



Applying Storycraft to Facilitate an Experience-Centric Conceptual Design Process

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Abstract. The design profession is shifting from designing objects towards designing for experiences, and the main premise of this paper is that designers need strategic guidance in bringing the emotional, contextual, and temporal aspects of experiences into discussion. Existing externalization strategies are not obviously equipped to help incorporate the transient characteristics of experiences into the designer’s creative thinking. In this paper, we propose that designers may be able to achieve this by including visual storycraft into their creative process. Storycraft is the skilled practice of generating/building stories. Stories and experiences share a sequential structure with a beginning, middle, and end that can be crafted and influenced through design to evoke and affect the emotions of their experiencers. Several activities of designers are already very similar to those of professionals in storycraft, as the tools and techniques used in both domains are aimed at creating emotionally satisfying experiences. While harnessing the power of storycraft to elevate strategies in designing for experiences is an attractive idea, which has been embraced earlier by the design research community, it is not a proposal that can easily be put into practice. We have iteratively designed, evaluated, and improved Storyply as a method that combines ‘conceptual design’ and ‘story planning’. Our studies have confirmed that incorporating storycraft within conceptual design by means of Storyply resonated well with design teams and indeed helped them to discuss and frame ideas in an experience-centric fashion.

Keywords: Design · Design process · UX · User experience · User experience design · Industrial design · Interaction design · Storycraft · Narrative · Design process · Design discussion · Visual meeting · Creativity · Conceptual design · Experience prototyping · Chart and diagram design · Design thinking · Design/evaluation for cross-cultural users · Emotion · Motivation · And persuasion design · Information/knowledge design/visualization · Service design · Storytelling · Fiction · Non-fiction · Comics

1 Introduction

The designer’s role in product and service development, and hence also their impact on society, has evolved substantially. This is due to a shift of focus from “making stuff” to “making stuff for people in the context of their lives” [34]. Designing for experiences

requires designers to envision both the ‘dynamic qualities of experiences’ and the ‘constantly changing emotional response to such changes.’ They require strategic guidance in bringing the emotional, contextual, and temporal aspects of experiences into discussion [6]. To test, evaluate, and refine ideas, designers also need to externalize and represent ideas into tangibles [8]. Existing externalization strategies are not obviously equipped to incorporate the transient characteristics of experiences into the designer’s creative thinking. Designers may need additional methods and tools to envision, sketch, and discuss experiences over time in addition to the existing skills that they have for drawing in 2D and making mock-ups in 3D. In this paper, we suggest that designers may be able to achieve this by including visual storycraft into their creative process. Storycraft is defined here as the skilled practice of generating/building stories. The similarity between the critical properties of a story and an experience is evident.

They are both subjective, context-dependent, and dynamic [26]. They share a sequential structure with a beginning, middle, and end that can be crafted and influenced through design [27]. Both stories and experiences evoke and affect the emotions of their experientors [17]. The activities of designers are already very similar to professional storycrafters since, in both domains, artifacts and services are brought together to interact with people who need to deal with a problem [5].

While harnessing the power of storycraft to elevate strategies in designing for experiences is an attractive idea, which has been embraced earlier by the design research community, it is not a proposal that can easily be put into practice.

In this paper, we propose a conceptual design method called Storyply that aims to merge the skilled practice of generating stories with the competent practice of design. The method includes a set of templates that guide designers by visually organizing their efforts and creative output (see Fig. 1). We have iteratively designed, evaluated, and modified Storyply to assist design teams in discussing and framing ideas in an experience-centric fashion.

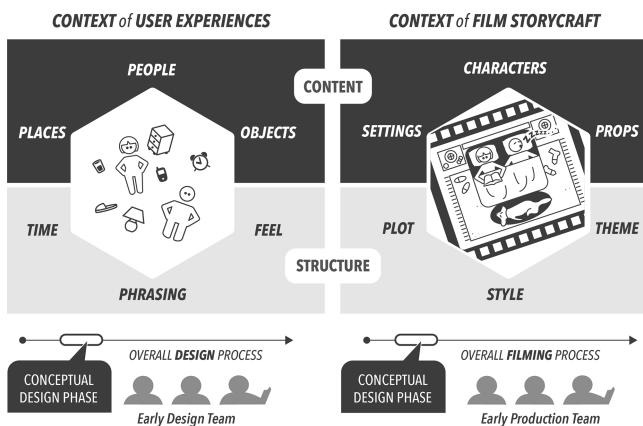


Fig. 1. Designers are conducting very similar activities to professionals in storycraft such as writers and movie-directors. In both domains artifacts and services are brought together to interact with people in order to create emotionally satisfying and meaningful experiences, and tools and methods are needed to discuss these experiences, also in the conceptual design stage.

2 Storyply

Storyply combines ‘conceptual design’ and ‘story planning techniques’ to help a design team to discuss and visualize solutions for themselves and the potential audience of their project, such as users, clients, and other stakeholders. A User-centered approach¹ requires designers to place user experiences at the very center of their creative intentions. This is easier said than done since, for decades now, designers have been honing their creative skills to produce tangible products and interactions. So, they need help to re-orient their creative focus from (tangible) objects to (intangible) experiences. Storyply offers useful guidance for that re-orientation and for building confidence in the design for innovative experiences. In this section, we explain how a Storyply session is conducted in several steps and provide a concrete illustration of each step.

2.1 Storyply Toolkit

Storyply provides nine templates to visually organize designers’ efforts and creative output by dividing the total effort into more manageable sub-activities, next to offering support for the sub-activities themselves.

There are two decks of pictures to ignite visual imagination. One comes ready-made with the Storyply toolkit, and the other should be prepared by the participating team before the workshop. A reference source called Storyply Tips is available to ground the approach by providing quick access to relevant research findings and best practices. It is a collection of useful tips from design thinking and story crafting disciplines, such as different methods and tools that are widely used by professional designers and storytellers in both industries. There is a procedure to guide the process, which is communicated by the website and/or a facilitator, and supported by onboarding videos at storyply.nl/videos. These videos also include more details about the example scenario that is used in the next section to explain the Storyply method. The Storyply templates can be obtained upon request through the same website.

2.2 Storyply Method

The Storyply Method distinguishes two types of activities: Backstory² and Story & Review (see Fig. 2).

¹ User-centered design is a research-led approach that utilizes an “expert mindset to collect, analyze and interpret data in order to develop specifications or principles to guide or inform the design development of products and services. These researchers also apply their tools and methods such as contextual inquiry and lead-user innovation in the evaluation of concepts and prototypes [33].”.

² In storycraft, a Backstory represents the set of significant events that occurred in the characters’ past, and the storyteller utilizes that background information while building the story’s progressions [27].

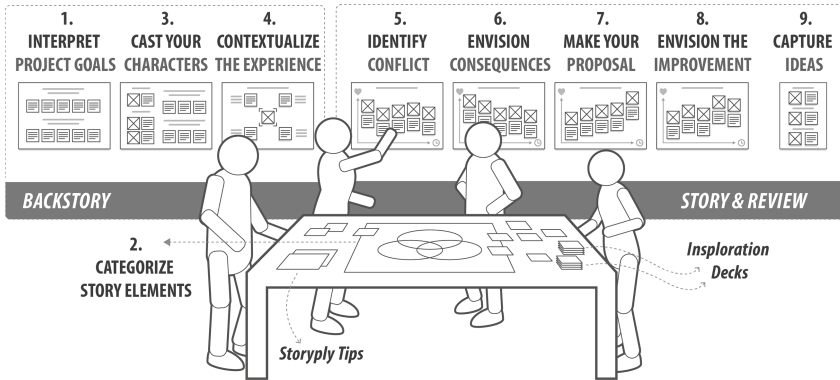


Fig. 2. Storyply supports a visual discussion process using templates, two decks of pictures (Inspiration Deck, Project Deck), and a collection of helpful guidelines (Storyply Tips). It consists of two main layers: Backstory and Story & Review. Backstory consists of four steps: Interpret Project Goals, Categorize Story Elements, Cast Your Characters, and Contextualize the Experience. Story & Review consists of five templates: Identify the Conflict, Envision Consequences, Make Your Proposal, Envision the Improvement, and finally Capture Ideas.

Backstory. Is the part to identify and utilize vital information about the background of the project, target user(s), and the context of use while envisioning the experience in general terms. Backstory helps a team with the interpretation of the project requirements and with collecting and organizing material that is potentially useful for identifying the experiences on which to focus. Backstory helps to externalize a fuzzy internal process by steering attention to building blocks that are often taken for granted (such as the project goals) but which tend to create confusion when not being explicitly defined.

Story & Review. Is the part to generate and assesses the content and create alternative approaches that can lead to propositions for new experiences. Story & Review guides the participants in using the outcomes from Backstory, in generating key moments in the experience, and in evaluating how those fit with the emotional needs of potential experiencers. This activity helps to envision temporal aspects of an experience and reflect upon the emotional impact of design intentions.

2.3 Storyply Workshop

In this section, we briefly go through the steps of a Storyply workshop (see Fig. 3). As not all details may be sufficiently visible or understandable from the figures provided in this paper, we advise the reader to also consult the onboarding videos at storyply.nl/videos.

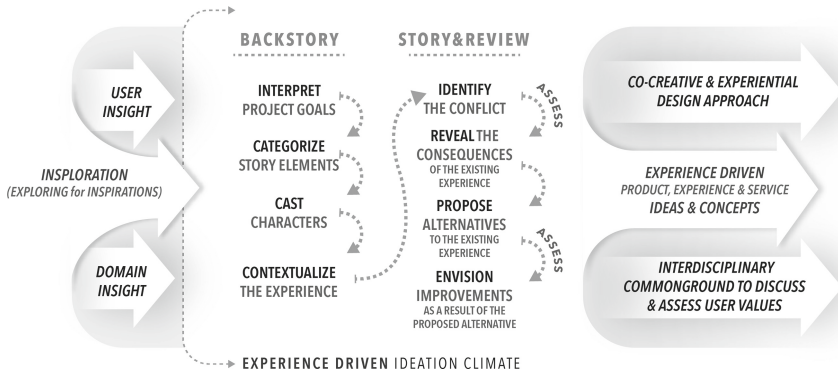


Fig. 3. A conceptual map of how Storyply works as a process: Backstory aims to identify relevant information about the intentions of the project, the target user(s), and the context of use to utilize while envisioning the experience’s progression. Story & Review helps to generate and assess the content and creates alternative approaches that can lead to propositions for new experiences.

Step 1-Interpret Project Goals. The first step guides the team to self-reflect by sharing and discussing their interpretation of the project brief. They do so by naming the project and re-writing the goal according to their individual opinions. This step acts as a warming-up exercise and an opportunity to spot ‘shared consensus,’ ‘polarized views’ or ‘complete lack of direction’ from the very beginning of the process.

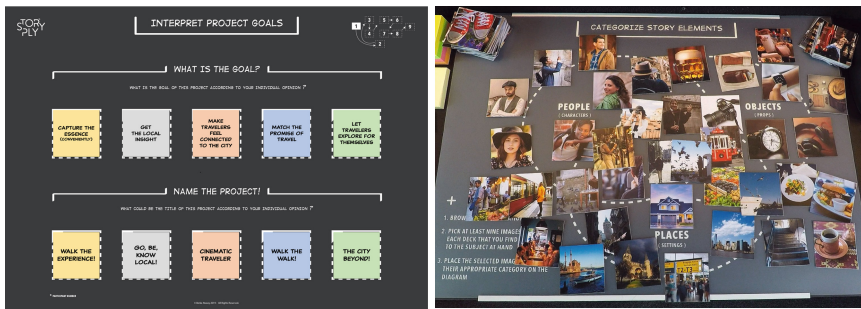


Fig. 4. Step 1: Interpret Project Goals: “What is the goal of this project according to your individual opinion?”, “What could be the title of this project according to your individual opinion. Step 2: Categorize Story Elements: Browse the Inspiration Decks, pick and choose at least nine images per category (people, places, objects) to be placed on appropriate sections in the diagram.

Step 2-Categorize Story Elements. In this step, the members of the design team browse and pick pictures from the Inspiration Decks and organize them in the shared People, Places, and Objects diagram. This activity prepares the participants for the following steps by inspiring their visual imagination (see Fig. 4). Designers are visual thinkers, so the majority of inspirational material is likely to consist of visuals [22].

There are two decks of pictures. The Storyply Deck comes with the Storyply Toolkit and aims to provide inspirational imagery for all kinds of projects. The Project Deck consists of pictures that the participants should collect by insploring³ the project domain and bring with them to the session. Browsing and reorganizing the pictures together with all team members allows participants to have a multimodal communication. For instance, placing one card on top of another can indicate priority [31], and that action can possibly trigger a lively discussion.

Step 3-Cast Your Characters. This step allows building believable characters to become the actors in the experience. The goal is to discuss the ‘drives’ and ‘vulnerabilities’ of the main character and his/her relationship with supporting characters who could influence the experience under discussion. There is a difference between a Character in Storyply and a Persona⁴ as frequently used in design. While a Persona focuses mainly on consuming behavior, the main interest of a Character is the external & internal conflicts that drive the emotional connection of people with their environment (see Fig. 5).

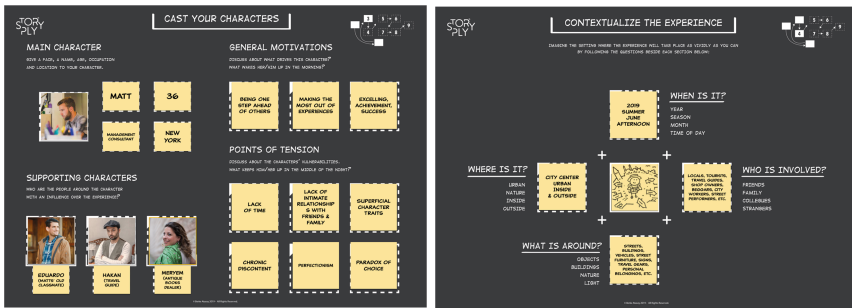


Fig. 5. Step 3: Cast Your Characters has four sections: 1) Main Character: Give a face, a name, age, occupation and location to your character. 2) Supporting Characters: Who are the people around the main character with an influence on the experience? 3) General Motivations of the main character: Discuss about what drives the main character. What wakes him/her up in the morning? and Points of Tension: Discuss about the main characters’ vulnerabilities. What keeps him/her up in the middle of the night? Step 4: Contextualize the Experience: “Imagine the setting of experience as vividly as you can following the questions beside each section.” The goal is to come up with a simple illustration in the center that shows the character in context.

³ Insploration is an anagram that we came up with to imply exploring inspirations in order to fuel our imagination. Design is a creative endeavor, and designers are explorers of inspiration: Insplorers. Insploration works as a conscious and systematic act of searching for and capturing stimulants that may inspire new ideas [2].

⁴ The Latin word ‘Persona’ means ‘Mask’ and has its origins in theatrical storycraft to indicate an individual character. In contemporary marketing and design, the same term is used to describe characteristics of a user group to represent the profile of a fictional individual to help companies focus their intentions on their target customers [32].

Step 4-Contextualize the Experience.

The fourth template helps the team to come to a visual agreement in one snapshot about a key moment where the main character interacts with other entities at the location of the experience. The task is to imagine the space where the experience takes place as vividly as possible and to sketch a straightforward visual representation of that scene (see Fig. 5).

Step 5-Identify the Conflict.⁵ The fifth template asks the team to describe the existing experience by envisioning probable events that set the experience into motion in the form of five key instances. This step makes participants start thinking about the experience by visually representing how the characters feel throughout the story in terms of key values (see Fig. 6).

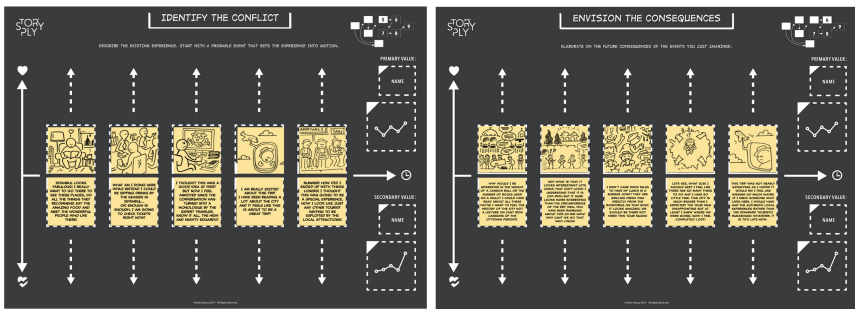


Fig. 6. Step 5: Identify the Conflict: Describe the existing experience, start with a probable event that sets the experience into motion (which is called an ‘Inciting Incident’ in storycraft). Step 6: Envision the Consequences: Elaborate on the future consequences of events you just imagined (in the previous template). The primary and a secondary value placeholder on the right of both templates are included for assessment purposes.

Step 6-Envision the Consequences. The sixth template guides the team to envision the impact of the conflict (*discovered in the previous step*) on the main character and the consequences on the experience. They do so by imagining five more key frames, that could be triggered by the previous five (see Fig. 6).

Assessing the Experiences in Template 5 and 6. The essential quality that distinguishes experiences from products is their temporal nature. In order to design for experiences, we need a way to think with the same temporal mindset, which requires a temporal interface to play with the instances of the sequence of events. A linear storyboard can only capture the sequence of events that would inform about ‘*what happens*’ or ‘*what could happen*’ and although it might be useful for visual planning, instruction or presenting a user journey, it does not allow us to capture and evaluate how the user feels, and when, why and how that feeling changes over the course of the experience.

⁵ A **Conflict** is a useful tool that professional story-crafters use to figure out how a story character behaves and decides. A ‘Conflict’ can be a struggle within the main character (internal conflict) or between the Character and other people, places, and objects (external conflict).

Our goal is to have a discussion about the emotional impact of the experience on specific personal values and make the participants think about the experience while visually emphasizing how people feel throughout that particular story. The goal is to capture changes in emotional intensity on to identify the corresponding ‘assessment values’ in order to open them up for discussion. The values (*Primary and Secondary*) represent the positive or negative charge that Characters are exposed to as a result of the choices they make throughout their experience (see Fig. 7). Adding a temporal map where the team discusses not only how events unfold but also how they impact the emotional state of the character throughout the experience opens up a whole new dimension to discuss WHY and WHEN users feel the way they do, and WHAT to do about it.

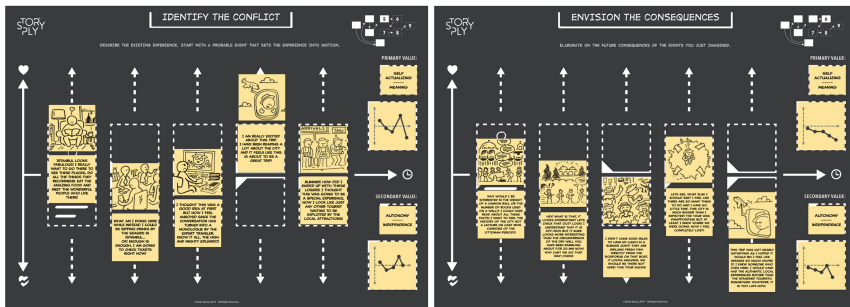


Fig. 7. The Y coordinate with the hearth icons on top and bottom represents the emotional intensity on a scale from negative to positive. The X coordinate with the small clock image at the end represents time. The dashed lines with arrows at each end remind us that the frames can move up and down according to the designated values. To assess the events in terms of assigned values, we ask: “How does the main character feel at each instance? Is it a positive feeling or a negative one?” and to move the keyframes accordingly. In this figure we see that the sequence of events planned in Template 5 & Template 6 are assessed in terms of the Primary Value: Self Actualizing/Meaning and Secondary Value: Autonomy/Independence.

Note that the goal of this chart is not to achieve precise metrics. The goal is to provide an impression of the change as experience arcs that can assist in the discussion. Storyply supports a discussion towards HOW the experience develops with respect to identified project values. These project values can be goals as formulated in Step1 or potential values that start to emerge during the discussion, i.e., any values that help to translate the high-level intentions into meaningful values that can inspire and inform design. During our studies, amongst various alternatives, one reference that proved to be immediately useful was well-known psychological needs as laid out by Hassenzahl [16, 17]. Here is a simplified interpretation of them [Martens, J.B.O.S (2017), private communication]:

- Autonomy (*I can do what I want, the way I want it*): independence, freedom, ideals
- Competency (*I am good at what I do*): performance, control, challenge, skills, learning

- Relatedness (*I feel close to the people I care about*): family, romance, presence, emotional expression
- Stimulation (*I experience new activities*): curiosity, mystery, play, coincidence, novelty
- Popularity (*I have an impact on others*): power, status, recognition, fashion, helping
- Security (*I am safe from threats and uncertainties*): order, calmness, familiarity, routine, relaxation

Step 6a- Assessing the Experiences in TMP 5 and TMP 6 - Primary Value. The team assesses the sequence of instances according to the emotional need that they have adopted as Primary value (see. Fig. 7).

Step 6b- Assessing the Experiences in TMP 5 and TMP 6 - Secondary Value. The team assesses the sequence of instances according to the emotional need that they have adopted as Secondary Value (see. Fig. 7).

Step 7-Make Your Proposal. This stage guides the team to make their proposal using the conflict and the consequences that they have identified in previous stages. The procedure is the same as in Step 5 except that Storyply offers the opportunity to re-tell the story by proposing a more desirable sequence of events that are likely to elevate the experience to a new and more desirable level (see Fig. 8).

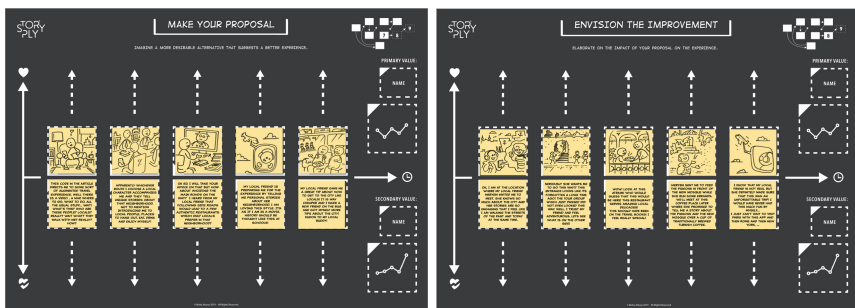


Fig. 8. Step 7: Make Your Proposal: The template prompts participants to “Imagine a more desirable alternative that suggests a better experience.” Step 8: Envision the Improvement: Participants are prompted by the message to “Elaborate on the impact of your proposal on the experience.” Once again, these templates offer space to express the assessment values on the right.

Step 8-Envision the Improvement. This is the moment to illustrate how the events could unfold with the teams’ intervention in mind and also to figure out a resolution⁶ within five new frames.

Step8a & 8b-Assessing the Experiences in Template 7 and 8. The team assesses the 10 new frames on the ‘Make your Proposal’ and ‘Envision the Improvement’ Templates

⁶ In storycraft, ‘resolution’ ties loose-ends of the story, offers a solution rather than an ending and allows people to see the outcome of the main character’s decision or actions during the experience [15].

with respect to the same values before. Of course, the intention is to identify improvements in TMP 7 & 8 in comparison to TMP 5 & 6. At first glance, it might look like that we are repeating the whole process all over again as templates TMP 7 & 8 are almost identical to templates TMP 5& 6. However, the objective is distinctly different.

To understand the underlying rationale of this necessity for a substantial number of additional key frames, we need to look at screenwriting. In screenwriting, every newly identified event contributes to a meaningful change into a Characters' life. This change is expressed and experienced in terms of 'Story Values' and achieved through 'Conflict' in order to act as a 'story event' or in other words 'Scene'⁷ [27]. Primarily, we need the 3rd and the 4th scene in an experience 'to express the meaningful change' we are introducing into the characters' life inspired by the conflict we established in previous scenes. Moreover, during the workshops, we observed that 10 instances were not sufficient to take the experience to the point it needs to go 'with a degree of perceptible significance,' [27].

Step 9-Capture Ideas & Make Notes. The last step in the Storyply method is to capture initial ideas as a tangible outcome of the process. The assignment is to scribble (quick) visual reminders of the initial ideas and directions that the project may take in the future (Fig. 9).

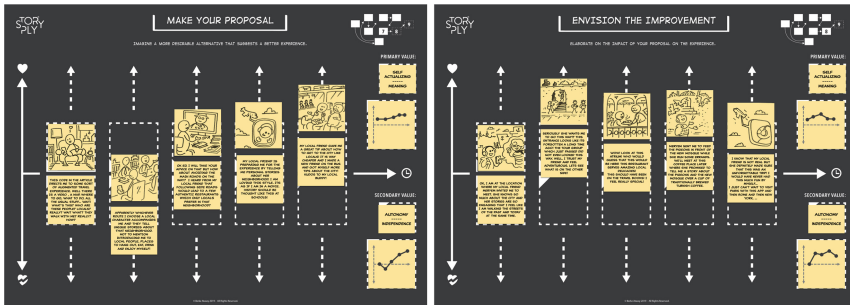


Fig. 9. Step 7: Make Your Proposal: “Imagine a more desirable alternative that suggests a better experience.” Step 8: Envision the Improvement: “Elaborate on the impact of your proposal on the experience.” Once again, there is space for the assessment values on the right.

The outcome of the whole process includes. (1) A clearly defined, structured and visually recorded brainstorming session. (2) An opportunity to collaboratively re-frame and interpret project requirements. (3) Sophisticated user archetypes who are driven by convincing internal and external conflicts. (4) Visual stories about the impact of emotional values on the user experience. (5) An externalized documentation of the

⁷ “A SCENE is an action through conflict in more or less continuous time and space that turns the value-charged condition of a character’s life on at least one value with a degree of perceptible significance [27].”

shared creative process that is immediately available for external communication purposes. (6) A new design approach to prioritize experiential properties over physical ones. (7) A new interface that allows externalizing ordinarily intangible ingredients such as emotional needs, personal conflicts, and vulnerabilities that could lead to insightful discussions about design directions.

3 Designing and Evaluating Storyply

We have iteratively designed, evaluated and re-designed Storyply over fifteen workshops in Italy, Sweden, Turkey and The Netherlands with 154 participants (63 Professionals and 81 Students/Trainees) from diverse backgrounds such as: designers (industrial, product, visual, interaction, service, strategy, software, hardware, UX), researchers, engineers, managers, filmmakers, R&D specialists and CEO's. During the fifteen workshops, the framework evolved and matured into more stable versions of itself. In each version, we built a sequential structure in which the suggested process was open for experimentation, observation, and debate.

3.1 Research Methodology and Procedure

We believe that incorporating storycraft in the conceptual design stage can support a project team's efforts in designing for experiences. This claim can be made more concrete in terms of the following questions and sub-questions:

1. Why do project teams require support in designing for experiences?
 - a. Why do we believe that the conceptual design process is the right stage in the design process to introduce storycraft?
 - b. What do we mean exactly by the conceptual design stage of design?
 - c. What do we mean by storycraft? Why and how can it be useful?
2. How can storycraft be incorporated into the design process?

To explore this latter question, we designed the Storyply method that we presented in the previous section. It started off as an interface to collect user insights and information that would help us to answer research questions and validate claims on the usefulness of storycraft. The interface naturally grew into a framework that produced a physical toolkit. We utilized this design process as our field of data collection with the design iterations providing opportunities to validate or contradict current insights. This process is frequently referred to as a Research Through Design Approach. The Research Through Design Approach involves both a creative and a critically reflective process in which literature survey and case studies are used to discover insights that are subsequently incorporated into the act of designing [1, 12, 14, 25, 40] (Fig 10).

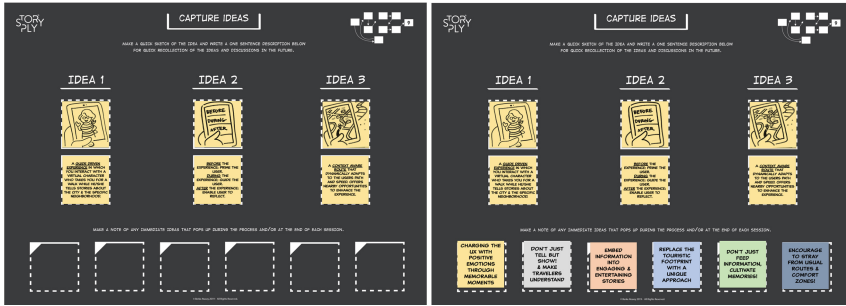


Fig. 10. Template 9-Capture Ideas prompts participants by asking: “Make a quick sketch of the idea and write a one-sentence description below for quick recollection of the ideas and discussions in the future.” Additionally, this template offers a section to make notes of significant ideas or discussion topics that feel ‘off-track’ but relevant during the whole process.

In a Research Through Design approach, the iterative design and evaluation process of the conceptual tools and artifacts plays a crucial role [11]. Storyply is our attempt to generate knowledge on how to enhance design practices by linking theory to practice through investigating the process and tools of thinking and making [25]. Throughout the evaluation process, we were guided by the following research question and sub-questions:

3. Does incorporating storycraft within conceptual design resonate with design teams and provide an improvement in the process of designing for experiences?
 - a. Does Storyply help designers to focus on and prioritize the experiential aspects of a design project?
 - b. Does Storyply help designers to address the subjective, context-dependent, and temporal nature of experiences?
 - c. Does Storyply help designers to envision user experiences in a better (more profound) way?
 - d. Does Storyply help to envision better (more profound) user experiences? (Fig 11)

Addressing these questions required a relevant and realistic project context where the value that is generated by the user experience focus could clearly manifest itself (*in order to increase external validity*). Moreover, to observe real design teams trying the method, we needed a coherent framework and an appropriate setting to apply, observe, and document. In the previous section, we explained the method, workshop, and toolkit, which played a vital role throughout our research-through-design process.

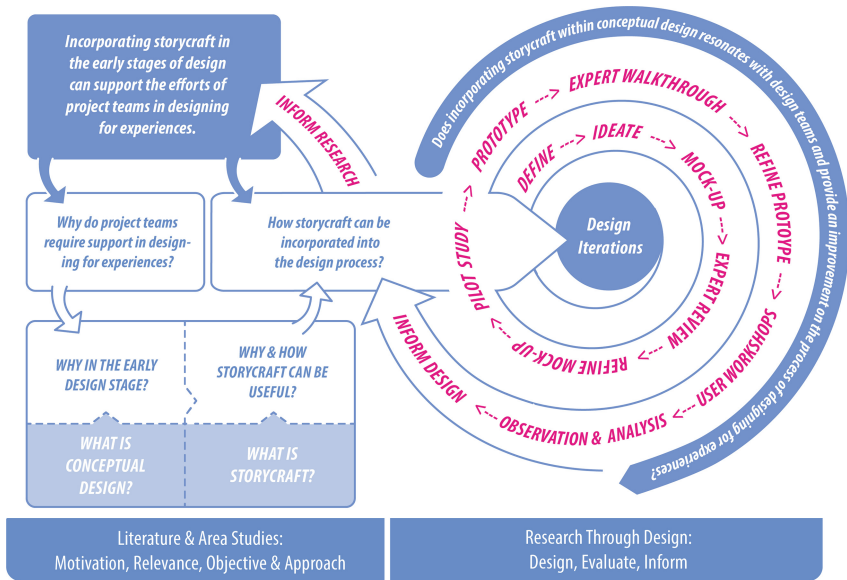


Fig. 11. Research approach to inform the discussion in this paper.

4 Reflections and Conclusions

We started by pointing out the shift of focus from objects to experiences in the design domain and explained the background and implications of this change on how designers operate. We placed the conceptual design phase at the center of our attention and provided an overview of how designers currently cope with the conceptual design process. We proposed storycraft as a means to incorporate the experience into the designer's creative thinking and introduced the practical outcome of our evidencing process as a framework to support our claims. What we learned from the process helped us to produce answers to the research questions which we previously established.

4.1 Informing Research Questions

Why do project teams require support in designing for experiences in the first place? Designing for an experience exceeds the physical product [4, 26, 34] and designers need to consider the time factor, as this is an essential aspect of experiences. We explained the need for a way to assess an emotional experience by discussing and weighing options about situations and events that belongs to a future context long before it becomes an established component of design [6, 8, 23, 25].

- *Why do we think that the early stage of the design process is the right stage in the design process to introduce storycraft?* The Pre-design and Discovery stages of the design development process provide the best opportunity for innovation,

- opportunity identification and translation of the research into design [6, 8, 21, 23, 30, 34] and hence also to establish an experiential influence over the whole project.
- *What do we mean by the early stage of design?* Designers need to externalize and represent ideas into tangibles in order to test, evaluate and refine ideas at this phase [8, 9, 34]. As explained in detail in “*STORYPLY: Designing for user experiences using storycraft*” [3], we explored the most relevant and widely used tools in the design profession for this purpose and exposed their shortcomings in terms of designing for experiences. We also offered an argumentation for why storycraft offers a potential solution.
 - *What do we mean by story craft?* Why and how can it be useful? Methods and tools used in storytelling are believed to be relevant when planning for human experiences [7, 10, 13, 27], as was argued in more detail in “*Crafting user experiences by incorporating dramaturgical techniques of storytelling*” [2]. Professional storycrafting processes are quite advanced in their explicit awareness and clearly defined strategies to aim at influencing experiences deliberately. Therefore, it is relevant for designers to try and understand the structural strategies behind this craft. This led us to the following question:
 - *How can storycraft be incorporated into the design process?* We explored new ways of incorporating storycraft in the design process to ensure that they could be applied in a diversity of design situations. We conducted a Research Through Design Approach as it promotes “creative translation and transformation of precedents from different situations to develop new types of solutions” [37]. We conducted co-creative design workshops. The visual meeting style in these sessions provided clarity and helped our thinking process about how storycraft and the design craft can come together in a structured process. These studies also helped us to understand the requirements of a new interface that allows externalizing intangible ingredients such as emotional needs, personal conflicts, and vulnerabilities that could lead to insightful discussions about design directions. In Sect. 2, we introduced Storyply, as our proposal to remedy the identified deficiency in current design methods. During the evaluation process, we were guided by the following research question and sub-questions:

Does incorporating storycraft within conceptual design resonate with design teams and provide an improvement in the process of designing for experiences?

We approached this question by externalizing our own process. We analyzed workshops using the filtering criteria (Flow, Expression, Guidance, Outcome) (see Fig. 12) that we developed with experts from design and storycraft domains. We conducted and analyzed more than a dozen workshops in which we evaluated various iterations of our proposed method and framework. The observations allowed us to conclude that incorporating storycraft within conceptual design most definitely resonated well with design teams.

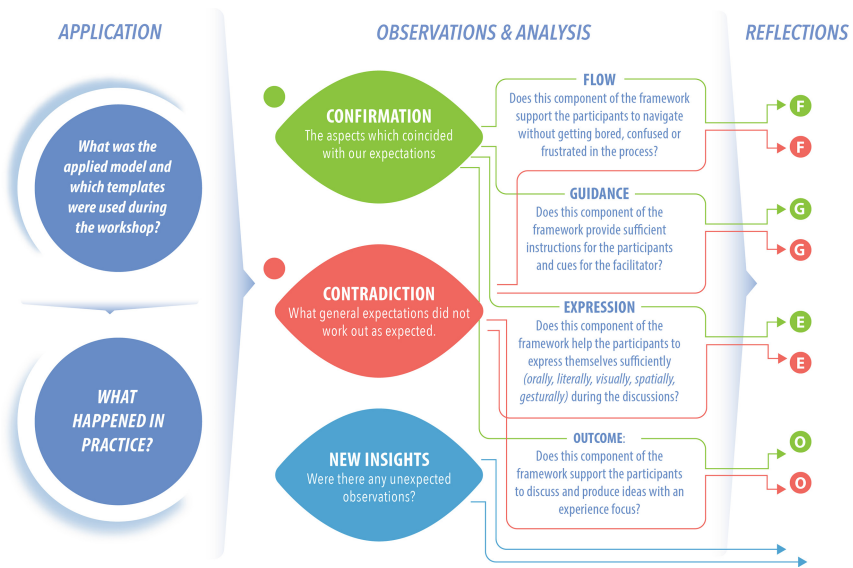


Fig. 12. Four design dimensions emerged as part of our analysis framework and we assigned four descriptors to them: ‘The level of friction while navigating (without getting bored, confused or frustrated) within the process’ was described as FLOW (Continuity). ‘The style and fidelity of expression (orally, literally, visually, spatially, gesturally)’ was described as EXPRESSION (Style). ‘The descriptiveness and timeliness of instructions and facilitation of the process’ was described as GUIDANCE (Instructions & Facilitation). ‘The direction of the focus during the discussions’ was described as OUTCOME (Focus & Direction).

- *Does Storyply help designers to focus on and prioritize the experiential aspects of a design project?* The participants confirmed that Storyply is perceived as helpful in order to focus their attention and to prioritize the discussion towards experiences. They found this to be a new and valuable approach that facilitated their efforts towards designing for experiences.
- *Does Storyply help designers to address the subjective, context-dependent, and temporal nature of experiences?* The participants confirmed that the suggested structure is indeed empowering, as they felt it helped them to get a concrete handle on otherwise more elusive components of experiences. They appreciated the ability to discuss and play with subjective qualities in concrete terms.
- *Does Storyply help designers to envision user experiences in a better (more profound) way?* The participants confirmed that Storyply offers an approach that is an improvement over what they have been using previously for similar purposes. The general tone of the collected comments was that the way we synthesized storycraft with design felt natural and made immediate sense to participants.
- *Does Storyply help to envision better (more profound) user experiences?* The collected comments confirm that Storyply triggers discussions that makes easier for designers to focus on aspects that they had not been so interested in exploring previously.

In summary, the real-time visual mapping of the thinking process under the guidance of story crafting principles offers the following benefits:

- The design team can discuss and iterate new concepts in a platform that offers a structure that allows sketching experiences true to their temporal, emotive, and contextual nature.
- Embedding narrative competence into visual thinking drove the discussion towards experiences. Consequently, the ideas that spin out of such discussions are more likely to serve the purpose of designing for user experiences.
- The ordinarily impenetrable creative process is opened up to the contribution of users and non-designer project stakeholders while the concepts are still under consideration.
- The document which gradually emerges in front of the design team provides a blueprint of the ideation process, which can be iterated back and forth at diverse occasions with various participants who were not present at the time of the generation process.

4.2 Informing Design Practices

While designers are sincerely interested in utilizing stories to create value, without appropriate tools and guidance, this interest can lead to disappointment as this endeavor has proven to be more complicated than advertised.

- **Patience is the key.** Our observations confirm that finding out the intended value of applying storycraft can take longer than expected. Visualizing feelings about a product on a timeline provides an opening towards seeing pain and pleasure points in the course of an experience. However, a visual timeline of events by itself provides only a superficial insight without spending ample time for deliberation on it. In a market where consumer satisfaction relies increasingly on prolonged use, we need tools and methods that allow longitudinal inquiries. One proven approach is to format user feedback in the form of ‘experience narratives’ that add consistency to the memories that users have [19, 20].
- **The two most relevant alternatives.** The design industry has been quick to embrace ‘experience mapping tools’ that promise faster gratification with less effort. ‘Customer Journey Mapping’ is a visual diagram that shows how a customer interacts with a service. Customer Journeys for instance help to illustrate the experience that a customer has with an organization [18]. ‘Service Blueprinting’ is a multilayered flowchart of the delivery process of a service. Its primary goal is to codify the service delivery process, which was ordinarily perceived as intangible and ephemeral into something that could be documented and systematically improved upon [35]. Currently, service blueprints are used mostly to help visualize, align, and prototype experiences for complex service ecosystems [36]. These tools use similar operational components such as time, flow, actions and “sequencing” in order to prototype new experiences and services [18, 24]. Both tools require little effort to apply and provide a sense of instant accomplishment, which makes them attractive for decision-makers. However, the depth they allow to dig into for insights is equally limited.

- **Output vs. Outcome.** Acritical insight we gained during our studies is the difference between output and outcome. Storyply generates a significant paper trail, but the ultimate objective of using stories is not to only documentation. It is to establish a shared understanding. The focus is not what is on sticky notes, but what we remember when we look at them. Our studies reinforced our conviction, which Patton perfectly formulated as; “Shared documents are not shared understanding.” [31, 39]. It is paramount to cultivate an environment and sufficient time to allow the opportunity for a beneficial discussion. The goal is to reach a point where we surpass discussing the ‘output’ and start to develop an understanding on what is a desirable ‘outcome’ [31].
- **A trade-off in payoff.** Storycraft has a lot to offer. Nevertheless, designers have to come to terms with the fact that there are no quick recipes which can fast-track you in-front of the line. As in every craft with a reputable value, design-storycraft also requires dedication. Methods and tools can offer helpful guidance, but the expected value requires your trust in the process to collect the payoff. Storyply is no exception. In various workshops, we had at least one participant who is more goal-oriented, asking something like, “*This is all well and good, but I am wondering when we are going to start getting something concrete out of this process?*” The process requires a certain amount of trust in return to the value it provides since the most valuable insights tend to appear after a period of feeling uncertain about the outcome.

4.3 Conclusion

In its current form, Storyply combines ‘conceptual design’ and ‘story planning techniques’ to help the design team discuss and visualize solutions for themselves and the potential audience of the project such as users, clients, and other stakeholders. However, Storyply is not primarily intended to generate convincing stories or make good storytellers out of designers. We are interested in adopting strategies from storycraft that are useful for discussion but not so much in strategies that serve to please an audience. For instance, we are trying to understand the underlying desire that drives a character, but we are not concerned with engaging an audience through dramatic action. We try to pinpoint conflict in a character’s life, but we are not trying to escalate conflict for the sake of dramatic intensity. While we encourage “drawing verbs (actions), not nouns (names of things),” we do not expect a good quality of illustration. While we would like to achieve visual clarity to assist in the conversation, we do not worry about the visual composition to direct the attention of the audience like a film director would [13, 27, 38].

In short, we are interested only in the qualities that help designers to empathize with users on an emotional level while visually imagining and discussing experiences to inspire and inform design directions.

Even though we have designed Storyply as a discussion tool for designers, it also aroused an unexpected level of interest amongst decision-makers as a translative tool. Non-designers who work with designers communicated a keen interest in understanding the decision-making within the designers’ creative process. Ordinarily, the designers’ process is not readily accessible from a management, sales, or engineering

point of view. Design is therefore not often recognized as a ‘financial performer’ that increases revenue and total returns to shareholders [28], despite the fact that the demand for experience-centric design skills is likely to increase in the near future. The UX profession is for instance expected to grow by a factor of 100 between 2017 to 2050, according to the N&N Group [29]. Tools that open up the collaboration between designers and other professionals (and users) are therefore also likely to be beneficial for the design profession itself.

The major obstacle towards a more widespread adoption of storycraft in UX design seems to be the demand on the time investment required, so that scaling down the Storyply method to a more manageable activity (or series of activities) is an obvious direction for further research. Studying the efficiency of the method on repeated use is another aspect that needs further study.

Ultimately, Storyply aims to merge the skilled practice of generating stories with the skilled practice of design. To that end, the insights revealed in this paper can hopefully inspire people who are interested in designing for experiences and services to see storycraft under a new light and tap into its potentials to take their experience design efforts to a new level.

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