

# Dear Diary: A Design Exploration on Motivating Reflective Diary Writing

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**Abstract.** This research-through-design study explores the motivations and threshold for reflective diary writing, as a case of supporting behavior change through product design. A field study examines how a new design of a diary triggers and stimulates writing and taking a reflective perspective. The most important finding shows that the design changes the overall experience and strengthens the reflective value of diary writing. The findings suggest focusing on motivation and experience design for supporting behavior change.

**Keywords:** Daily Reflection, Motivation, Diary Writing, Design Exploration, Changing Behavior

## 1 Introduction

The interest in diary writing is very broad, as it is an essential element in cognitive behavioral therapy that can help address problems relating to eating, sleeping, medication compliance etc. As such there is a broad interest in increasing compliance to diary writing regimes. Typical solutions to this might include computerized tools to improve people's ability to keep diaries, for instance by reminding them to write or reducing the effort required [1]. Such persuasive approaches to diary keeping are suitable because these diaries are often kept for a predefined amount of time and rely on complying with a therapy.

This research focuses on diary keeping as a way to address sleep problems. Several studies have found that a substantial number of adults suffer from sleep problems, which can cause severe health problems and hazards at work or when driving. For example, a 2008 survey by the National Sleep Foundation (USA) found that 15% of respondents sleep poorly occasionally and 6% never sleep well [2]. Often a cause for sleep problems are worries and stress [3].

Diary keeping and cognitive behavioral therapy have been proposed as ways to mitigate this problem. However, diary keeping for sleep needs to be sustained for long and goes beyond record keeping to personal expression and reflection. Diary writing in this case is a personal activity and as a result this study does not depend on compliance. Referring to Fogg's model of behavior we believe it is more fruitful to enhance motivation rather than ability [4].

## 2 Method

To explore the motivations, threshold and the potential influence of the diary object this study adopts a research-through-design approach. A diary is designed and is seen as an embodiment of several hypotheses concerning aspects that will increase the likelihood of writing. A field study of using this diary helps evaluate these hypotheses qualitatively.

Figure 1 shows the concept diary. A wooden stand holds several folded letters and can display up to four next to each other. The front of each letter features an incomplete sentence, "today was". Participants were asked to finish this sentence with a single word. The letters can be unfolded, the inside of the letters is lined for more elaborate writing.



**Fig. 1.** The designed diary with letters

This design is based on the following premises:

- Asking for one word will lower the threshold to start writing and the folded letters will stimulate people to continue writing more.
- Making the diary more outstanding in its context will trigger people to write.
- Seeing your previous entries will motivate to write again.
- There is a more emotional value in writing by hand. Also, the design and the materials used are intended to give a personal and warm feeling.

A convenience sample of 10 individuals (5 male, 5 female) used this diary for a week. We examined the relation of the artifact design to their experience through individual in-depth interviews at the end of the trial period.

### 3 Diversity in Ways of Diary Writing

People wrote about a variety of things: events, experiences, emotions and more practical issues like “to-do's”. For some participants reflection became an active mental process rather than helping them wind down after the day; for others it became a moment of transition: *“I think it helps to give closure to the day. It helps when you consciously have to think about it.”*

The reported motivations set apart two types of diary writers: The first write to remember and to look back, they often have less writing experience and write more factually. The second are intrinsically motivated by the joy of writing and because writing helps deal with their worries: *“I seldom look back at what I wrote down; it is a matter of putting things down on paper.”*

For the two groups the concept diary offered different reflective values. Three of the four people who indicated they would “normally” write with the goal to look back upon, indicated that the cards triggered them to write on a more emotional side. *“I guess I write in a factual way anyhow (...) but that one word tells much more about how you felt about it.”*

Those who indicated to be in the habit of writing more expressively had more diverse experiences with the diary. For example, being challenged to write one word helped put emotions in perspective: *“Usually I focus on the excesses, things I want to have off my chest. Now you review the entire day, which gives a more balanced picture.”* The visible display of the writings had an additional reflective value: *“It would make me feel more responsible of how things go, not only by feeling my feelings but by actually seeing them.”* Two participants remarked how the concept diary was more able to trigger them to write: *“It is more present than a regular diary, it stands right in front of you, it stands out”.*

Some participants would prefer a more mobile diary that would be at hand when one feels the urge to write. Two participants indicated they appreciated how the diary design fitted their irregular habits: *“You can do this when you have the urge to. In a diary it is like “I didn’t write for three days, it is disturbing that there are gaps in it.” With this it are loose parts that you can pick up separately again.”*

### 4 Fostering reflective writing by design

Analysis of the interview data indicates the emergence of a ‘tunneling’ [5] process enhancing reflective writing. The interviews show people had diverse motivations and experiences, but all have these steps of the process in common. First of all, participants indicated the diary was more present than a regular diary, which appeared to trigger them to start writing. For some writing one word was very easy and others saw it as a challenge but for all, the diary made the activity more accessible. Other aspects lowered the threshold as well: the separate letters made it feel less of an obligatory routine. Some thought a more portable diary could make the threshold even lower.

Second, people were teased into writing more. Participants mentioned they wanted to explain the word they had written on the front. Others easily wrote just one word

and some wrote in a different order, first writing a story and writing one word as conclusion.

Third, participants commented how looking back on previous entries motivated them to write and for some the aesthetic aspects of the design made them enjoy writing about their day. The prompt to provide one word for completing the sentence on the cover, stimulated them towards an emotional expression which combined with the visibility of previous entries lead to an unexpected experience of diary writing.

In turn, this stimulated people towards the last step: to take a more reflective perspective towards their days. Any diary has this reflective value but this value was enhanced by the design of the diary; it stimulated more emotional and more balanced input, combined with looking back over a longer period.

This analysis shows how the design had impact on all stages of diary writing as well as for the many different approaches people had. The handwritten and aesthetic qualities of the diary enhanced the experience, because it focuses on experience and not on efficiency. Participants appreciated the reflective perspective, but not all were conscious about it during the study period. To maintain this reflective behavior, for it to truly become a part of daily life a personal motivation should be combined with a motivating design.

## 5 Conclusion

This paper has motivated the design of a physical diary that aims to enhance people's intrinsic motivation for diary writing. A one week long evaluation with 10 participants has first of all given insight in the diversity of people's experiences and motivations. The study validated the design of the diary, showing how diary writers can be guided through this process to become more reflective through product design aspects. This behavior was stimulated by triggering through the visibility and by lowering the threshold and feeling of obligation through separate small entries. Finally the behavior was also motivated by increasing the reflective value through asking for one word and displaying the entries.

Going beyond the use of persuasive strategies and technical means to facilitate a target behavior we hope to have illustrated how product design can encourage behavior change.

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