



EasyTell: A Caregiver-Centered Prototype for Innovating Everyday Eldercare through Bite-Sized Digital Storytelling

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ABSTRACT

Digital storytelling offers notable benefits for older adults, particularly those with cognitive impairment. Yet, existing digital storytelling methods are often research-oriented and disconnected from eldercare routines. To extend digital storytelling into everyday eldercare for normal aging, we designed EasyTell, a WeChat mini-program prototype through a four-stage, user-centered design process at a community eldercare center in Hefei, China. Beginning with semi-structured interviews with 13 older adults, the design process evolved through three iterative workshops collaborating with 17 caregivers. Our findings underscore the importance of scenario-based prompts in engaging older adults in storytelling and confirm the viability of a bite-sized story collection method featuring recording, real-time transcription, and manual correction. This paper contributes to the HCI field by illustrating the bite-sized digital storytelling, facilitated by scenario-based prompts, can enhance eldercare, highlighting the potential of digital tools to nurture human connection in everyday caregiving scenarios.

CCS CONCEPTS

• **Human-centered computing** → **HCI design and evaluation methods**.

KEYWORDS

User-centered design, Digital storytelling, Eldercare, Story collection

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1 INTRODUCTION

Digital storytelling has emerged as a potent mechanism for enabling older adults to foster social interaction [8], stimulate autobiographical memory and communication with family members [27], as well as facilitate self-expression and identity [17]. This approach has garnered interest for its potential benefits for individuals experiencing mild cognitive impairment or dementia [9, 11]. For instance, the UK-based startup DeepVibes offers thematic cards to engage older adults in conversation, aiming to analyze their cognitive state through voice assessment [20]. Furthermore, digital storytelling presents broader applications for caring for older adults in the normal aging process. The LifeBio system features a "question-guidance" mechanism designed to prompt narrative storytelling from older adults and record the stories into an electronic memoir manually [22].

Current digital storytelling approaches largely cater to older adults [23] and often sideline the vital role caregivers play in facilitating these narrative interactions, mirroring a broader observation in system designs related to caregiving [4]. This oversight becomes impactful in the context of the widespread digital divide that substantially restricts older adults' access to and efficacy of these digital approaches. Furthermore, existing strategies fail to recognize the substantial benefits that digital storytelling can offer caregivers, particularly in enhancing the quality of care provision. Engaging with life stories helps caregivers to build connections and trust with older adults [6, 13, 15, 28], enabling them to formulate personalized care plans, offer emotional support [25], and actively engage in collaborative care decision-making [5]. These benefits underscore the necessity for digital storytelling approaches to be not only accessible but also thoughtfully designed for the unique requirements and capabilities of caregivers.

One notable challenge caregivers face in integrating digital storytelling into their daily caregiving routines is the effective collection of stories. To begin with, this task must minimize additional effort, given the already demanding workload of caregivers [19]. Moreover, caregivers need help to engage older adults to share their life stories. Lastly, without timely capturing, the rich narratives of older adults are at risk of being lost.

This paper introduces EasyTell, a WeChat mini-program prototype, developed to address these challenges. EasyTell aims to offer caregivers a bite-sized digital storytelling strategy to minimize extra workload, scenario-based prompts to engage older adults

for storytelling, and expediently recording to capture the narrative interaction. With caregivers as the primary users and older adults as crucial indirect users, EasyTell holistically considers the unique needs of caregiving dynamics. A user-centered design (UCD) framework [21] guided the development process, starting with semi-structured interviews with 13 older adults and evolving through three iterative workshops with 17 caregivers. This collaborative and iterative approach refined EasyTell's prototyping through continuous feedback, leading to the exploration of two primary research questions:

- RQ1: How can EasyTell's scenario-based prompts effectively engage older adults in storytelling?
- RQ2: What features should EasyTell incorporate to facilitate convenient life story recording by caregivers?

Our research contributes to the HCI domain by delineating a set of design requirements for the future development of digital storytelling tools for the aging population from the caregiver perspective. More importantly, it advocates an inclusive design approach that values the experiences and needs of both older adults and their caregivers. This dual-focus approach not only aims to foster more empathetic and user-friendly eldercare solutions but also underscores the vital need for technologies that facilitate meaningful connections and support within aging societies.

2 METHODOLOGY

We conduct a UCD workshop procedure [21] for the EasyTell design, as seen in Figure 1. Each UCD workshop consists of two rounds involving two distinct groups of participants, iterating and refining the requirements and design of EasyTell [7].

2.1 Ethics Approval

Approval was obtained from the research ethics board of the Hefei University of Technology (HFUT20220921001), and all participants provided informed consent. The information and pictures of older adults mentioned in this paper are all privacy-free.

2.2 Participants

Older adults serve as the narrators of life stories, while caregivers act as the recorders using EasyTell. Therefore, older adults are indirect users of EasyTell, whereas caregivers are direct users. The requirements of both these groups influence the design of EasyTell.

Table 1: Population description of participants in semi-structured interviews

Participant ID	Gender	Age
P1.1 to P1.6	F, F, M, F, M, F	72, 67, 78, 76, 72, 81
P2.1 to P2.7	F, M, F, M, F, F, M	81, 76, 74, 78, 75, 76, 73

We assisted in identifying older adult participants who met the inclusion criteria for the study by contacting elderly care institutions in Yicheng Street, Hefei City, Anhui Province, China. The recruitment criteria are (1) older adults aged 65 and above; and (2) verbal communication ability. We recruited 13 older adults and

divided these older adults into two groups. The statistics of older adults are shown in Table 1.

We recruited 17 caregivers from nursing homes in Hefei City, Anhui Province, China. The recruitment criteria are (1) caregivers aged between 18 and 60 (to reduce differences in age-related care methods); (2) having at least half a year of care experience; (3) normal understanding and communication skills, and frequent communication with older adults. The 17 participants were bifurcated into two cohorts, and their demographic information is elaborated in Table 2.

Table 2: Population description of participants in semi-structured interviews

Participant ID	Gender	Age	Years of eldercare
P3.1 to P3.8	M, M, F, M,	23, 26, 32, 43,	2, 3, 5, 6,
	F, F, M, F	49, 28, 54, 33	4, 3, 8, 10
P4.1 to P4.9	M, M, F, M,	56, 49, 30, 48,	12, 8, 5, 9,
	M, F, M, M, M	32, 54, 54, 49, 47	7, 15, 21, 9, 7

2.3 Procedure

The UCD workshop procedure involves four phases: semi-structured interviews with older adults, a focus group with caregivers, paper prototype design, and digital prototype evaluation.

2.3.1 Semi-structured interviews with older adults. The research team conducted two rounds of semi-structured interviews with older adults. The first round of interviews aimed to preliminarily determine the needs of older adults in digital storytelling, while the second round of interviews aimed to validate and refine the results of the initial interviews.

We initially formulated an interview outline based on policy interpretation and literature review and conducted the first interview with six older adults. Based on the interview results, we revised the interview outline, including (1) The difficulties in communication with caregivers in daily care; (2) The difficulties in narrating life stories; and (3) What the caregivers do when communicating with them. Subsequently, we analyzed the interview results to capture the topics that older adults prefer to discuss when narrating life stories, the challenges they face, and the support they expect from caregivers. Afterward, we conducted interviews with another 7 older adults based on the results of the first group of experiments. We selected specific topics to guide older adults in their narratives and provided appropriate prompts when they faced difficulties in recollection. The recording was employed as the method to document life stories, minimizing potential disruptions caused by the act of recording the older adults' storytelling process.

2.3.2 Focus Group. The focus group with caregivers aimed to fathom the challenges they face in the collection of life stories and to affirm how digital applications could support them in the scenario. The topics during the focus group encompassed the following facets: (1) scenarios of communication with older adults in daily care; (2) challenges encountered during communication with older adults; (3) current methods of life story collection and

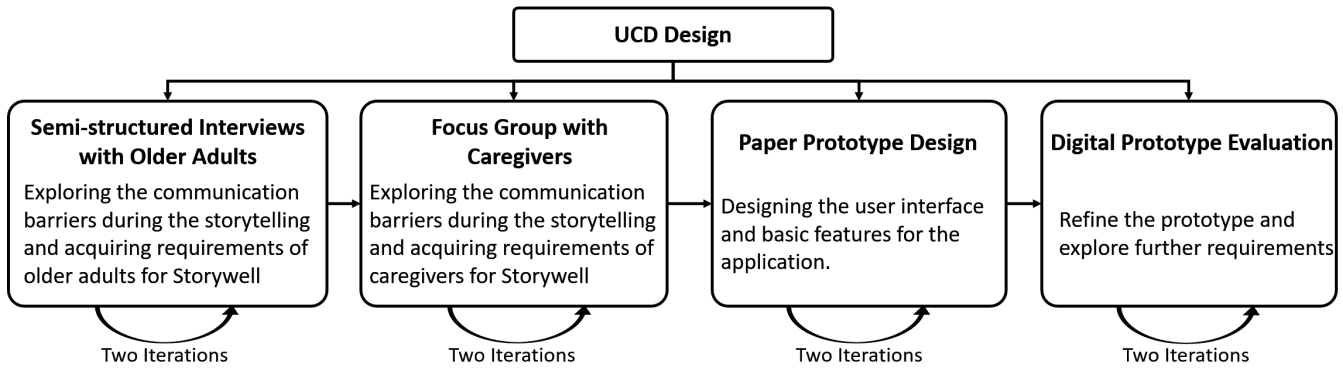


Figure 1: UCD workshop procedure for the EasyTell Design.

associated challenges; (4) expectations regarding the functionalities of EasyTell. In addition, key concepts discussed were captured in real-time using sticky notes [12] and subsequently presented in the group’s overall view. This enabled them to challenge any misunderstandings from the lead researcher and helped overcome short-term memory disorders. During each topic discussion, the facilitator initiated the discussion by introducing the topic, after which participants fully expressed their opinions. Avoid interrupting their statements and allow for the unhindered expression of viewpoints, while the facilitator observed and recorded participants’ expressions. The focus groups last for approximately 60 minutes to ensure a quiet and private environment.

2.3.3 Paper Prototype Design. The paper prototype design is to determine the ideas of caregivers on how the EasyTell application should run. They were asked to place the physical model on the paper and position it according to their own needs. These objects include general usability features such as ack buttons, as well as features more specific to the application. There were also some blank objects to allow participants to add elements that the authors did not anticipate. This collaborative process involved research team members and participants, with the facilitator documenting the design ideas mentioned in the phase, points of contention, and solutions. Paper prototypes need to quickly express design concepts, so it is important to maintain simplicity and speed.

2.3.4 Digital Prototype Evaluation. In the digital prototype evaluation, team members developed digital prototypes based on the paper prototypes and extended invitations to caregivers for evaluation, seeking feedback for design enhancements. During this stage, we could identify needs that went unnoticed in the first three phases. Caregivers familiarized themselves with the functionalities, layout, and interactions of the EasyTell through the digital prototype and directly identified any potential inconsistencies or shortcomings in the prototype. When participants encountered uncertainties regarding the rationality of features or interactions while using the digital prototype, the facilitator prompted them to recall and narrate practical experiences with similar scenarios in daily care.

2.4 Analysis

Phases 1 to 4 were documented with participants’ consent and transcribed verbatim by researchers to gain familiarity with the data. Following this, researchers carefully examined the transcripts, coding representative quotes with associated influencing factors by NVivo 11 [10]. Similar codes were then grouped through axial coding to derive overarching themes. The coding results were organized, and initial themes were distilled [29]. We organized and prioritized the themes based on the principle of majority consensus. This coding process was then applied to the data from the second round, allowing us to iterate and enhance the analysis based on the outcomes of the initial round. Ultimately, we selected representative quotes for each theme and consolidated our findings. We finished the data analysis at each phase and confirmed relevant issues with the participants.

3 FINDINGS

This section discusses the salient findings from our empirical engagements, encapsulating primary stakeholders’ lived experiences and constructive feedback. The insights acquired from these activities shed light on specific barriers and expectations, serving as a cornerstone for the nuanced development of the EasyTell prototype.

3.1 Semi-structured Interview

Through the two rounds of semi-structured interviews, we captured the main difficulties older adults face in digital storytelling.

Hard to begin with: EasyTell should incorporate the functionality of topic guidance to provide older adults with cues for initiating or continuing their narratives. Recalling the past is not always an easy task, and older adults often struggle to know where to begin. At the commencement of digital storytelling, older adults may benefit from topic guidance, as they might find it challenging to identify suitable subjects or entry points during the initial stages of communication. P1.3 says, "Let me tell you my life story? I don’t know where to start."

Oblivion: For older adults experiencing cognitive decline and memory challenges, recalling life stories becomes a challenging task. During conversations, they often forget the progression of the story or what comes next. Therefore, caregivers need to offer

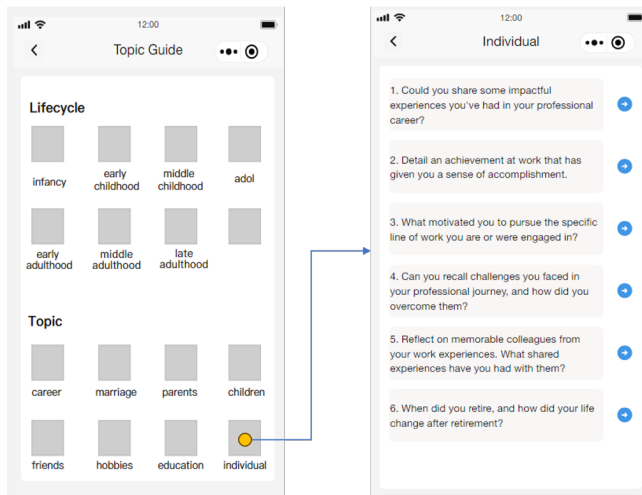


Figure 2: A digital prototype of the topic guide in EasyTell.

appropriate prompts during such moments. P1.1 says, "Where was I in my narration just now?"

Story record: EasyTell should possess a feature for documenting life stories. In our research, we observed that older adults seldom receive feedback after sharing their life stories. They anticipated obtaining documented records of their story recollections, while also hoping that caregivers will remember the stories they have recounted. P1.7 says, "Could you provide me with a compiled memoir? It would be a commemorative gift worth cherishing."

3.2 Focus Group

Throughout the focus group, participants discussed several obstacles they faced when attempting to obtain effective communication services. In addition, they also introduced various technical and non-technical strategies used to alleviate such barriers.

Communication barriers: Communication between caregivers and older adults poses a primary challenge in that it is difficult to identify suitable topics to initiate a conversation. Secondly, the decline in memory and expression in older adults is also a barrier to communication. P3.1 points out that "older adults may encounter memory fragments when recalling life stories, or have difficulty expressing their experiences clearly due to decreased language ability." Thirdly, older adults have a strong dialect. P3.4 points out, that older adults may experience difficulty in articulation, where the surname "She" is often misheard as "Shi" due to unclear speech. Therefore, the main challenges faced by caregivers in the narrative process with older adults primarily involve how to effectively initiate conversations, guide dialogues appropriately, and address issues related to older adults' dialects.

Difficulty recording: In their daily work, caregivers have approximately 15 minutes for each interaction with older adults. Due to the brief nature of these interactions, using paper records makes it challenging to comprehensively document life stories. Recording life stories in audio format is also difficult to organize effectively. Therefore, as mentioned in the previous section, older adults lacked feedback after mentioning or sharing their life stories. P3.5 said, "I

care for 5-6 older adults every day. I don't have time to document and organize these life stories unless I dedicate time to the life story project." Therefore, how to enable caregivers to record the life stories of older adults efficiently and effectively for subsequent reading and organization is a challenge that the EasyTell program needs to address.

Digital illiteracy: Caregivers, on the whole, tend to be of advanced age, exhibiting limited adaptability to novel technologies or applications. It is optimal for the design of EasyTell to employ a familiar user interface and interaction paradigm, facilitating ease of user adoption. P4.5 said, "I am in my fifties, and my memory is poor. When I use this program, I may not be able to remember its usage process. Therefore, I hope your program can be designed to be simpler and have as few interactive modules as possible."

3.3 Paper Prototype

After analyzing results from semi-structured interviews with older adults and information garnered from focus groups with caregivers, we identified a set of design requirements for the EasyTell prototype, which is provided in appendix A. We then invited caregivers to participate in the co-design of the paper prototype. After paper prototyping, we identified three core modules of Easytell.

Topic prompt: Designing topic prompts as the starting point for EasyTell workflow in paper prototypes. This module offers caregivers prompts to guide older adults in recounting their life stories, addressing the issue of "older adults struggling to begin, and caregivers unsure how to initiate the conversation."

Story recording: Life stories are narrated by older adults while caregivers document them. The primary method of recording life stories is through voice recording, supplemented by text input. The objective is to effectively capture life stories without interrupting the older adults' storytelling.

Story visualization: By presenting the life stories of older adults in a chronological event timeline, the stories are displayed from recent to distant events, with each life story showcased as "time: life story summary".

3.4 Digital Prototype

During this stage, participants were tasked with utilizing the digital prototype to identify inappropriate aspects and discuss any overlooked requirements. After two rounds of discussion and revision, the digital prototype is enumerated as follows.

The choice of platform: We design the EasyTell as a WeChat mini-program. Given that WeChat has become a prevalent social tool among Chinese users, caregivers who participated in the study commonly use WeChat, rendering them familiar with its interface layout and interaction methods. P3.4 provides his experience of using intelligent devices in daily care: "Efficient human-computer interaction is more important than flashy functions. Our caregivers in the care home are generally older in grade, and we cannot use complex applications. Therefore, a simple interface may be an attractive design approach."

Communication prompt: Based on two rounds of semi-structured interviews with older adults, we accomplish the localization improvements to the prompt in EasyTell, drawing inspiration from the "question mechanism" of the Lifebio system [24]. EasyTell supports

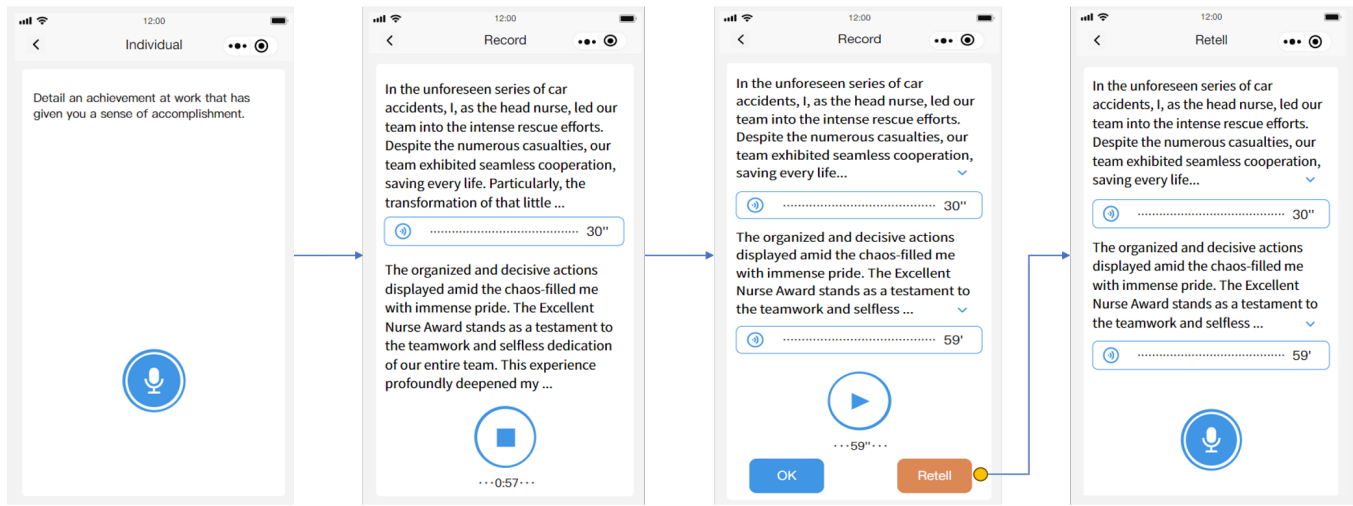


Figure 3: A digital prototype of the story collection in EasyTell.

two sets of communication prompt strategies in EasyTell, as shown in Figure 2. One set of prompt cues, centered around the lifecycle, encompassing seven stages and totaling 21 questions. Another set revolves around eight themes, such as career, family, parents, individual, etc, encompassing a total of 58 questions. Caregivers can choose appropriate topics from these sets to guide older adults in their storytelling.

Story collection: (1) Segmented transcription: The EasyTell is equipped with the capability of real-time transcription from audio recordings, and it supports automatic segmentation of audio into text based on time intervals, as shown in Figure 3. P4.4 states, "In the process of speech transcription, the function of segmented transcription should be considered. If the transcription time reaches half an hour or even longer, it is too long for the buffering of speech to text." (2) Manual correction: The EasyTell features various manual correction strategies for life stories, as shown in Figure 2. Firstly, EasyTell supports caregivers in retelling life stories narrated by older adults. In cases where older adults have a significant accent, causing transcription challenges in EasyTell, the program supports caregivers in providing voice retellings. Besides, the transcribed text may not perfectly align with the recorded content. EasyTell enables caregivers to correct the transcribed life stories manually.

Story visualization: The EasyTell supports the life story visualization feature, as shown in Figure 4. After the life stories are transcribed into text, caregivers can add time stamps and corresponding story summaries to each segment of the life stories. In cases where caregivers haven't set this information, EasyTell will automatically fill in these details. Subsequently, the system generates a digital memoir for the older adult by reordering all life stories based on the time stamps.

4 DISCUSSION

The study presents a prototype design of a caregiver-centric life story collection tool. Our research has found that caregivers encounter difficulties in engaging older adults in narrative conversations, and the recording of life stories poses a challenge during daily

care. Due to the work pressure of caregivers, there is a persistent contradiction between providing people-centered care and increasing the workload of already strained nursing professionals [16]. EasyTell has the opportunity to service the caregivers by adopting a communication prompt mechanism, scenario-based open-ended questions, and life story recording strategies. We conducted UCD workshops to gather design requirements from highly heterogeneous potential users and demonstrate more complex support for existing practices. The application prototype developed using this method increases the likelihood of being used by highly heterogeneous populations and is embedded in current practices.

4.1 Scenario-based Prompt Mechanism

Effective communication is vital in daily caregiving and significantly influences caregiver compliance [2, 3]. Due to the impact of regional culture, existing literature on narrative collection applications tends to overlook the commonalities in the speech habits of older adults [22]. Our end-users in the study believe that the proposed application can guide older adults in narrating their stories through a set of contextualized questions. Firstly, a crucial aspect of life stories is their coherence, implying that life events are not merely added without any connection but are interconnected personal experiences [14, 18]. Therefore, most participants suggest that the guiding questions should follow a chronological order. Secondly, participants feel that the application should be able to provide guiding questions based on contextualized event themes. This can be achieved by prompting local events within a specific timeframe in the guiding questions, facilitating rapid recollection of story experiences within that period.

The scenario-based prompt mechanism is not rigid, as the prompt template will dynamically adjust in the future based on the increasing life story collection. Caregivers can assess the initial prompt questions based on the communication smoothness and the tendency of older adults. They also have the option to create personalized prompts that could engage older adults to narrate. Through

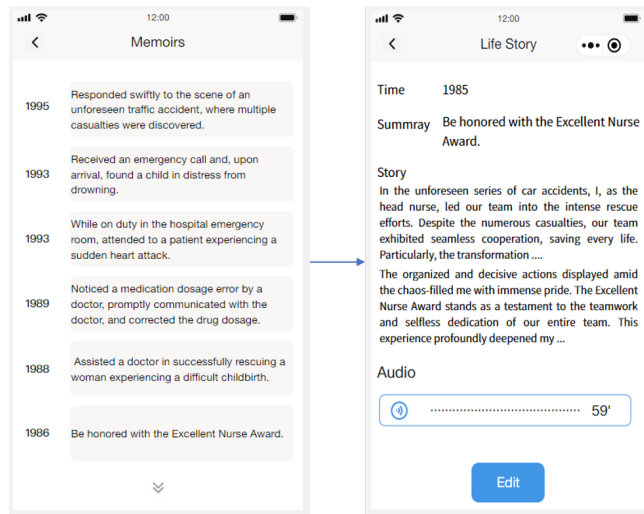


Figure 4: A digital prototype of the story visualization in EasyTell.

self-feedback learning, the template for prompting questions can dynamically update.

4.2 Story collection method based on WeChat

Caregivers often perceive technology as a series of steps or procedures, and due to a fear of "breaking something," they are less inclined to try error-prone learning methods [1]. As described in [30], the influence of WeChat in China has deeply permeated the social fabric, with people from every demographic, including older adults, embracing it for a wide array of daily activities and interactions. Daily caregiving is no exception, as WeChat mini-programs are increasingly utilized for communication by caregiving professionals targeting the older adult population. Therefore, building EasyTell on the WeChat platform is advantageous for caregivers' adoption.

Caregivers aspire to maintain effective communication with older adults in nursing homes and communities during their daily work, aiming to collect the life stories of older adults as a reference for future personalized care plans [26]. They lean towards new digital channels, leveraging computer technology to alleviate the additional workload associated with story collection. To address this, we adopt a design approach incorporating speech-to-text technology to enhance the efficiency of story collection during caregivers' daily interactions. Simultaneously, the use of caregivers' transcriptions helps rectify machine transcription errors caused by dialect-related issues.

5 CONCLUSION

In this exploration of caregiver-centric design within digital storytelling, we have delved into the complexities of bringing digital storytelling into eldercare practices, spotlighting caregivers' experiences and technological needs. The iterative development of EasyTell, steered by a user-centered design philosophy, has highlighted its potential to incorporate bite-sized storytelling into daily caregiving practices. EasyTell facilitates this through scenario-based

prompts and efficient narrative recording, thereby enhancing the caregiving process.

Yet, our investigation also surfaced areas requiring further refinement, particularly in cultivating deeper engagement among older adults and bolstering support mechanisms for caregivers. Future directions for EasyTell include investigating more engaging prompts with the Large Language Models and broadening its user base to involve informal caregivers and family members. The expansion of the user base not only aims to widen EasyTell's utility but also seeks to deepen interpersonal connections within the caregiving continuum through the shared experience of storytelling.

Another promising avenue for future research lies in examining digital storytelling's impact on caregivers. Understanding how this practice enriches caregivers' experiences and adds meaningful depth to their roles could offer profound insights into digital storytelling's emotional and psychological benefits in eldercare.

Our focus on caregiver inclusion seeks to complement—not overshadow—the active participation of older adults, ensuring that digital storytelling serves as a bridge between generations, and encouraging a dialogue that honors and respects the stories and identities of the elderly. Ultimately, this work contributes to a growing body of knowledge advocating for the use of digital technologies to create a more empathetic, connected, and supportive caregiving environment.

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A DESIGN REQUIRMENTS

Based on a study of semi-structured interviews with older adults and a focus group with caregivers, we analyzed the design requirements of EasyTell with NVivo11. The analysis proceeds as follows.

(1) Familiarization: Team researchers familiarized themselves with the collected data, researching people and locations mentioned in the data. This helps establish an understanding of the content and background of the data.

(2) Transcription and Data Import: The collected speech data from older adults and caregivers presents a challenge for automatic transcription due to variations in accents. We invited two local individuals to perform preliminary transcription of the speech data, obtaining standardized textual data, which was then imported into NVivo.

(3) Generating Initial Codes: Research members created initial themes, concepts, and patterns in the project, including reminiscence assistance and prompt, narrative data collection and storage, user interface and interaction design, and information visualization and user experience. Subsequently, the research members identified key information in the text and coded the link relationships, completing the initial coding.

(4) Searching for Themes: Research members looked for common patterns and concepts in the data themes to identify higher-level themes.

(5) Reviewing Themes: Review the discovered themes to ensure they are reasonable and accurate, delving deeper into the content of each theme.

(6) Defining Meaningful Themes: Summarizing and generalizing the identified themes to ensure they are meaningful and effectively represent the results of the study.

A.1 Memory assistance and problem guidance

Life Story Guide Problem Design

- P1.5: Open questions should be designed during the communication process. If there are too many closed questions in the design, it is not conducive to inspiring older adults to tell stories.

Design guided by localized events

- P2.4: I have always lived locally, and if you could give me some local topics to help me recall, I might associate more content based on this topic.

A.2 Narrative data collection and storage

Design of voice-to-text conversion function

- P3.8: In the process of collecting stories, voice-to-text technology should be used to avoid forgetting the content and improve the efficiency of collecting stories, thereby ensuring communication coherence.

Segmented recording to text function

- P3.8: In the process of voice input, the text should not be transcribed only after a story has been told, but rather through segmented transcription of a segment of speech.
- P3.6: The transcription and presentation time for the first two paragraphs can be designed to be shorter so that caregivers can quickly understand the theme of the story that the elder is about to tell.
- P3.4: In the process of voice transcription, the segmented recording method is used. After collecting a story, the story content is transcribed for users to view.

Support third-party reporting

- P3.2: If older adults use dialects when telling stories, can voice-to-text accurately transcribe the story content?

- P3.3: In the process of collecting stories, the methods of voice collection and text collection should be combined, because after voice conversion, there may be errors or incomplete transcription of speech.
- P3.6: Nurses can transcribe the stories told by older adults in Mandarin, which not only confirms the content previously told by older adults but also reduces the occurrence of errors caused by dialects in the process of phonetic transcription.

Design of story information filling method

- P3.2: The time, address, and characters of the story should be filled in after collecting the stories of older adults. In this way, caregivers can fill in story information based on the content of the story.

Automatic save function settings

- P4.3: If during the use of the program, the network is disconnected or the program is exited due to an error caused by a phone call, all previous voice recordings will be lost. Therefore, you should also design an automatic save function.

Basic information records of older adults

- P3.1: Design a health program to record the long-term medical history and chronic diseases of older adults, so that caregivers can provide care plans based on their health status when they move into nursing homes.
- P3.6: In the Basic Information section, it is necessary to record the personal hobbies and lifestyle habits of older adults, which can further help caregivers understand their situation.

Support voice search for information

- P4.7: When searching for elderly people through the search bar, if a voice search function can be provided, it can improve the work efficiency of older caregivers.

A.3 User interface and interaction design

Simplify functional design

- P4.5: In the process of designing programs, it is important to cater to the user experience of the general public and avoid the need for too many complex functional modules, otherwise it will not be widely available.

- P4.7: Many caregivers here have a low level of education, and the most important thing in program design is to use the simplest, most convenient, and acceptable solution for caregivers.

No additional operational requirements

- P3.5: Some older caregivers do not know how to use their phones to edit text, so after collecting a story, caregivers no longer need to edit the collected story.
- P4.4: Due to the heavy workload of nursing staff, after collecting an elderly person's story, they do not have the time and energy to adjust the newly collected content, so they need to take care of another elderly person.

Design of anthropomorphic and obvious page jump buttons

- P3.3: For older caregivers, try to have fewer interactive modules. If there are too many functional modules designed, we may forget how the product page is redirected.
- P4.8: On some functional buttons, design them in a clear icon style instead of simply introducing them with text, which is also convenient for people like us to use.

Adopting mainstream application style

- P3.5: I usually use WeChat a lot and haven't used many other mobile apps. If the usage of this program is similar to WeChat, I can accept it.

Large and contrasting font settings

- P3.1: The font should be set to a larger size and the color contrast should be more prominent because I have myopia, so I don't see the orange font very clearly in the program.
- P3.3: Large font needs to be designed for use by older caregivers.

A.4 Information Visualization and User Experience

Highlighting of useful information

- P3.8: Time holds significant importance, particularly concerning essential milestones such as birthdays and anniversaries for older adults.