple choice answers: CIRCLE student, MIND Alumni, Sustainable development student, Industrial ecology student, Environmental systems sciences student, and Other).
2. How often when you talk to people about the circular economy (while describing what you study, the work projects you do), people don’t know what circular economy is and you need to explain?
3. How do you explain or describe circular economy to these people?
4. How easy or difficult is it to explain the circular economy to people that haven’t heard or know little about it? If difficult, what are you struggling with?
5. If it is difficult to explain what circular economy is, what could help you translate your knowledge into an easier explanation to nonexperts?

3.3. Workshops

3.3.1. Existing toolkits and workshops exploration

Exploring various toolkits and workshops was an important step to move forward with the research. Studying the existing practices opened new directions and inspiration in the relation to the structure of conducted workshops and design and contents of the toolkit. Table 1 displays consulted toolkits, frameworks, and workshops in depth and details on how each of them contributed to the conducted workshops and the toolkit. A detailed explanation how explored items from Table 1 influenced the steps of the
conducted workshops can be found in 3.3.2 Conducted workshops and the toolkit – in 6.2. Recommendations: Toolkit section.

Table 1. Explored toolkits, frameworks, and workshops and their relation to this thesis

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Relation to this thesis</th>
</tr>
</thead>
</table>
| “Through Other Eyes” framework (Andreotti & de Souza, 2008a) | • Is created to support educators.  
• Addresses global and complex issues like diversity, human rights, social justice, peace, international and sustainable development (Andreotti & de Souza, 2008b).  
• Helps to reflect on educators’ own “knowledge systems” and mental models and to engage with others’ in new and different ways. (Andreotti & de Souza, 2008b) | • idea of examining one’s assumptions, interpreting them in different contexts and unlearning them.  
• “learning to listen” provided the insight for the structure of the Online Workshop.  
• The framework is for improved dialogue, engagement and mutual learning.                                                                                                                                                                                                                   |
| Green Gorilla Storytelling Cribsheet (Cinquemani, 2020)    | • For sustainability professionals in a rapidly changing world.  
• Leadership tool is meant to prepare and give confidence in effective persuasion of business clients and team members. | • Provides information on story archetypes based on the objective and audience.  
• Offers story structure from business and convincing perspective.                                                                                                                                                                                                                                                                                      |
| “Adapting our Culture” toolkit (Patterson et al., 2021)     | • For cultural organisations planning for a climate changed future.  
• Provides tools and methods to understand climate implications and impacts of a specific organisation, help adapt to the effects of climate crisis by creating a climate adaptation plan and prosper in a changing world. | • Ideas for design layout, colour schemes, and table structures.  
• Provides examples of templates for exercises like identifying primary audience, value proposition, audience relationships.                                                                                                                                                                                                                          |
<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Relation to this thesis</th>
</tr>
</thead>
</table>
| Shift 1.5 Method book (Sitra, 2021) | • For organisations that are interested in promoting sustainable lifestyles.  
• Is a guidebook that introduces different methods to shift to sustainable lifestyles: to understand the context of achieving 1.5 degrees; to provide with regionally relevant human insight; to catalyse action after obtaining relevant insights; to engage with the power of positive storytelling. | • Ideas for design layout, color schemes, and content structure.  
• Tips on positive storytelling.  
• Methods on how to identify different audiences specifically motivation profiles. |
| Bobby McCormack, Development Perspectives, “Change the story, change the world” workshop (McCormack, 2021) | • For high school students.  
• Explores the role of storytelling in transformative education and encourages to see the world differently.  
• Suggests steps in creating stories for a more sustainable, equitable and just world. | • Importance of values, questions like “How do you imagine future? What values do you see in the society?” were adapted from this workshop. |

3.3.2. Conducted workshops

After checking insights from interviews, results of the survey, and existing workshops and frameworks addressed in Table 1, the workshop was planned. The goal of the workshop was to test steps for the final toolkit on how to become a better storyteller and attempt to create CE stories-explanations for different personas. Since CIRCLE students were the majority who have filled out the survey, which is showed in 4.2. Survey section, they were selected as participants for the conducted workshops. An announcement for a workshop with dates and times was posted in the relevant CIRCLE Facebook group. Consequently, two CIRCLE students replied to the announcement. Both students were available on one of the indicated dates and time that resulted in conducting the first workshop. Other students were contacted individually, and other
date and time were decided on their availability. This resulted in the second workshop, in which three CIRCLE students have participated. Since first intake of CIRCLE Programme students predominantly consisted of female individuals, during both workshops five female students took part. Both workshops were conducted in April 2021 via Zoom. The timeframe of each of the workshops was set to 1 hour – 1 hour 15 minutes. The structure of both workshops was the same and consisted of three consecutive individual steps or tasks and one collaborative step, more details can be found in Figure 10. Google Jamboard was used as an online workspace for the workshop that is placed in Appendix A.3.

<table>
<thead>
<tr>
<th>--&gt; STEP 1</th>
<th>Brainstorm on how do you understand circular economy, circular future and what values in the society you think are important to have?</th>
</tr>
</thead>
<tbody>
<tr>
<td>INDIVIDUAL</td>
<td>• Key words, bullet points, phrases</td>
</tr>
<tr>
<td>CREATION</td>
<td>(5 min)</td>
</tr>
<tr>
<td>------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>--&gt; STEP 2</td>
<td>1. Identify needs, values, and/or limitations of the person in the video a. Who are they? Job/education? What hopes, dreams, and fears do they hold?</td>
</tr>
<tr>
<td>INDIVIDUAL</td>
<td>2. Jot down in your board</td>
</tr>
<tr>
<td>CREATION</td>
<td>(5 min)</td>
</tr>
<tr>
<td>--&gt; STEP 3</td>
<td>• The persona does not know what CE is</td>
</tr>
<tr>
<td>INDIVIDUAL</td>
<td>• Review previous boards</td>
</tr>
<tr>
<td>CREATION</td>
<td>• Jot down CE explanation / story considering provided points</td>
</tr>
<tr>
<td>(10 min)</td>
<td></td>
</tr>
<tr>
<td>FINAL: --&gt;</td>
<td>Aspect 1.</td>
</tr>
<tr>
<td>STEP 4</td>
<td>YES, AND ...</td>
</tr>
</tbody>
</table>

*Figure 10. Steps of the workshop*
3. Methodology

The first step was created for students to brainstorm on their understanding of CE, circular future, and values in the society they wanted to see. The goal was to start with an easy task and to extract as many ideas as possible in five minutes. The task included brainstorm on future and society, in order for students to have a broader understanding of CE in the context of conducted workshop and not narrowing down to CE definition only. The part with values was inspired by the workshop of Bobby McCormack “Change the story, change the world” (McCormack, 2021). This is one of the explored workshops that is described in Table 1. In the workshop of Bobby McCormack, the importance of identifying values was pointed out and as a result the step 1 in the conducted workshop included a question “What values in the society do you think are important to have?” to have a deeper understanding of CE and society.

During the second step a video of an individual, further referred as a persona(s), was shown that gave short video introduction about them. More details on personas are provided in Table 2 below. After listening to the video, students described the persona in the written form in Jamboard. Follow up questions around persona's education, job, values, dreams, hopes, or needs were included to help students reflect on the task. This step was influenced by “Through Other Eyes” framework (Andreotti & de Souza, 2008a), which is described in Table 1. It provided an insight on the importance of unlearning one's assumptions with the help of listening. Therefore, this step focused on active listening of the provided persona by writing down their characteristics, needs, hopes, and dreams that would help students to recognize and not presume things about provided personas.

During both workshops for the first rounds simpler personas were chosen to make it easier for students to relate to personas and not overwhelm students with first task. Simpler personas were young female individuals that were enthusiastic about change or were already involved in social or environmental activities. Additional harder personas were prepared for further rounds, if there was an extra time left during the workshop. There were two differences between two workshops: 1) different personas
and 2) the duration of videos that described personas. During the first workshop the video was shown for 33 seconds, after which students suggested to show the video longer, to get more information about the persona and avoid assumptions. Therefore, during the second workshop, the video of another persona was introduced longer for 1 minutes 42 seconds, which is mentioned in Table 2. Two different personas were planned in order to produce different stories and compare them.

<table>
<thead>
<tr>
<th>Table 2. Two personas for conducted workshops</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Workshop 1</strong></td>
</tr>
<tr>
<td>Student, social entrepreneur, has a big</td>
</tr>
<tr>
<td>family.</td>
</tr>
<tr>
<td>Video was shown for 33 seconds.</td>
</tr>
<tr>
<td><strong>Workshop 2</strong></td>
</tr>
<tr>
<td>Saul Morgana. Lives in Mexico City.</td>
</tr>
<tr>
<td>Optimistic and has faith in human kind and</td>
</tr>
<tr>
<td>the planet.</td>
</tr>
<tr>
<td>Video was shown for 1 minute 42 seconds.</td>
</tr>
</tbody>
</table>

After the second step, suggestions on how to engage people, extracted from the expert interviews, were introduced. More explanation on indicated suggestions are provided in 4.1.6. How to become better in telling stories on CE. To ease the understanding of a story and increase its influence the following tips were covered: (1) positive storylines, to avoid doom and gloom stories, (2) emotions that can incentivise action like hope, inspiration, and anger, (3) convenience should not be underestimated, for example if a story contains a call to action then the action should be easy to make, (4) not overselling and oversimplifying CE because it is not perfect, (5) include local, familiar, concrete elements, and (6) have examples that the audience can relate to.

The next steps included concluding steps and discussions. The third step was to create a story for the persona, imagining that she did not have any understanding or
knowledge around CE. Students needed to consult previous steps and construct a story-explanation describing CE to the persona. The final step was to tell a story together and use a design ideation method “Yes, and ...” to encourage sharing of ideas freely (Kumar, 2012). The method is usually used in groups. It is about agreeing with what another person has stated and continuing or expanding on this thinking. In this workshop, a student started with an idea or sentence from individual CE stories or explanations that they have created in the previous step 3. The next student then added to the idea by starting with “Yes, and ...” and continuing with her sentence, and so on in the same fashion until students ran out of sentences. The results of these steps are covered in Table 4, 5 and 6. At the end of each workshop 10-15 minutes were left. This period of time was not sufficient for another round of a story creation. Therefore, a discussion with prepared questions was held: (1) what students felt was easy or difficult in the process, (2) what could have been different in presented steps, and (3) whether this preparation could help students in discussions with nonexperts around CE. Points of discussions are presented in 4.3. Workshops.

3.4. Data Analysis Method: Affinity Diagramming

For the analysis of the qualitative data that came from interviews, survey, and workshops, design method called Affinity Diagramming was applied. The Affinity Diagramming was devised in the 1960s by Jiro Kawakita, a Japanese anthropologist, the term by some can be known as the KJ Technique (Martin & Hanington, 2012). Affinity Diagramming is a process that brings and organizes data: issues, observations, and insights from interviews or other qualitative data by meaningfully clustering them (Martin & Hanington, 2012). These observations, concerns, comments that researchers capture from conducted interviews are recorded on individual sticky notes, an insight per sticky note. Then all notes are placed on a big surface, so that they could be grouped based on affinity or common patterns by interpreting them and finding the underlying importance of each (Martin & Hanington, 2012). Each note should be based on the original interview transcripts.
3. Methodology

The technique was chosen to analyse data because Affinity Diagramming is useful in identifying themes and relationships that would be hard to see via other methods. Moreover, while conducting the steps of the Affinity Diagramming one becomes very immersed into the data, which is why it is clearer to see hidden insights, discrepancies, and stories that can emerge about a problem or people. Additionally, Affinity Diagramming is used to research complex problems, develop and design innovative ideas and solutions (Martin & Hanington, 2012), therefore the technique provided suitable insights to consider for the planned end-result like toolkit.

For this thesis report, there were several steps that were used to analyse data with the help of Affinity Diagramming. All nine interviews and two workshop discussion sessions were transcribed. After thorough reading of transcribed data and answers of the survey key citations were imported into individual sticky notes into Miro.com platform that provides interactive and user friendly online collaborative workspace. Quotes from the primary data were then clustered together into groups under themes with common denominators for each of the primary data method separately: interviews, the survey, and conducted workshops. Consequently, three boards with clustered groups of quotes were created that are presented in Appendix B.1. – B.3. The process of reading transcribed interviews, inserting quotes into Miro, and creating and naming common themes was conducted twice before midterm presentation to share preliminary findings and after the midterm presentation to review the reoccurring themes. This resulted in more distinct themes that are explained more in 4. Findings chapter.
4. Findings

In this chapter, all the findings of this thesis are described. The results are presented in the following order (4.1.) Expert interviews, (4.2.) Survey, and (4.3.) Workshops. Experts interviews section provides key learnings around why stories are powerful, what stories are important in CE, and who a good storyteller is. The part on the survey describes findings around four open-ended questions around how often respondents talk to nonexperts about CE and how they explain it, what they struggle the most, and what could help them to translate their knowledge. Lastly, the section on conducted workshops describes the findings of four steps and five individual and two collaborative stories that were created during two workshops.

4.1. Expert Interviews

The results from the interviews were separated into major questions that were asked during interviews.

4.1.1. What is a good story?
4.1.2. What is storytelling and why stories are powerful?
4.1.3. What is the CE current state about?
4.1.4. What is a dominant story in CE?
4.1.5. Why do you think it is difficult to communicate CE or sustainability?
4.1.6. How to become better in telling stories on CE?

4.1.1. What is a good story?

Good story is understood through good structure. Seven interviewed experts referred to Hero's Journey of Joseph Campbell (Campbell, 2004) that story has to have “the start and the end, a hero, a mentor, some kind of conflict or tension that can be solved by the hero”. Therefore, a good story involves hero's development at the end of a journey. At least three experts mentioned that there should be a call to action, namely suggestions what listener can do after hearing the story. In the Cambridge English
Dictionary *call to action* means “something such as a speech, piece of writing, or act that asks or encourages people to take action about a problem”. Some other experts talk about call to action from the other perspective: by highlighting the necessity of talking about failures and mistakes and as a result sharing learnings; so that listeners can gain new knowledge. On the contrary, majorly researchers pointed out that a good story does not tell listeners what is right and what is wrong and gives space for imagination. Moreover, four experts elaborated on that a good story is a complex story that “awakens listeners’ consciousness to ask important questions” and “have the power to make hidden things visible”.

### 4.1.2. What is storytelling and why stories are powerful?

In relation to the power many experts mentioned that a good story evokes emotions. So, that if storytellers want to make an impact, then they need to engage listeners emotionally. This way listeners get immersed into a story and feel related to it. Three interviewees shared that a good story can inspire listeners to imagine futures and can help to understand complex ideas. Therefore, good stories might motivate people to take action. Two experts described that a good story has different levels of meanings, depending on the age or life experiences listeners can see different meanings or if they come back to the story again when they or society change. Two experts said that with the help of storytelling listeners “can explore different worlds and possibilities” that might inspire them to open to other perspectives.

### 4.1.3. What is the CE current state about?

Four interviewees shared that simplifying things is popular, and people want easy ways out. According to some experts, people want solutions to be served on a silver plate. As a result, it is difficult to communicate complex issues like CE or climate crisis. Two experts noted that there is crisis of imagination. Since people have never experienced carbon neutrality or “circular future in 2030, not many can imagine it". "CE is often hijacked by white middle class high people", the aspect of social justice and inclusivity was well pointed out by one of the experts. According to the expert, it is important to
include different social groups into the conversation that are often overlooked like migrants, minorities, or people with disabilities. One interviewee highlighted that the way scientists and academia communicated issues has not worked until now. Majorly, “communication was around tables, charts, facts, and a little storytelling”.

4.1.4. What are dominant stories in CE?
Three experts without any hesitation talked about narratives that people expect problems to be easily solved with technological fixes: “it is a matter of finding the right innovation or technology”. In general, dominant stories are obsessed with economic growth like business and innovation and encourage consumerism. One interviewee highlighted that there is a culture of superheroes that are expected to save people or the planet. For example, vaccine is the solution, and everything will get back to normal. Another example that the expert shared was that some people carry the idea that “CE experts will solve our problems and we will not have to do anything”. The same expert talked about that masculine values, about individualistic values, are dominant. Feminine values like empathy and compassion are not dominant and can be considered weak if one expresses them. Another expert noted that CE started to be widely used also among centre right parties in some parts of Europe. And lastly, one expert shared that Doughnut economics is an example of a positive and good story about CE that “spreads a clear message about environmental limits”.

4.1.5. Why do you think it is difficult to communicate CE or sustainability?
Four experts agreed that CE is hard to define and that the concept is not fully developed. On one hand, one interviewee stated that it forces people to communicate and collaborate with one another, check and consult different perspectives, which is a positive aspect. On the other hand, three other interviewees shared that it can be hard to find a common ground since there are many different views and CE means different things to different people. This happens, because every person can have different experience and different knowledge about CE. It variates even in different countries,
“for example in Spain CE is perceived more from social component and in the Netherlands – from resource efficiency”. “It is hard to communicate about something that people generally do not have an interest in or react to” was shared by another interviewee. The aspect of complexity was raised by five experts: “Some people understand world as black and white or right and wrong”. Since the world and problems humankind face are complex, “complexity is ingrained in systems we live in” and this complexity makes it hard to communicate. One expert stated that CE is technical to talk to anyone about, “there are many different parts depending on what aspects are highlighted in discussions”. “The future is uncertain”, this is another reason why it is difficult to communicate. An expert explained this is because no one can predict how it would be, “experts can have just visions”. In communicating there are many factors that influence people's behaviour and therefore when communicating “there is a high chance to start blaming people; which is not often effective” was highlighted by the same interviewee.

4.1.6. How to become better in telling stories on CE?

Suggestions received from interviewed experts to the question How to become better in telling stories on CE? for better understanding are combined into 1) what to have in a story and 2) what to consider. They are illustrated in two columns accordingly in Figure 11 below. The first column of “What to have in a story” includes positive storylines and inspiration. Four experts shared that often doom and gloom stories are spread, which can paralyze listeners. For example, “Circular Stories” start-up incorporated inspirational stories to inform and inspire people; simultaneously there are aspirational stories for audiences that want to go further into action and therefore more information is provided on what one can do. Two experts noted that something familiar to the listener, and something concrete and specific should be included in a story. For example, instead of saying sustainable jacket, one can describe it more concrete as long lasting. Three interviewees emphasised that a story should be fun and interactive. As it was described earlier a good story should have a good structure and should evoke emotions. If there is a call to action or an example to follow, then it should be easy to
implement. Finally, three interviewees stated that a story or CE as a solution in a story are not perfect, therefore storytellers “should not exaggerate it”. Researchers suggested that storytellers need to communicate the complexity of CE, because the world needs more complex and diverse stories.

The audience topic is a crucial one, that was mentioned by almost of all interviewed experts. In stories, storytellers should consider audience they talk to and tailor the message accordingly. As an expert from the private sector mentioned, “stories are very powerful if you are able to frame it in a good way and deliver to the right person on the right time”. Therefore, storytellers cannot reach everyone with the same story. Three experts delved deeper by addressing the need to be aware of values, needs, wants, limitations, and mental models of listeners. For example, people in trauma or

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**Figure 11. Main suggestions from interviewed experts to the question How to become better in telling stories on CE? (Visualisation is created in Canva.com)**
4. Findings

immigrants in a shelter would not get interested in the story if it is not adapted to their needs and values. A researcher shared another example is when talking about negative impacts of plastics on the oceans, to an individual who works two jobs and barely has time for a bottle of Pepsi and a McDonalds burger for lunch. The person would not listen, because convenience and comfort are other drivers that should be considered in a story.

Two experts emphasised that storytellers have a big responsibility when and how they tell stories and who they influence. Therefore, it is important for storytellers to develop critical thinking abilities. For example, be critical of dominant stories, that praise wealth, growth and destruction of eco-systems. Critical thinking can be cultivated by reflecting on one’s values and what kind world, future, and society they want to see. This in turn can help judge stories. Some experts talked about the importance of sharing a vision and helping listeners to imagine. For example, one of the interviewed experts led and was involved in Climaginaries project. The goal was to catalyse transitioning to a post-fossil society through different methods of imagination, where one of the results was a tourist guide to an imagined coastal city in a decarbonised Europe in 2045. Another expert described that by sharing vision with people storytellers can co-create stories in collaboration with listeners. Where listeners and storytellers can both play a role in creating a story and listening to each other.

Mostly academia brought up into the conversation the part of needing a system change in order to tackle challenges that humankind faces today “transformation we need to do in society, to change the demand structure, of supply chains, to change how democracy works”. Where stories can help with shifting people’s mindsets by “changing the stories that people, institutions, countries, and the world agree with, follow and act upon”.
4.2. Survey

In the online survey 29 respondents have participated. The number of different respondents is presented in Figure 12. A more detailed explanation of students and their relevant programmes and universities can be found in 3.2. Survey. The option “Other” includes an alumnus from the University of Graz, a teacher, and unknown.

![Image](image.png)

Figure 12. Answers to Question 1 of the survey

Answers to the Question 2 in Table 3 below show that the majority 24 of survey respondents shared that most of the time, often, or almost half of the time people did not know or had limited knowledge of CE. Some respondents mentioned these individuals were outside of their studying bubble: “Most of the times, except people from a related discipline (such as e.g. environmental management).” And some of these people cannot understand “what kind of work we will do after graduation”.

To the Question 3 on how respondents explain CE, majorly, answers covered Rs – “repair, reuse, reduce, recycle and so on”, closing the loops, Ellen MacArthur Foundation’s butterfly, cradle to cradle, cycles, examples form daily life, economy that is not linear and “not like general economy”, and change the explanation depending on the person they talk to. Fewer connected CE to business models, consumption, and
waste. One respondent shared that people need to be critical even though CE is viewed as a solution, and again only one respondent mentioned a necessary shift in thinking.

To the Question 4 on what respondents were struggling the most with, 19 respondents answered that it is difficult or “easy, but” to describe CE. They struggle because “people have their own version of what CE is” or unaware, people do not get why CE is necessary, people tend to “simplify to recycling, waste management, planting a tree”, or “are not interested”. Four respondents talked about people not getting the deep and complex picture of CE: “the concept of CE is much more known to people, they recognize it when explaining”, however “when people realize it requires fundamental changes in how individuals and institutions behave, there is usually a sense of helplessness that shuts down the conversation”. The view that CE is a complex term to explain appeared three times in answers. One respondent mentioned that it is hard to define the term in one sentence. The following quote describes well the perspective that CE is easy to explain at first, but further many questions arise: “I help them imagine i.e. a town without garbage... using mobile phone to rent your shirt for today's job, you click to approve that someone takes your car for a ride, since you are sharing it. ... your shirt will become your apron... Then they come back with questions in a few days since this seems interesting to imagine... and with a lot of but”. For nine respondents it is not difficult to describe CE, if they talk about examples, Rs, adjust their language, and talk about familiar aspects.

Lastly, to the Question 5, 11 respondents answered that examples, best practices about everyday objects or services in use can help translate their CE knowledge into an easier explanation to nonexperts: “When I'm lazy and don't use them people can't fully picture what I'm talking about. But with examples they can join some dots together”. Six respondents stated that visual and inspiring elements beyond butterfly diagram like graphs, diagrams, analogies, cartoon sketches, memes, animations can be helpful: “A simple, cool graphic design. So, I can show it on my phone to them”. Four respondents pointed out views on simplifying terms and technical language and trying to speak
people's language can help the conversation: “If you talk about it the way an engineering student talks about it, the concept itself will be too hard to grasp. You can still get the point across, even if you have to dumb it down a little. People are smarter than we think!” And the rest was about stories, specifically positive ones, and something entertaining.

Table 3. Answers to Questions 2-5 of the survey

**Answers to Question 2:** How often when you talk to people about the circular economy (while describing what you study, the work projects you do.), people don't know what CE is and you need to explain?

- 11 respondents - almost every time, most of the time, always, with people outside of my bubble
- 11 respondents - 70-80% of the time, often
- 2 respondents - almost half of the time people don't know about circular economy
- 3 respondents - sometimes, less often now, the concept is becoming mainstream

**Answers to Question 3.** How do you explain or describe circular economy to these people?

- 6 respondents – with the help of closing the loops, Ellen MacArthur Foundation's butterfly, cradle to cradle, cycles
- 6 respondents – mentioning examples from daily life
- 5 respondents – change the explanation depending on the person they talk to
- 5 respondents – not linear.
- 4 respondents – Rs: “repair, reuse, reduce, recycle and so on”
- 3 respondents – a business model, waste out, less consumption
- 1 respondent – CE is a solution, but we need to be critical
- 1 respondent – shift in thinking, systems thinking
- 3 respondents did not bother much to explain

**Answers to Question 4.** How easy or difficult is it to explain the circular economy to people that haven't heard or know little about it? If difficult, what are you struggling with?
4. Findings

- 11 respondents – difficult
- 8 respondents – easy, but
- 9 respondents – not difficult, if you mention examples, Rs, adjust your language, talk about familiar things
- 1 respondent – depends on the person

**Answers to Question 5.** If it is difficult to explain what circular economy is, what could help you translate your knowledge into an easier explanation to nonexperts?

- 11 respondents - examples, best practices about everyday objects or services people use of well-known industries.
- 6 respondents - pictures, graphs, diagrams, analogy, cartoon sketch, memes, animation, something visual and inspiring beyond butterfly diagram, more coverage in media.
- 4 respondents - simplifying terms and technical language, speak people's language.
- 2 respondents – not hard
- 2 respondents – stories, something entertaining
- 1 respondent - positive storylines

4.3. **Workshops**

As it was mentioned earlier in 3.3. Workshops section during conducted workshops four steps were tested. Table 4 illustrates the outputs of the first step that are illustrated by AnswerGarden tool, where bigger in size phrases indicate that they were mentioned twice by the participants and smaller sized terms – once. During the first workshop important values in circular society and future were identified: innovation beyond resource optimization, resilience, regeneration, purpose, well-being, new governance structures and stakeholders, and others. All of them were mentioned once. During the second workshop, answers to the first step that appeared twice were sharing is caring, regenerate natural systems, and better environment protection.
4. Findings

Table 4. Results of steps 1 of two workshops

<table>
<thead>
<tr>
<th>Workshop 1</th>
<th>Workshop 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1. Brainstorm on how you understand CE and circular future, and what important values you see there?</strong></td>
<td><strong>Step 1. Brainstorm on how you understand CE and circular future, and what important values you see there?</strong></td>
</tr>
<tr>
<td>innovation=beyond resource optimization</td>
<td>sharing is caring</td>
</tr>
<tr>
<td>resilience</td>
<td>regenerate natural system</td>
</tr>
<tr>
<td>future generations</td>
<td>better environment protection</td>
</tr>
<tr>
<td>well-being</td>
<td>reduced consumption</td>
</tr>
<tr>
<td>not growth</td>
<td>better use of the materials service</td>
</tr>
<tr>
<td>cbms</td>
<td>sufficiency</td>
</tr>
<tr>
<td>purpose &amp; economy</td>
<td>love to the planet</td>
</tr>
<tr>
<td>regeneration</td>
<td>stewardship</td>
</tr>
<tr>
<td>decentralized</td>
<td>design out of waste</td>
</tr>
<tr>
<td>sdgs</td>
<td>rectrulate materials</td>
</tr>
<tr>
<td>3rs</td>
<td></td>
</tr>
<tr>
<td>redefine waste as a resource</td>
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</table>

The results of two workshops of step 2 are indicated in two columns accordingly in Table 5. During the second step of persona identification in workshop 1 participants described persona Wangechi mostly with key words like “student”, “family values”, “social entrepreneur”, “big family”. Since the video for the second workshop was longer, this resulted in broader and more detailed descriptions around persona Saul Morgana,
who is identified as inspirational, optimistic, and hopeful. For example: participant 3 shared “She feels powerful and optimistic about the human beings and the protection of the environment. However, she also thinks we can do anything”.

Table 5. Results of step 2 of two workshops

<table>
<thead>
<tr>
<th>Workshop 1</th>
<th>Workshop 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Persona Wangechi</strong></td>
<td><strong>Persona Saul Morgana</strong></td>
</tr>
<tr>
<td><strong>Participant 1</strong>: Student from Africa, family values and future hope.</td>
<td><strong>Participant 1</strong>: Hopeful, but also acknowledges that humans have limitations due to greed, prioritizing wants and not needs. Most likely someone well educated in environmental sciences/systems, otherwise someone whose line of work is exposed to nature and human interaction all across the different economic classes (maybe in government or NGO? Or academia?) Hopes: that humanity will overcome their differences in creating a healthier earth. Limitations: not practical? Too idealistic.</td>
</tr>
<tr>
<td><strong>Participant 2</strong>: Social entrepreneur/daughter, big family, health for family/access to opportunities</td>
<td><strong>Participant 2</strong>: Optimistic, with faith, she is inspired, and she inspires as well. With a lot of energy. Care’s about others. Tries to see the good around her. Believes in herself, and that she (we) can make it happen (whatever she/we can think of).</td>
</tr>
<tr>
<td><strong>Participant 3</strong>: She feels powerful and optimistic about the human beings and the protection of the environment. However, she also thinks we can do anything. I like that she is able to combine both (i.e. it is usually associated that we cannot do everything if we need to protect the environment). So then, I believe she has reached an equilibrium state in which she is happy with limited resources.</td>
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</table>

During the third step five individual stories were created. One of the two stories of the workshop 1 elaborated around big family, waste creation, health impacts, and shared platforms. Another one covered CE from the perspective of long-term use and re-use of materials and products, re-defined ownership, well-being, care, and creativity. For example, participant 2 of the workshop 1 shared:

Circular economy is about making and using things (products, food, our homes, etc.) ... in a way it is about caring for and making the most of every material in your possession. It's about understanding that once you finish using the material
for one purpose, it still may have some value for another purpose or another person. In a circular economy care, creativity and resourcefulness is your currency. It's about understanding that success is about well-being and not accumulating things and growth.

During the workshop 2 three individual stories were produced. They took a different angle in comparison to the first workshop. The stories covered systems approach, bigger planet picture, abundance, collaboration, regeneration, shift in mindsets, living in harmony with nature, sustainable society, redefining consumption and production. More details are included in Table 6.

During the fourth step one collaborative story for each of the two workshops was produced with the help of “Yes and …” technique. Both stories considered the above-mentioned steps for example the first collaborative story weaved together ideas of phasing out waste, sharing platforms, wellbeing, and better health of the large family, resourcefulness, and the value of the material. This is an extract from the story: “Apart from protecting the environment it also cares about the society and our limited resources. ... And it depends on how creative we can get. Yes, and CE doesn’t only consider impacts as climate change, but also eutrophication, protection of biodiversity, air pollution. Yes, and this is how our parents used to live, because they coexisted in harmony with nature and used only what they needed to. Yes, and we need to come together, politicians, governments, communities, academics, industries in order to make that happen”. The second collaborative story of the workshop 2 connected leaving a better planet for future generations, changing systems, limited resources, shift in mindsets, living in harmony with nature, respecting the biodiversity of different species, and collaboration of multiple stakeholders. Both stories are described in Table 6. An edited audio recording of the collaborative story of the workshop 2 was presented during the final thesis presentation.
Table 6. Results of steps 3 and 4 of two workshops

<table>
<thead>
<tr>
<th>Workshop 1</th>
<th>Workshop 2</th>
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<tbody>
<tr>
<td><strong>Step 3. Individual CE explanation and story creation</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Participant 1:</strong> Big family = high amount of waste creation. Impact on sanitation. Impact on health and living conditions. Less waste = better future. <strong>Shared platforms</strong> = access to more products and services without the ownership burden (price, space, etc...).</td>
<td><strong>Participant 1:</strong> Humanity has evolved so far in terms of technology and how they meet their needs. Some would say we've overcome hunger, and people are able to enjoy high standards of living. With such ease, humans tend to overconsume. In our everyday lives we are consuming large amounts of <strong>materials, biological or mineral</strong>, and we don't even realize it. The system we're stuck in now, relies on the use of resources, producing it into products, and then disposing it so that they end up in waste facilities. But with the ever-increasing population, we're catching up with the Earth's capacity. Will we have enough of Earth to raise many more generations? Circular Economy is one solution. Not the only one. But one attempt, an effort to create a different system. A different kind of economy, where we use materials and products as optimally as possible. Where we aim for sufficiency, and not just aiming for abundance and riches. A system where we don't just take away from nature but work together in our communities to let nature thrive while trying to meet our needs.</td>
</tr>
<tr>
<td><strong>Participant 2:</strong> Circular economy is about making and using things (products, food, our homes, etc.) in a way that makes them easy to use for a long time and that can be broken down easily to be re-used again and again. In a way it is about caring for and making the most of every material in your possession. It's about understanding that once you finish using the <strong>material</strong> for one purpose, it still may have some value for another purpose or another person. In a circular economy care, creativity and resourcefulness is your currency. It's about understanding that success is about well-being and not accumulating things and growth.</td>
<td><strong>Participant 2:</strong> CE is a term that has try to cover a lot of things, but what matters the most is that it pretends to leave the world better than how we have found it for us and for future generations. And even if it is a new concept it does make use of things our grandparents already knew... I'll tell you: as a concept it basically came up as the opposite of the concept of linear economy. In a linear economy we take materials from nature to produce whatever we need/want, we use it and we throw it away, either because it doesn't work anymore or because we don't want it anymore (for whatever reason) ... But the problem with this is that we are using more than what Earth can give us, and we are using Earth as a dumpster, and our ecosystems are not able to keep up with this... And what happens with CE? with this concept we try to make better use of what Earth can give us, we try to use it wisely acknowledging that they are not infinite resources, this also makes us shift from considering things as waste, to consider them as things with potential to become new things, and it basically depends on how creative we can get! So, this is why I say we could think that CE shares a lot of things with how our grandparents used to live. They were living in harmony with nature, using only what they needed to...</td>
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4. Findings

<table>
<thead>
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</table>

**Participant 3:** Circular economy is the means to achieve a sustainable society, to protect Mother Earth and create a healthier world for human beings, that uses the minimization of wastes, which can be considered valuable for other production processes, and an increased efficiency in society. As a result, the flows of pollutants and material consumption is greatly reduced. With decreased pollution and material consumption, we reach a better environment. And that is how we could create a better society just by reducing consumption/designing out waste/and consuming in a rational manner. Because the human being is powerful and intelligent (and good) and we know we cannot thrive in a damaged world (nor the future generations).

| **Step 4. "Yes and...". Collaborative storytelling** |

CE is when you decide in your family together with all the aunties, grandmothers and grandfathers and the rest of the family; everyone is involved in the decision making. Yes, and in CE care, creativity, and resourcefulness is your currency. Yes, and if you have a large family you have huge amounts of waste creation. Yes, and it is about understanding once you finish using a material for a purpose it may still have a value for another purpose or another person. Yes, and less waste equal a better future. Yes, and when you care about a wellbeing of your house, your family, garden. Yes, and it is about understanding that your success is your wellbeing, not accumulation and growth. Yes, and if you have less waste, you have less impact on sanitation, have better health and living conditions. Yes, and shared platforms for your community: you can have access to different services and products without the burden of high cost of ownership and space.

CE leaves the world better than we have found for future generations. Yes, and CE is not the only solution, but an effort to create a different system. Yes, and apart from protecting the environment it also cares about the society and our limited resources. Yes, and promotes the idea where waste is unique and identified as a good resource that has a dream to be something else and it comes true. Yes, and better use of what Earth can give us, we try to use it wisely, acknowledging that there are not infinite resources and it makes us shift from considering things as waste, but that have a potential to become new things. And it depends on how creative we can get. Yes, and it is a system where we just don't take away from nature, but we work together in our communities to let the nature thrive while trying to meet our needs. Yes, and CE doesn't only consider impacts as climate change, but also eutrophication, protection of biodiversity, air pollution. Yes, and this is how our parents used to live, because they coexisted in harmony with nature and used only what they needed to. Yes, and It is not just taking a step back, but rather having humans evolve into something better and more advanced. Yes, and CE should also prevent us from trusting into greenwashing policies. Yes, and we need to come together, politicians, governments, communities, academics, industries in order to make that happen.
During discussions CE students shared that it was useful to practice the steps. Since they are at the stage of career making choices, the framework can be applied in CE related discussions with different targets groups including employers. Generally, it was mentioned that talking more about CE helped to demystify it. At the same time, the process or some of the steps were hard to complete for participants. They explained more practice would be needed with different kinds of personas to become better in crafting stories. The first brainstorming step was difficult for some students, due to many different aspects in CE definition and not knowing how deep to go into the concept.

Another key discussion point was around CE jargon and language used. “You just use these popular CE definitions, without changing the language and not considering the audience you are talking to” was noted by one of the students. Since there are many definitions of CE, the commonly used ones are from European Commission and Ellen MacArthur Foundation and many experts can be repeating them without thinking whether people outside of CE bubble can resonate with or not, for example flows and stocks. Blue highlights in the Table 6 indicate more CE related terms that participants used in their stories during the conducted workshops. Students realized that people’s background can be different, and it does not mean that people do not care about the planet. Students shared there is a need to come up with a different approach for communication, which is not that easy.

Additionally, participants were curious about ways on how to engage or even convince people with opposite views or sceptics. One of the students shared that she struggles to find the right arguments when she needs to not only engage, but also to persuade people. Personas presented during workshops were hopeful and enthusiastic about the change, and this is not the type of a person students meet in the real life.
5. Analysis

This chapter aims to connect key results from survey, interviews, and workshops with theories covered in literature review. It provides an analysis of common patterns and rare, but important themes that occurred in conducted primary research in relation to reviewed academic journal articles, books, and reports. The chapter talks about the following key points: simplification and easiness, CE jargon, critical thinking, importance of different audience groups, unlearning assumptions, resistance, convincing stories vs inspiring stories, and collaborative storytelling.

CE is a developing concept that embody internal complexities (Mulet et al., 2019; Marin & De Meulder, 2018). Interviewed experts described CE as a hard to define concept too because it is under continuous developed. Additionally, due to its complexity and technical language CE is not that easy to explain to the general public. Survey respondents and workshop participants shared similar views on CE communication that will be discussed further in more detailed way.

5.1. Simplification and Easiness

One of the important reoccurring themes in primary research was simplification. In accordance with the survey and interview results nonexperts tend to think of CE on a simple and shallow level like recycling or planting a tree. This is on one hand is not a surprise, because humankind has passed the period of Circularity 1.0 and 2.0 “Techno-fixes to waste”, where a discourse of concentration on waste management, recycling, and technological solutions was majorly present (Friant et al., 2020). Currently, there are still dominant stories of growth, technocratic fixes, and easy solutions that are trapped in people’s mindsets. According to survey responses, simplification of the term comes not only from nonexperts, but also from perspective of CE students. They want to have a chance to explain CE in one sentence or some do not bother in general.
Moreover, it is only about simplification of the CE concept, but also looking for easy and simple solutions to the complex problems, like silver bullets that can help to fix it all. In connection to easing the process of solving problems, a theme of “super-heroes” appears during interview discussions too. This brings another idea of an easy solution: someone else will fix the problem. The idea of a superhero and simplification of complex issues can be dangerous because it might lead to relying on someone else to make a positive change, having no desire to get involved, and not bothering of assessing solutions critically. There is a need to open for complexity from both sides: experts and nonexperts. Therefore, the point from interviewed experts that society needs more diverse stories to explain the complexity of current issues and solutions is vital. Creating new beneficial stories might help to diminish destructive stories of consumerism, ownership, growth at the expense of the planet resources (Wilson, 2021). There are examples of stories that are beneficial to the planet like Ellen MacArthur Foundation and Doughnut Economics of Kate Raworth that were pointed out during expert interviews and conducted workshops.

5.2. CE Jargon

The survey data showed that among survey respondents there was some knowledge around adapting and simplifying technical language to the audience. However, according to the survey and conducted workshop discussions it was noted that CE students mostly use CE jargon when explaining CE often without realizing it. Some students recognized that they got used to popular CE definitions used in courses in their bubbles and they did not change the language while talking to different audiences. For example, in the survey respondents talked about closing the loops, cycles, Rs., business models, life cycles, balance, and systems when answering to the question how they explained CE to nonexperts. As can be seen in individual and collaborative stories created for two different personas during the conducted workshops students wrote stories using CE specific terms like “material consumption”, “system”, “biological or mineral materials”, “use of resources”, “eutrophication”, “biodiversity”, “greenwashing policies” that are highlighted in blue in Table 6.
5.3. Critical Thinking

Present times especially require the cultivation of critical thinking ability as was pointed out by interviewed researchers as well as by the literature (Wilson, 2021; Stibbe, 2014). Because currently, humankind lives in post-truth times when facts are not as impactful in public as emotional and personal beliefs (Moezzi et al., 2017); when marketers and politicians utilize the power of storytelling on people’s behaviour to promote stories with messages that uplift ideas of limitless gain, ownership, destruction, and killing. Additionally, because human brain cannot automatically differentiate between the truth and falsehood (Moezzi et al., 2017; Sundin et al., 2018). For example, conspiracy theories and stories of some politicians and government officials that were not based on credible sources were still impactful last year, when they could drive people into actions like demonstrating against COVID-19 existence (Buranyi, 2020).

As it was emphasized by interviewed experts, critical thinking skills especially important to have for storytellers. Because CE experts have responsibility what stories they tell and what actions they might evoke as a result of told stories. Therefore, when communicating CE to the general public, CE experts could assess and differentiate destructive stories from beneficial ones and translate complex messages to nonexperts. As can be seen in the previous section and the survey CE experts including can simplify and see the world as black and white. Evoking critical thinking in oneself requires an effort, which does not come naturally and easy. Questioning situations or stories that people live by is not as important for some, because they might have other priorities to focus on for example, fulfilling their basic needs like finding food and shelter (Thøgersen, 2014). This is another reason why creation of complex and diverse stories for different audience groups with different values and needs are important, which was addressed by experts and literature review.
5.4. Different Audience Groups

Another major common pattern that was noted by interviewed experts is the importance of recognizing the audience, to whom the story is told. Reviewed academic articles addressed that communications should be human-centred (Sitra, 2021), specifically that different audiences need to be approached differently (Moezzi et al., 2017). It is a common practice in private sectors to group people in various profiles in accordance to their desires, values, interests, and lifestyles in order to be more effective in reaching these groups of people and influencing their behaviour. This includes the topic of how to promote sustainable lifestyles better to different audiences (Sitra, 2021), where in accordance with created profiles stories can be adapted. Adjustment of the language and explanation of CE depending on the addressed person was recognized by some survey respondents. However, it was not seen as an important component by many other respondents. Therefore, during conducted workshops two different personas were introduced to check how participants would react. As a result, at the end of the second workshop during the discussion CE students recognized that it did not come to them naturally to adapt and change CE explanations depending who they speak to. CE students explained that often they continue using popular CE definitions of Ellen MacArthur or European Commission.

5.5. Unlearning Assumptions

Interview and survey data show how rare people talked about system transformation and changing mindsets, however it is still a vital topic to discuss. According to reviewed literature humankind has passed the period of thinking that solely invention of more technocratic solutions would solve current challenges (Friant et al., 2020). As it was noted by interviewed experts, humankind possesses technology that can support transitioning to circular future and therefore, academia praises changing of mindsets as a paradigm shift in current systems instead (Korhonen et al., 2018; Marin & De Meulder, 2018; Meadows, 1999).
When talking about changing people's mindsets, the idea of questioning one's own mental models and beliefs do not appear often. In the survey respondents talked about shift in thinking, but mostly either from the point of view that general public does not understand the complexity and depth of CE or from general systems view that changes are needed in the way individuals and institutions live and work. There was only one answer that experts should not underestimate and have assumptions about people's abilities to understand by saying that “people are smarter than we might be thinking”.

Therefore, in the conducted workshops active listening task was included, which can help to note own assumptions by listening and start unlearning them. This was extracted from “Through Other Eyes” framework (Andreotti & de Souza, 2008a) that had more sophisticated steps for unlearning assumptions; the framework is described in Table 1. It was noticed during workshop discussions that participants talked about some of the wrong beliefs they might had. An example of parents appeared, that they can have different background and they might not grasp the concept of CE in depth, however it does not mean that they do not care about the environment.

5.6. Resistance
It is important to mention the aspect of resistance in the context of CE, change, and future. The data from interviews and the survey shows that CE at its core brings and implies change of the status of regular lives. This is supported by the literature that change is bothering and frightening for many people, specifically social change and change of behaviour (Palm et al., 2020). One of the survey respondents wrote that “when people realize it requires fundamental changes in behaviour of individuals and institutions, the sense of helplessness appears and it that shuts down the conversation”. Interviewees discussed that cutting GHG emissions requires change in lifestyles like flying less, switching to plant-based diets, or buying less clothing put limits on people's comfortable lives that no wonder can lead to resistance. Additionally, discussing threats like climate change also creates resistance (Palm et al., 2020). As it
was pointed out by interviewed expert there is “a hairy big monster around the corner” referring to climate crisis that needs to be addressed, which can be overwhelming and scary for people. Conversations around topics like CE and climate crisis are essentially complex. Hence as it was supported by literature and interview data, the resistance to change and what it can cause are one of the significant aspects CE experts need to consider and know how when holding conversations and creating stories around CE with the general public.

5.7. **Convincing Stories vs Inspiring Stories**

How to convince people with opposite views to change was one of the key discussion points during conducted workshops. Workshop participants explained that this is the type of people they meet in real life; therefore, they struggle to find the right arguments to persuade these people. Persuasion is a big topic in storytelling in literature (Fischer et al., 2018; Dahlstrom, 2014) as well as in interview data. As a result, effective CE communication can be discussed in two ways: 1) a story that calls to action and 2) a story that inspires listeners and shows new worlds, perspectives, and experiences of characters.

A story with a call to action is used to achieve a desired outcome, nudging listeners into a specific action. Currently, one can find many articles and blog posts with “what can you do” section with tips after describing a specific issue or the whole initiatives dedicated to describing how to live a sustainable or circular lifestyle. This includes “The Lazy Person’s Guide to Saving the World” (United Nations, n.d.), interactive eco-challenges (Drawdown Project, n.d.; UN Environment & the UnSchool, n.d.) and Circular Future Lifestyles (European Environmental Bureau, n.d.) that share suggestions to different audiences on how to live sustainably or how to become a new circular consumer *Cirkulent* (Medveten Konsumtion, n.d.). It is proposed by literature that if provided call to actions are relatively easy to accomplish then encouraging the change of behaviour can be achieved taking into account the audience group and their persona characteristics (White & Habib, 2018). At the same time while creating stories and calls
to action in relation to sustainability and CE with behavioural recommendations, one should consider context and audiences' characteristics in order to avoid backlash in reducing trust and belief in experts or creating resistance (Palm et al., 2020). The importance of knowing the audience was supported by interview data as well, which was discussed in 5.4. Audience section. Lastly, there is a risk of manipulating nonexperts if they do not critically assess the created story, which goes back to the importance of critical thinking of above-mentioned 5.3. section.

Another type of a story inspires a listener and does not tell them what to do. Both interview data and literature described story that helps to imagine, shares a vision, so that listeners can think, reflect, and decide what they will do. As it was supported by interview data a storyteller should meet where the listener is and walk with them to the other side of the bridge to show the different world. This can be done by communicating vision to get people motivated and inspired (McCormack, 2021). As interview experts shared and literature (Ganz et al., 2010) supported inspiration and hope can catalyse action. Additionally, due to crisis in public imagination, interviewed experts suggested that cultivating imagination in listeners can be transformative as well, so it can be useful to invest “in public imagination rather than in public opinion”.

There are research projects, where imagining sustainable futures is explored for example: 1) CO-NATURE project by Université Libre de Bruxelles and Vrije Universiteit Brussel are in the process of producing science fiction stories for nature-based urban regeneration for the city of Brussels in Belgium (CO-NATURE, n.d.) and 2) Climaginaries project that was discussed in 4.1.6. How to become better in telling stories on CE. It can be concluded that communicating a vision and fostering imagination of targeted groups of listeners in inspiring way can help people reflect, see and open up to different perspectives and as a result can motivate people into action or change their views. However, as it was noted during interviews stories, where a vision is communicated and reflection and imagination are offered, are not for all listeners, some can get confused without concrete described steps or actions.
Even though in the survey theme of imagination and inspiration did not appear as often, in the conducted workshops the first step was around imagining values in circular society and future. During this step some CE students shared that it was not an easy task to do due to a huge topic and time constraints. Moreover, some workshop participants did not connect that a good story can be effective in convincing people with opposite views and changing their perspectives and shared that they struggle to find the right arguments. Since during conducted workshops resistant personas were not tested it can be a good next step to try. Because as it was suggested by the literature, stories can be effective in changing people's mindsets even among resistant audiences (Dahlstrom, 2014).

5.8. A dialog: Collaborative Storytelling

The last important denominator was that stories can lead to a dialog between a storyteller and a listener. Survey data showed that after helping listeners to imagine, they come back with questions and “lots of but” to discuss it further. It makes listeners to reflect, question, share their opinions, and create possibilities to co-create a story together with storytellers. Engaging and nudging listeners into a conversation can provide a space for listeners to become active and participate in co-creating diverse collaborative stories together with storytellers; where their opinions and perspectives can be considered. An interviewed researcher mentioned that by inviting listeners to create a story together can lead to having no need in convincing people. In other words, knowledge would be created not solely by a teller and interpretations of a listener, but also in the space between telling and listening and by consider listeners’ needs. This means that a storyteller needs to be curious and be a good listener (Wilson, 2021).

Fourth step in the conducted workshops attempted to create a collaborative story with “Yes, and …” technique with CE students and to check their listening skills. Stories are provided in Table 6. First, answers to step 2 and 4 confirmed that CE students listened attentively: they could describe provided personas in a detailed way and could weave points together, mentioned in the previous steps into a collaborative story. Hopefully,
5. Analysis

their active attention and listening skills would be taken to the real life whenever CE students hold conversations with different audiences. And second, after finishing with stories rich discussions were hold, where participants shared that talking more about CE helped to demystify it. Adding representatives from general public into the process of creation a story can be included for the future workshops.
6. Discussion

This chapter describes answers to research questions, the development of recommendations: a toolkit, study limitations, contributions, and further research.

6.1. Aim and Research Questions

In the introduction chapter the aim and research questions were presented. The aim of this thesis project was to explore storytelling as an effective tool in communicating CE and engaging nonexperts by learning from literature review and interviewing representative from private sector and academia. As a result, based on conducted research recommendations were created and designed into a toolkit. The elaboration on answers to research questions are provide further.

6.1.1. Research question 1: How CE students can become better storytellers and popularise CE with the help of storytelling?

After reviewing literature and analysis of primary data from expert interviews, the survey, and conducted workshops, main themes from Figure 11 on key suggestions from interviewed experts were added, improved, and separated into Figure 13 and 14 to address both research questions. Figure 13 describes two interconnected questions how to popularise CE and how to become a better storyteller that are divided into two columns. To start it is important to consider the audience a storyteller is talking to. Diverse stories should be adapted to characteristics of different groups of people specifically their needs, desires, values, limitations, and CE language need to be adjusted. This is important for the sake of inclusion into conversations different social groups. For example, one of the interviewed experts created different stories around CE in Flemish, for immigrants, about teenagers, post officer and other. The more adapted the story to a specific group of people or person, the more they can resonate with it, and the more likely they are going to pass it on and popularise the story. CE stories should not be simplified instead show the complexity of the concept. Because
6. Discussion

CE is not black and white, it should not be presented as a perfect silver bullet solution. As it was discussed earlier, there is a danger in simplifying complex terms and issues. They cannot be solved with simple solutions, because this combination can produce unintended consequences.

Ability to tell complex, inclusive, and diverse stories can be developed by skills and aspects described in the second column of Figure 13. Critical thinking plays a big role, because storytellers are responsible for stories they tell and how these stories influence people. Therefore, storytellers need to recognize and be critical of dominant stories and being able to translate this knowledge to nonexperts. Good listening skills is another important trait to have for a storyteller. Good listening skills can help connect with the listener, identify what is important for them, hear their opinions, and possibly understand why listeners have opposite or resistant views. Listening skills are very much complemented by being brave to have an open mind and notice one’s own assumptions. Noting and questioning own assumptions and beliefs and exploring how they influence on the ways storytellers act and talk with other people can help to see the shift in the relationships. If we want to make a change – we need new ways of thinking; change comes within self.
6. Discussion

It can be important to consider questions like how I am manifesting my values and how I communicate them, with respect or lack of it. I believe, pointing at people and trying to persuade them “you are not doing it right and you should change” will not necessarily help the conversation. Therefore, instead of pushing people into something, instead learning how to tell inspiring stories to different audiences by sharing the vision of circular futures or present and helping people to imagine them, can be an effective way to start interesting conversations. This will help and inspire people to see different worlds and perspectives and can lead to changing their mindsets and behaviours and act upon them.

6.1.2. Research question 2: How stories that CE students tell can engage nonexperts and incentivise action?

Questions how to engage and incentivise action are presented in two columns in Figure 14. Conducted research shows that a good story that has a good structure can engage and involve people. A good structure is referred to Hero's Journey matrix, which was discussed in 2.1.2. What is a good story. The question, what a good story is, was discussed by interviewed experts and reviewed in the literature. As a result, the first column describes main compiled components of a good story that can be considered by CE students. A good story should be familiar to the listener, have something concrete, interactive or fun, where CE language is simplified and adapted to the audience.

According to the literature and interviewed experts to incentivise action it is suggested to consider convenience factor and emotions of people. For example, a story can praise positive emotions like inspiration and hope that can catalyse action in people. We often hear doom and gloom stories, so more stories that spark positivity and inspiration can be created to diminish the dominant doom and gloom stories. Call to action can have a place in a story depending on the target group as it was discussed in 5.7. Convincing Stories vs Inspiring Stories. Some people can be regarded as followers that are not
experts in CE but would want to contribute to circular lifestyles and might look for solutions and might get overwhelmed. Not many people are activists, changemakers, visioners or in general would like to be active in CE society or creating circular future. Some are followers and it is important to have stories for them, where they would have concrete descriptions of actions to consult that can help them to change and act upon for circular future.

For other groups of people, call to actions can create resistance, they might need stories that spark reflection, imagination, and inspiration, so they can get motivation to decide on how to act. In both type of stories an already existing example of a circular business, product, service, or activity can have an effective explanation as it was pointed out by experts and survey respondents. All covered items lead to the key idea that storytellers can be effective in telling good stories and moving people into action by understanding the context and listeners deeply and adapting stories accordingly.

How to engage?
- Something familiar
- Concrete story
- Interactive, fun
- CE language
- Good structure

How to incentivise action?
- Convenience
- Emotions
- Positive storylines, inspiration
- Call to action
- Example

Figure 14. Main themes in addressing RQ 2, after literature review and analysis of primary data. (Visualisation is created in Canva.com)
6.2. Recommendations: Toolkit

This section describes how the toolkit was developed and how it can be used. Additionally, there is explanation of visual part and two parts of the toolkit are also presented.

6.2.1. Development of the Toolkit

Two conducted workshops were organized to test steps illustrated in Figure 15 that were planned to include into the toolkit. Steps included: 1) defining CE, circular future, circular society, and values that are important to have, 2) listening and understating the audience and what is important for them through identifying their hopes, desires, dreams, values, limitations, and after presented tips extracted from interviews 3) creating a story.

Since the procedure was scheduled for specific time frame and it was new to workshop participants, they shared that it was difficult to go through these steps. However, since the steps made participants to reflect during discussions it showed that they were
necessary to include into the toolkit. To make the process easier to understand these three steps were divided and adjusted into six questions or steps.

Explored toolkits and frameworks from Table 1 influenced the toolkit in the following ways. Shift 1.5 Method book (Sitra, 2021), “Adapting our Culture” toolkit (Patterson et al., 2021), and Green Gorilla Storytelling Cribsheet (Cinquemani, 2020) provided examples of templates on how to structure and design steps into exercises for a toolkit. As a result, as seen in Figure 16b, every step has a question, explanation below, and space for writing down ideas. “Change the story, change the world” workshop (McCormack, 2021) and “Through Other Eyes” framework (Andreotti & de Souza, 2008a) emphasised the importance of steps on learning to listen and imagining and identifying values. Therefore, both steps, in the conducted workshops step 1 and 2, containing these elements were included in the toolkit as steps 2 and 4.

6.2.2. Toolkit

The visual structure of the toolkit is based and inspired by Hero's Journey of J. Campbell (2004), due to popularity of this matrix and better visual illustration of the steps. Figure 16 below includes Figure 4 of Hero's Journey for comparison. Steps of the toolkit are different from the Hero's Journey and are included in accordance with conducted research and developments from the section above. The understanding of a “Known” and “Unknown worlds” are different from Hero’s Journey as well. In the toolkit it means that first, a CE student identifies what is already known to them 1) who they are as a storyteller, 2) what circular values they have, and 3) what their goal is for creation of the story. Further steps are located in the “Unknown world” 4) who their audience is and 5) what is suggested to include in the story. After learning about step 4 and 5 CE students can embrace developments in their thinking if they are attentive and open to their audience’s information and suggestions received. Lastly, step 6 is around story creation. It is placed in the “Known world” due to acquired learnings that are not new or unknown
6. Discussion

anymore. Figure 16a includes visual illustration of the journey and part b of Figure 16 contains more details and explanations of the steps.

These steps are important to address for a CE student who is open to pass from a “Known world” into the “Unknown world” in order to be better in telling stories and conveying messages. The process is not linear, one can always come back to the previous steps for reconsideration. The toolkit depicts a development journey of CE students that are heroes and heroines to embark on the journey of unlearning their assumptions and exploring unknown world of audiences they speak to. The toolkit provides a preparation for CE students before starting conversations around CE as a complex term or as a reminder of things to consider during conversations. The toolkit is meant to motivate CE students to rethink that a change starts with them first, before they would want to change the world and people around them.
6. Discussion

Figure 16. Toolkit for CE students: a) upper part, b) lower part. (Visualisation is created in Canva.com)

Figure 4. Hero’s Journey by Joseph Campbell (Campbell, 2004)
6.3. Study Limitations

The chosen approach was mainly qualitative and had exploratory nature of the aim. Data is limited to a small group of interviewed and surveyed people and based on subjective interpretation of their subjective views. The report could have benefited from reaching larger audience for survey and interviewed experts. Another limitation, the scope was chosen too broad for five months master’s thesis project. The report could have benefited from narrower scope in order to get deeper results and reflections. Additionally, for the conducted workshops five female students were chosen that could participate. This could have led to one sided results. Moreover, Affinity Mapping is a long process, where a conductor needs to read through transcribed data and extract key points in their subjective opinions and interpretations. Since it was analysed by one person, it could have been biased despite conducting the process a few times.

6.4. Contributions

This thesis has contributed to explore issues and suggestions around complexity of communicating CE to nonexperts. A practical and tangible artefact – a toolkit was created as an interactive knowledge support for CE students to facilitate recognition of different audiences, contexts, and adapting the language and stories accordingly. The toolkit was meant to provide ingredients to CE students, so they could create recipes and link these steps to their situations and conversations around CE and to raise importance of talking about CE in critical, empathetic, and positive ways.

This report contributes to the area of research on effective communication for general public, which is still developing specifically in relation to CE and sustainability. The connection of storytelling, circular economy, and behavioural science was explored in this thesis report. The combination is new and can contribute to the field with new questions and data, which provides ideas on how to motivate people into positive action.
6.5. Further Research

Further research is suggested in conducting more workshops with CE students to test the recommended toolkit in creating CE stories for different audiences, especially including personas that are sceptical of circular society and circular future. As a result, different archetypes or profiles of audience groups can be created and suggestions on how to communicate with them effectively. It would be helpful for CE students or experts to check these profiles that can help to identify different groups of audiences and what how be effective to communicate in this context. Additionally, different target groups of CE students or experts from different regions and mix of genders can be addressed. Moreover, different stories can be created and tested with listeners from general public, to see which stories about CE might make a difference.

Another suggestion would be to investigate other areas in connection to storytelling. These can include ecological linguistics in terms of use of language and concepts; social change, transformation and leadership in the context of storytelling; impacts of call to action in stories; and ethical theme and manipulation in storytelling.
7. Conclusion and Reflections

“Trying to get people to alter their behaviours and norms for something that doesn’t hurt the climate or giving up some really bad personal behaviours in favour of a better future for all, requires more than the presentation of facts and the adoption of new technology. It needs a story.” (Thøgersen, 2014).

In accordance with literature review, scan of existing toolkits and frameworks, conducted expert interviews, survey, and workshops important qualities of CE students as emerging experts to create beneficial CE stories are cultivating critical thinking, noticing and challenging their assumptions and mental models, and developing listening skills and curiosity toward nonexperts. In accordance with interviewed experts’ and reviewed literature suggestions on creating good and inspirational stories are around positive storylines to alter doom and gloom stories, to have something familiar – the story should not be completely new or a social example to relate to and follow, the story should be localized and concrete for the chosen audience, and most importantly be able to describe the complexity of CE.

Communicating data with the help of storytelling in a relevant way to different audiences has shown to increase engagement of the audience and act upon the acquired knowledge (Sundin et al., 2018). Another benefit of storytelling in comparison to facts and numbers is that it does not require an expert knowledge of the audience to understand and resonate with what is communicated. There are different research projects, mentioned above in 5.7. Convincing Stories vs Inspiring Stories section, investigate and use storytelling as a model for involving people in sustainability and climate related discussions with the help of imagining futures, evoking emotions, and collaboration. Therefore, storytelling has becoming central in academia and private sector communication developments. Because in order to introduce transformational changes in the complex world, relevant tools are needed to understand and communicate about complexity.
7. Conclusion and Reflections

Stories can play an important role in shifting mindsets of listeners and storytellers. The primary cause of the current crisis is human activities, human and planet interactions, therefore human behaviour and thinking require fundamental attention (Meadows, 1999; Wilson, 2021). Over the course of the life, people accumulate conditioning, and as a result beliefs and opinions can become fixed in a particular way of thinking even if when thinking that this is not the case. This could be improved with willingness to listen and respect what others think and challenge own's assumptions and dominant stories. Additionally, with the help of stories people can create, convey and adjust their values and beliefs. Even though storytelling is an uncertain and messy art, in these uncertain times people need new methods to communicate scientific data and with each other. Storytelling can be one of the ways.

I had embarked on a complex journey with a broad scope of research, jumping from one aim to another in an attempt to address a complex topic. The key points for me were around cultivating critical thinking and listening skills and questioning own assumptions in the process of becoming a better storyteller. Among experts there are assumptions that we need to be aware and critical of. We often might risk of running into quick conclusions and automatically adding a negative filter into our conversations with people. At the same time, being immersed in one's expertise bubble there might be a tendency of forgetting that others do not have similar knowledge and therefore, people might not be able to connect the dots. Therefore, I believe, in order to create a powerful story, a storyteller should hear listeners and have a curious and open mind to try to see the same things and connect with them: what is important for the listener and what they do not know. Bringing awareness and noting of one's assumptions, being critical of what stories to tell, while being attentive to our listeners might help in improving conversations with each other and communicating CE. To conclude, all these points can be summarised into a popular phrasing: “change comes within self” and we need to talk more about how we can improve in communicating complex topics like Circular Economy.
8. References


https://doi.org/https://doi.org/10.1016/j.resconrec.2020.104917


Sundin, A., Andersson, K., & Watt, R. (2018). Rethinking communication: integrating storytelling for increased stakeholder engagement in environmental evidence
8. References


9. Appendices

Appendix A: Methodology
A.1. Interview Guide & Consent form
A.2. Online Survey
A.3. Jamboard
A.4. Learning to read the world “Through Other Eyes”
A.5. Green Gorilla Storytelling Cribsheet

Appendix B: Findings
B.1. Affinity Diagramming of interviews
B.2. Affinity Diagramming of the survey
B.3. Affinity Diagramming of workshops
Appendix A: Methodology

A.1. Interview guide & Consent form

Hello, Thank you very much for your time and participation.

- Introduction of my thesis.
- Consent form template: https://forms.gle/LXD7zVaPVoR8ngU5A

Questions:

- Your introduction.
  - Could you tell me more about your project around sustainability, climate neutrality, or circular economy? What were you doing to try to get your message out? To who and how?

- How do you define circular economy in your company? How do you communicate CE to consumers? [to private sector experts]

- Could you describe how do you create stories? and what is the purpose?

- What is storytelling to you? What do you see are important qualities of a well-told/good story?
  - Why are stories powerful?

- Could you give an example of a successful story you've told?
  - Why was this story important?
  - What did you want to happen as a result of sharing that story?

- What is your perspective on communicating circular economy/sustainability effectively without confusing or alienating people?
  - Example: in terms of using terms as they are CE, sustainability, climate change? Do we need to use them? In what context?

- Why is it hard to communicate CE/sustainability/climate neutrality? What are the difficulties/barriers in communicating CE/sustainability you have faced?

- What are the stories of CE are dominant today? What stories are we telling around CE now?

- According to your experience, what are some things we can do to be better at telling stories?
  - What stories can engage people?

- How and where can storytelling be helpful in solving challenges we are facing today?

Do you have questions to me? [Thank for their time. Prompts to use: "How?" "Why?" and "And then...?"]
Informative consent form

I voluntarily agree to participate in an interview/talk performed by Natalya Amirova, a student at the Chalmers University of Technology.

I understand that this interview/talk is being conducted in order to identify the following opportunities for master's thesis "Storytelling in Communicating Circular Economy": What is storytelling, what is circular economy, how circular economy can be communicated effectively to different target groups?

I grant permission for the 45 minute interview/talk to be audio recorded and transcribed, and to be used only in an educational setting and by Natalya Amirova for analysis of interview data (Audio recordings and transcripts will be kept on Natalya's computer and will be deleted on June 15, 2021).

I understand that even if I agree to participate now, I can withdraw at any time or refuse to answer any question without any consequences of any kind.

* Required

Master’s thesis report will be publicly available and published on Chalmers’ website; therefore, I understand that in the report *

- My name and company name will be used
- My company name only will be used
- My name only will be used
- Any identifiable information will be kept anonymous
- Other: __________________________

My full name and company name: *

Your answer

By ticking “yes” button below, I agree to the terms indicated above. *

☐ Yes

Date: *

Date

dd——yyyy

Submit
A.2. Survey

1. I am a/an*

   Description (optional)

   - CIRCLE Student
   - MIND Alumni
   - Industrial Ecology Student
   - Sustainable Development Student
   - Environmental Systems Sciences Student
   - Other

   Add choice

2. How often when you talk to people about the circular economy (while describing what you study, the work projects you do, etc.), people don’t know what circular economy is and you need to explain?*

   Including when people haven’t heard about the term at all.

   Type your answer here...

   Shift D + Enter to make a line break

3. Then, how do you explain/describe circular economy to these people?*

   Feel free to give examples if explanations are different depending on who you are talking to (Friends, family, Tinder dates, colleagues, strangers, etc.). Or how do you behave: do you bother to explain at all?

   Type your answer here...

   Shift D + Enter to make a line break
A.3. Jamboard

**Workshop CE, Apr 28**

---
**STEP 1**
**INDIVIDUAL CREATION (5 min)**

*Brainstorm on how you understand circular economy, circular future and what values you see that are important there.*

- Key words, bullet points, phrases

---

**Step 2**

---

**Step 3**

Workshop 2
Online workspace for the workshop with covered steps

Online workspace for the workshop with uncovered steps
A.4. Learning to read the world “Through Other Eyes”
(Andreotti & de Souza, 2008a, p.5)

METHODOLOGY

Each learning activity has six components and extra online resources (e.g., short videos and classroom activities). Each component was designed with a specific rationale (see below).

GETTING STARTED
– learning to unlearn (ego-ethno relationships)
  Brainstorm of individual perspectives, invitation to relate it to different perspectives in one’s social group.

MAINSTREAM PERSPECTIVES
– learning to unlearn (heterogeneity at the ethno level)
  Analysis and deconstruction of mainstream: exposing learners to the heterogeneity within the ‘ethno’ narrative and to an outline of different strands in the debate.

DIFFERENT LOGICS
– learning to listen (ethno-human-world)
  Analysis of another possible (and logical) way of thinking about the issue (through metaphors). The interviews with indigenous people served as a basis for the metaphor strands, however, the perspective presented is the authors’ interpretation of the collected data.

THROUGH OTHER EYES
– learning to listen (ethno-human)
  Exposure to other personal narratives (the metaphor in action).

CASE STUDY
– learning to learn (world-human-ethno)
  Examination of the complexity of issues related to coloniser-colonised relationships.

READING THE WORLD AGAIN – learning to reach out (world-human-ethno-ego)
  Self-assessment in terms of potential transformation in thinking and implications for professional practice.

You will find three types of activities in each section:

LEARNING JOURNAL: each learning activity of Through Other Eyes (including the introduction) has 6 learning journal tasks that should be completed online or as part of your institution’s coursework (according to the advice you have received from your tutors).

REFLECTIONS: these are questions that are key to your learning journal task.

FURTHER REFLECTIONS: these are extra questions for you to start thinking about if you want to go deeper into this issue.

TOE THEORETICAL BACKGROUND AND RESEARCH PROCESS

If you are interested in the theoretical background and research process of TOE, please visit our FAQ section on the website or read the article available in the same section.

Comments and suggestions can be sent to the authors at: vanessa.andreotti@canterbury.ac.nz or mdesouza@usp.br.
A.5. Green Gorilla Storytelling Cribsheet

**STORY SELECTION**

1. What do you want the audience to think, feel, or do after the story? What’s your objective?
2. Think of a relevant topic, failing, or moment of curiosity around that objective.
3. If you don’t have a story from your own experience, create a story “whole kit.” One writer reached out for summaries of stories heard during meetings or conferences, or read in print, online, or social media. Capture stories that happen around you, small stories you hear while working or in conversation. Share your wish list and ask open-ended questions about specific moments.

**STORY ARCHETYPES**

<table>
<thead>
<tr>
<th>DEPENDING ON THE OBJECTIVE</th>
<th>CHOOSE AN ARCHETYPE STRUCTURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Show experience and strength</td>
<td>Coming of Age</td>
</tr>
<tr>
<td>Demonstrate resilience</td>
<td>Overcoming Obstacles</td>
</tr>
<tr>
<td>Demonstrate adaptability</td>
<td>Constant Evolution</td>
</tr>
<tr>
<td>Reinforce the audience’s trust</td>
<td>True as It Ever Was</td>
</tr>
<tr>
<td>Explain unknown direction</td>
<td>Riddles</td>
</tr>
<tr>
<td>Account for or demonstrate dedication</td>
<td>Quest</td>
</tr>
</tbody>
</table>

**BASIC STORY ELEMENTS**

- **Basis:** Relevant, heroic, challenge, honest struggle, worthy lesson.
- **Emotion:** Identify relevant emotions. Use “felt” expressions; “make me feel,” and dialog techniques to develop the most important. Avoid overusing emotional manipulation.
- **Suprise:** At the beginning of the story, reveal the key detail. Introduce an unusual event, use flashbacks, skip over elements in the context, orocks a critical fact until the end.
- **Dialog:** Replace these words into the story: “we, character” with words they actually said (quote) or thought (imagine).
- **Details:** Replace generics with specifics. Show, don’t tell. Pick one important scene and describe it in detail. Use anecdotes.
- **Length:** 3-5 minutes to tell (200-750 words).
- **Accuracy:** Set expectations about accuracy of story. Avoid allowing the audience to be offended or frustrated.
- **Delivery:** Oral focus on the story, not physical performance. 5 or 6 filler words or minute is okay. Conversational tone.
- **Written:** Write the way you’d like to speak — 5 words per sentence, small words, active voice, Finish-Knaack of 7.

**STORY STRUCTURE**

<table>
<thead>
<tr>
<th>STEP</th>
<th>ANSWER THESE QUESTIONS</th>
<th>SOUNDS LIKE</th>
</tr>
</thead>
<tbody>
<tr>
<td>HOOK</td>
<td>1. Why should your audience listen to this story?</td>
<td>“A great example of this was when….”</td>
</tr>
<tr>
<td></td>
<td>You can start with a question, or by presenting the problem or a statement that will be explained later.</td>
<td>“How are you feeling?”</td>
</tr>
<tr>
<td>CONTEXT</td>
<td>2. Where and when did it take place?</td>
<td>“Back in….”</td>
</tr>
<tr>
<td></td>
<td>Who is the hero and what are they wanting?</td>
<td>“They were trying to…”</td>
</tr>
<tr>
<td></td>
<td>What other background needed to understand the hero’s motivation?</td>
<td>“Then, one day…”</td>
</tr>
<tr>
<td>CHALLENGE</td>
<td>4. What was the problem/opportunity?</td>
<td>“That, and the whole thing…”</td>
</tr>
<tr>
<td>CONFLICT</td>
<td>5. What did they do about it? Show the honest struggle between hero and villain, even internal.</td>
<td>“No, they….”</td>
</tr>
<tr>
<td></td>
<td>And then they….”</td>
<td>“And as they…”</td>
</tr>
<tr>
<td>RESOLUTION</td>
<td>6. How did I turn out for everyone? How are this/their actions changed as a result?</td>
<td>“Eventually…”</td>
</tr>
<tr>
<td>LESSON</td>
<td>7. What did you learn?</td>
<td>“That’s what I learned…”</td>
</tr>
<tr>
<td>ACTION</td>
<td>8. What do you think I should do?</td>
<td>“And that’s why I think you should…”</td>
</tr>
</tbody>
</table>
B.1. Affinity Diagramming of interviews

Step 1 of Affinity diagraming of interviews
Step 2 of Affinity diagraming of interviews
9. Appendices

B.2. Affinity Diagramming of the survey

B.3. Affinity Diagramming of workshops