Using a camcorder in exploring a design topic: an autoethnography

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ABSTRACT

In this autoethnography, I describe and analyze the experiences of using a camcorder and film to explore a design topic. With my background as a filmmaker and experienced user of camcorders, I show how my activities can inspire other design students to use a camcorder and film as a tool in the exploration phase of a design process. I have achieved this by performing activities in three different phases. These include which film tools I use, how I familiarize myself with a design topic, and how a video can play a role to make it accessible to other designers. Furthermore, this research shows a way of showing visual autoethnography research in a rich personal, and detailed manner through film.

INTRODUCTION

As a child, I was occasionally filmed with a camcorder on holidays. When I watch those videos, I am transported back to moments I can remember from those holidays. Filming my life still plays an important role today, as I use a camcorder to record my daily life. I often edit months of footage to capture certain feelings and experiences. I find it special that I can communicate emotions through moving images with the aim of looking back at them later. Within design, we also know film as a strong means of communication, for example, to introduce products to users or stakeholders, such as product video presentations. Due to the many styles and possibilities, film can be an interesting tool to work with during the exploratory phase of a design process. This is because it can be a transparent tool to convey one designer's thinking to others. Capturing the exploratory phase on a camera can make it easier to reflect together on choices within the design process. Forces the designer to be closer connected to the design space which is being captured. In this phase, the focus is on discovering what the designer finds important and immersing himself in the design subject together with the camera. This research uses an autoethnography method to show the use of a camcorder as a design tool in the exploratory phase of a design project.

CONTRIBUTION

The researcher describes and analyzes the experiences of using a camcorder and film in exploring a design topic through an autoethnography method. The researcher's film knowledge and user of camcorders show how his experiences help other design students to use a camcorder and film as a tool in the exploration

phase of a design process. Furthermore, this research shows a way of showing visual autoethnography research in a rich personal, and detailed manner through film.

POSITION STATEMENT

I am a 23-year-old master's student of Industrial design and completed my bachelor's degree in the same field at the University of Eindhoven. To share a bit about my experience with film, I run my own film production company where I produce cinematic business-to-business videos from start to finish. Throughout my design career, I have extensively experimented with using film in design. My studies as a designer have shaped my video production work, allowing me to view it as a design process with a user-centered approach.

In addition, I have been filming my daily life with a camcorder for over 1.5 years, resulting in 3000 different videos. This practice has highlighted the unique value of documenting life and the ability to revisit earlier moments. I aim to capture moments to preserve them and create videos to relive them. This experience has taught me how to handle a camcorder effectively during conversations and capture ordinary moments. Over the years, I have also become efficient in various editing software programs, which has smoothened my workflow. This efficiency allows me to execute certain steps in this research faster than designers with little or no experience. My wide knowledge of the film industry makes me aware of the potential film holds, especially concerning design. My knowledge of film is therefore mainly focused on being behind the camera, which gives me a certain comfort in doing this research. In addition, I expose myself by being in front of the camera during my personal and emotional reflection moments, something that is also new and exciting for me.

As a designer, I primarily focus on the story that a design carries which for me revolves around the latest phase of the design process, aiming to convey the design through experiences that evoke specific emotions in the user. During the design process, I choose to always be personally involved in the design topic. This approach encourages me to think and perceive topics differently, positioning me as a designer who emphasizes the user and societal contexts. I invite the reader to be aware of how I view my autoethnography through this combined film and design perspective.

RELATED WORK

This section briefly explains the first-person research for the design method, autoethnography. Next to that, it gives an overview of the history of the camcorder and highlights various studies on the role of film in design to demonstrate how we can learn from the intersection of these design and film fields.

Autoethnography

Autoethnography is a narrative qualitative research method where the researcher is the subject of the study and in which a story is told based on descriptions of events (Lucero, 2018; Ellis, 2004; Muncey, 2010; Pinnegar & Daynes, 2007). The researcher immerses themselves in a subject, undergoing experiences that they share in detail from an emotional perspective. Autoethnography amplifies voices that are typically unheard where it contains the personal story of the researcher as well as the larger cultural meaning of the individual's story (Cooper & Lilyea, 202; Wu et al., 2024). The researcher needs to collect multiple forms of data such as conducting interviews, observation, documents, and other sources of qualitative data (Duncan, 2004). The data collection and analysis revolve around chronologically dividing the story, wherein the researcher identifies narratives and, during the analysis, interprets the larger intention of the story by sharing revelations (Creswell, 2013). Andres Lucero (2018) presents a paper in which he describes 7 main criteria (study boundaries, reliability, plausibility, criticality, self-revealing writing interlacing actual ethnographic material and confessional content and generalizability) on which an autoethnography can be judged. I use these criteria to provide guidance for this research and to test it successfully.

Film in autoethnography.

Within ethnography, there have been multiple studies carried out with a film that can be called visual ethnography. Where the researchers use visual media such as photos or videos to research a culture. Lasker et al. (1943) were one of the first examples where photographs were used to research Balinese culture later Gardner and Heider (1968) used film to examine daily cultural practices of families in New Guinea. These first studies provided insights into how storytelling with visual media can play a role in research. When doing research with visual media such as photos and video, risk within ethics and privacy must be taken seriously. In earlier work, a camcorder has been used in high-risk sensitive environments such as crack cocaine users in the United Kingdom (Briggs, 2013). They found which role the camera plays within normal conversations but also what these new potentials are with showing detailed information to the camera.

With visual media, it is possible to see how life is lived and document it as it is happening. making these lives available for playback and analysis. (Erickson 1992, Plummer, 2001). For design, this can provide new insights not only during a design process but also during an autoethnography where the researcher is telling a story. As stated by Riessman (2008), aspects such as the pitch of the voice and intonation are important in

understanding how researchers tell stories. In my opinion, film is one of the best mediums to bring this to life, as it doesn't leave these elements open to interpretation the way text can.

Camcorder

In the past, it was not self-evident that we captured real life on camera. In 1929, Man with a Movie Camera directed by Dziga Vertov was the first film in which we could view the world through a different lens and see life as it is (Petric, 1987). We learned about new moving images because, for the first time, the camera went to places that people had never seen before. The accessibility of film has increased in recent years due to the availability of cameras and software that are becoming increasingly cheaper, as well as the more professional cameras on smartphones.

In 1984, Sony released the first camcorder for the nonprofessional user. The name contains the words 'camera' and 'recorder' (Sony Group Portal - Product & Technology Milestones-Video Camera, n.d.). A camcorder made it possible for the average consumer to record life. It became a phenomenon to use the camera to record the children growing up or making holiday videos. It allowed more stories to be captured in a lowkey way that became increasingly cheaper. This technology of a camcorder evolved by adding, for example, an LCD and later digital data storage options. Through rapidly developed technology, today's camcorders are of good quality and come close to professional cinematic cameras. Whereby the design of the average camcorder remained the same and they are known for their light and compact design. By using these old digital camcorders in today's time, the focus shifts from the high quality of the pictures to tell a 'real' story.

Film in design

Within the filmmaking process, there are similarities to design where the viewer can be seen as a user, and various design decisions must be made throughout production (Raijmakers et al., 2006). These parallels ensure that film is used to gather knowledge for the design in various areas (Gilardi et al., 2016). Within UX/UI, the similarities between the choices made in an editing process and how people respond to them were examined. This data was used to optimize a website interface (May et al., 2003). Within participatory and scenario design, we see that designers use film to show how technology and design can work together to evoke emotions and raise thought-provoking questions that can stimulate discussions (Mackay & Fayard, 1999; Briggs et al., 2012). In design research, conducting ethnographic studies can also be carried out with a camera. This involves recording the daily practices of groups of people. The use of a camera plays a role as a documentation tool so that these practices can be replayed in detail later (X9). The criticism of this is that in these studies, the camera can harm the participants. This can make them feel uncomfortable and watched, which can cause them to behave differently. In these situations, the researcher has a certain role within the research and may not be equal to the participants, which can hinder the feeling of being observed. When the researcher is also part of the research through an autoethnography, he or she is also exposed to the camera, ensuring that the participants feel more equal to the researcher.

There are also known works in the design phase itself in which film plays a role in conveying information. For example, Philips (2018) experimented with filming a persona to fully immerse in a character within a few minutes. The book Designing with Video: Focusing the User-Centered Design Process by Ylirisku and Buur (2007) contains practical examples of how film can be used in user-centered design projects. They find that video is a medium that can capture activities over time, as well as people's feelings and personalities. In this book, the emphasis in early-stage projects is on exploring, describing, and relating film to design. This research builds on these themes. An example case is 'free ride' skiers, where video is used to identify design opportunities in parallel with a prototype phase, using the footage as a means of analysis. The book also provides crystal-clear tips on how designers can use video, such as "Let the video run continuously (do not stop the camera when surprised)," which forms a basis for this autoethnographic research.

In the book ViewFinders: Thoughts on Visual Design Research writes Raijmakers et al. (2016), who also researched the use of film documentaries in design research, argue that designers should view filmmaking as a design activity. In this research, I focus on exploring how designers can use the strengths of a camcorder in the exploratory phase when the designer is the subject of the study.

METHOD

In this section, I will discuss my activities and the various methods used for this research. Phase one consists of discovering what film means to the researcher and what possibilities exist within film and design. The second phase involves implementing the possibilities of how a camcorder can be used during an exploration phase in a design project. The third phase provides insights into how these experiences can be shared with other designers through film.

Data collection and analysis autoethnography

To record my experiences of my activities in this autoethnography as a researcher, I applied various data methods and analyses in this research. I used the camcorder to collect data as a reflection-in-action (Duncan, 2004) consisting of a weekly reflection moment with me and my camcorder. Supplemented with footage reflecting on moments after I used my camcorder in conversations with strangers. I carried a small notebook for field notes when I didn't feel comfortable sharing my emotions and thoughts in the moment on camera. At this point in my life, I was using my camcorder to document my life, I used this footage consisting of

experiences and events as a retrospective account (Duncan, 2004). I also was used to reflecting on events because of the journal notebook that I have kept track of for 1,5 years where I weekly reflect on my decisions, emotions, and events during the week.

I analyzed my interpretation and experiences during this autoethnography with Kevin Pfeil and Bas Raaijmakers, both working in the design and the film industry, and shared my experiences with other students from the industrial design and visual ethnography department. In this way I try to question my interpretation from a new perspective, allowing me to look critically at my findings.

Phase one exploring: the camcorder as a design tool

This is the exploratory part of the research. I wanted to find out what the role of film within design can mean through different methods and activities. I conducted an exploratory co-creation session with four other design students in which I gave them an open assignment to use film to record their design process for a week. By looking at my previous work of film within design as a designer, I defined that film for me was using a camcorder instead of high-end cinematic cameras because filming with a camcorder emphasizes the story rather than achieving the perfect picture or lighting. I chose to conduct the research with my second-hand 2019 Canon model LEGRIA HF R806 camcorder.

The data from the first phase mainly consisted of videos in which I reflected on my actions. These shots have been converted as analysis into a video titled *Progress Video 1*. I compiled 17 action reflection videos shot on the camcorder, along with additional images of activities in this phase. Existing of shots were I share my 'spark' moment with the camera. This video provided valuable insights into the reflective and documentary roles that a camcorder and film can play within a design project.

The footage in Figure 1 shows the influence of a camera when formulating your findings to be efficient and to the point. "...what I just told was clear right? Do you think I have to speed up that sentence, slightly more compact?"



Figure 1: Reflection moments backlight redesign footage.

The exploratory co-creation session gave me insights into the properties of film and a camcorder. Like straightforward interaction without any other distractive features other than a phone. Next to that, a camcorder was originally made for capturing daily life, reality, and spontaneous moments. Properties where I saw opportunities in the exploration phase of a design project Through these activities, I wanted to discover the potential of using a camcorder to explore a design topic in phase two.





Figure 2 & 3: Reflection moments phase one.

Phase two, implementation: Talking with strangers

I selected a specific topic to explore how a camcorder can be used during the exploration phase of a design project. The goal was to identify initial starting points, uncover design possibilities, and become comfortable within the design space.

to view these activities through my two identities as filmmaker and designer, the choice has been made in this section to write an autoethnography. I used my camcorder to explore the topic of talking with strangers, setting myself various challenges over a four-month filming period. These challenges were inspired by Joe Keohane's book The Power of Strangers (Keohane, 2021), which highlights different research on engaging with strangers. Various methods such as shadowing, in-study acting, self-recording and situated interviews (Ylirisku & Buur, 2007) emerge because I open myself up to explore the topic together with the camera. This subject challenges the conventional use of a camera, as in Dutch society, it is not yet commonplace to engage with strangers (X), let alone request to film the conversation. Additionally, there are ethical and practical dilemmas involved in conducting this research. As mentioned earlier, my experience with using a camcorder equips me to delve into this topic effectively, Yet it is also new for me to expose myself to a subject in this way and to engage in a social experiment.

I spoke to over 60 strangers and captured 26 of them on camera. These moments consisted of both planned activities and spontaneous interactions. I asked for their consent to participate in this research and whether I could film them. The planned activities consisted of me standing in the middle of Eindhoven with a sign offering free listening, inviting people to talk to me (Figure 4). Or I set up an interview in an elevator where I asked people what they were most looking forward to that day. I also dedicated afternoons to actively approaching people on the street (Figure 5). Besides these planned activities, I encountered many strangers unexpectedly and managed to capture some spontaneous moments on camera (Figures 6 & 7).



Figure 4 & 5: Planned activities talking with strangers.



Figure 6 & 7: Spontaneous activities talking with strangers.

150 scenes were filmed with more than 14 hours of footage. The small in-action reflection scenes have been a large part of the data analysis of this autoethnography. Looking back at the scenes provides a third perspective on my actions. These small adjustments between activities are documented on camera.

After my conversation with strangers, I conducted semi-open interviews with eight different people to explore their experiences of having a conversation while being recorded. I asked them about their perceptions of the camera's role in these conversations, their thoughts on the camera angle, and other related aspects. Through this data, I aimed to understand how people perceive a designer capturing spontaneous moments and what a designer should consider when conversing with strangers in exploring a design topic.

The raw images were reviewed, and moments were captured and categorized into 9 themes: (Getting used to the camera, in action reflection, The camera's position, influence of the camera on changing appearance, rejected, conversation is stopping, aware of surroundings, camera features, decision making/spark, B-roll storytelling) supplemented with field notes and reflections on my experiences at that moment. A comprehensive bottom-up approach (Johnson & Stake, 1996) allows the themes to emerge from the data itself. Since most of this data is video material, this analysis was carried out in the editing software program Davinci Resolve. The shots are divided into themes chronologically by color, supplemented with notes on how I experienced the scenario (Figure 8 & 9). Themes have emerged regarding the relationship with the designer, camera, and design space.

In addition to these data points, during a planned session, I asked if someone would like to film me while talking to strangers to analyze my attitude and working method. Most of these shots can be found in the theme: *The camera's position* (Figures 10 & 11).

This demonstrates how I hold my camera toward strangers and relates to my comfort level in the design space. Additionally, as a cameraman in that moment, my focus is on eliminating context, directing the viewer's attention to where I'm pointing the camera. Participants later mentioned in interviews that this position is perceived as comfortable, unlike when the conversation revolves around the camera. Participant 4: "You keep it very subtle, so that might be nice". These findings were discussed with experts in the field of film and design, to gain different perspectives and alternative interpretations of my work.

The footage in figure 8 talks about how the stranger changed after I asked if I could film this conversation. She said of herself, "Wait, let me put on my blouse" and asked if she looked good enough on camera. This is divided into the theme *influence of the camera on changing appearance*.



Figure 8: Notes in editing software, influence of the camera on changing appearance..

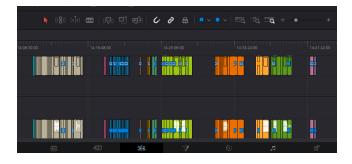


Figure 9: Thematic analysis with notes in editing software.





Figure 10 & 11: Position camcorder during the conversation with strangers.

Although it is evident that film is an effective means of communication, I observe from my own experiences that design students do not yet perceive film as a conventional method in design. Therefore, I am proceeding to phase 3 to see the current role of film for design students and to identify what requirements are necessary to make film more accessible.

Phase three, Validation: sharing experiences through video

The final phase focused on how the experiences of a designer who used an autoethnographic approach with a camera during the exploration phase can be transferred to other designers in a design team. The main questions are how this footage can be used in a video and what role a video as a medium can offer in a meeting with a design team.

I conducted semi-structured interviews with 6 fellow students (2 bachelor's and 4 master's students) in industrial design. As an introduction, the first questions were about how they shared experiences in the exploration phase within a design team in a current situation. Later, I imagined a scenario in which we were in a meeting, and both had explored the topic of talking to strangers over the past two months. I then showed my video about my experiences of phase 2 in which I presented my interpretation with my design and film background about sharing my experiences (Figure 12). In this video, I shared the insights these experiences gave me and presented design opportunities that we, as designers, can continue to explore.



Figure 12: Validation with industrial design students.

Each interview lasted 30 minutes and was recorded and transcribed. The answers were then divided into 9 themes that indicate the potential functions, style, how a video can be used during a meeting, and the disadvantages of showing a video to share a designer's experiences.

Answers that were categorized under the theme of *video style*, participants suggested that a video at this stage of the project could be more open to interpretation, showing raw images and providing additional context. Participant 4 "... just separate images

of what you have done... because now, for example with the voice-over and so on, it really is already a whole."

FINDINGS

In this section I present my interpretation. These findings are divided into 5 themes, in which I elaborate on the role of a camcorder and film in this research and will discuss how these can assist designers in a design project. Furthermore, I will elaborate on the limitations I encountered when using a camera in research and the conflicts I experienced as both a filmmaker and designer.

Field exploration and eliminating the periphery:

A camcorder forced me to go out into the street and discover the story in the field. This ensured that I developed empathy with the users at an early stage and felt part of the design space. While creating the story, I framed my camcorder what I found important, and which contexts I wanted to eliminate. This allowed me to discover stories on the spot and look at possible design opportunities from a narrative perspective. Without even analyzing or editing these images, this can be a method to find stories and design opportunities. This demonstrates that images do not necessarily have to be converted into film, but the method of doing so can already provide insight for designers.

Camcorder as reflection tool:

In my experience, this project presented the camera as an extra person I had to care for someone I could talk to and vent about or share what was going wrong. It is the first time that, in addition to written journaling, I have used video for reflective moments. When I look back at this, I see, feel, and hear my emotions, pauses, and intonation. Talking to the camera is still uncomfortable, but something I initially wanted to do in an extremely safe situation. Now, I can do it with others. These reflections taught me to consider choices and formulate where I wanted to go as if the camera were a person. Sharing these moments with other designers can be difficult. But it shows how, with practice, you can become comfortable talking to the camera. Just

Camcorder as a communication tool:

We know that video could function as a good communication tool during the design process as shown in previous work of Ylirisku and Buur (2007). Yet, during my interviews with design students, I found that film methods are not often employed. They mentioned this was because it is not commonly taught as a method, and other methods such as sketching are more accessible. Design students I have spoken to view video as a challenging skill that requires a significant amount of time. However, students also mentioned that videos with few cuts and raw images (and therefore easy to edit) are perceived as better means of communication than polished videos. This indicates that basic skills in video making are sufficient for using film as a means of communication and for sharing experiences within design teams.

Icebreaker for a conversation

I assumed that a subject like talking to strangers would be difficult to explore with a camera. Sometimes it was, I crossed boundaries that I wouldn't have without a camera. I can imagine this can be scary for other designers, but I've noticed that a camera pushes me to act, as a person normally would. I think it is because I want it as proof of what I've done. By speaking to many people, I discovered that a camera does not have to be an obstacle to exploring a subject. On the contrary, the camera made people curious, and at times, it was an opening for a conversation. Next to that, I have also noticed that a camera prompts people to ask what you are doing, which can also provide an opening for a conversation.

Capture the full unfiltered experience

Video is an experience over time with a beginning, middle, and end that possesses the unique property that allows us to revisit moments that have occurred previously. This is something designers seek to comprehend regarding users. A camcorder has the ability to capture spontaneous moments where others' emotions are transferable over time. We should not underestimate the uniqueness and value of being able to understand other people through film experiences without physically being present. In design teams, designers often attempt to convey experiences through sketches or small mock-ups, but individuals will better comprehend stories and experiences when they watch a video.

DISCUSSION

This autoethnography has been evaluated based on the seven main criteria established as a good autoethnography by Lucero (2018). By conducting various interviews with strangers, design students. Themes have emerged about how a camera can play a role in the exploration phase of a design process. Additionally, this research has identified the limitations of film and camcorders, which will be discussed in this section.

Limits of camcorder and film

When we use a camera in social spaces designers must be aware of privacy aspects, such as informing participants and scanning the design space. As observed in other studies, this diminishes the authenticity of a conversation and also subordinates it to topics that are more sensitive to privacy. I have also noticed that people behave differently when on camera, as they mentioned in the interviews afterward. However, they also noted that the use of a camcorder and the position in which I held it made them feel more comfortable during the conversation compared to having a professional camera in the face. A camcorder seems to possess features that, among other things, make people feel more at ease in front of the camera in a social context. With other subjects, this factor plays a smaller role, and it's not about capturing people on camera. Other camera tools or smartphones can also be utilized in these cases.

Furthermore, filming entails processing a significant amount of data, which in practice can be perceived as time-consuming. If the designer lacks skills in, for example, editing, film may not be suitable in every situation. However, as mentioned earlier, the act of filming sometimes serves a purpose without requiring the processing of the footage.

Designer-filmmaker conflicts

During these activities, my two roles as designer and filmmaker have often come into conflict. As a designer, I make conversation and being in the moment is a high priority. As a filmmaker, I am more concerned with recording, and documenting conversations, ensuring that the camera is still recording and that the angle remains optimal. For example, I was sometimes less present in the moment and even felt disappointed when I experienced things without recording them as it sometimes felt like a worthless experience. That is why I believe film can never completely stand alone. In my opinion, autoethnography must be supplemented with additional data, such as field notes, to convey moments that are not captured on film.

I have found that these two identities are inherently linked and difficult to separate. My actions and choices are influenced by my experience in film, leading to quick decisions. This provides new opportunities and insights for me as a designer during the exploration process, both in terms of what I choose to film to enhance the story and in conducting research.

Video autoethnography format

As the final phase of this research, I show how film tells a story, something we also do as designers and researchers. To properly convey research that relies on moving images, it is necessary to have a suitable format for this communication. In my experience, it can be interesting for designers to strengthen their communication when submitting moving images becomes more accepted within the research world. This allows us to use film to make research accessible to people outside the research community, thereby spreading knowledge even further. That is why I present my interpretation of a film format for *visual autoethnographic research*.

CONCLUSION AND FUTURE WORK

In this research, I present an autoethnography where I share my experiences of using a camcorder in the exploration phase of a design project. Through three different phases with activities employing various methods, such as conducting interviews with designers, five main themes were identified: Field exploration and eliminating the periphery, Camcorder as a reflection and documentation tool, Icebreaker for a conversation, and capturing the full unfiltered moment. During the interviews with designers and conversations with others involved in this project, I was often told that film is indeed an excellent way to share experiences within design teams. A digital camcorder can serve as an accessible starting point because it requires no skills to understand these devices. A Camcorder can be viewed as a companion in the

design process and can push the designer to capture moments. Simply showing recorded footage sequntially is enough to share your experiences with other designers.

I hope that by recounting my experiences and undertaking this project, I have been able to inspire students to use camcorders and film more in their design projects. Furthermore, by proposing a research video format, I hope to inspire other design researchers to capture and conduct more visual research. This enables us to explore the possibilities of making a video format a new counterpart to, for example, a pictorial representation of research.

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