

Candy-Package Envelopes to Prompt Handwritten Letters

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Abstract—With the diversification of communication methods, letters are no longer the main communication tool. However, writing letters has various advantages, and efforts are being made to actively use letters in educational and medical settings. In this study, to create a letter-writing opportunity, we used an envelope consisting of a candy package. We held a workshop in which participants made a candy-package envelope and asked them to write a letter to use the envelope. After the workshop, we conducted a questionnaire survey to investigate their usage of letters and the effect of the candy-package envelope on prompting handwritten letters.

Index Terms—candy-package envelopes, handwritten letters, Shikakeology

I. INTRODUCTION

In recent years, the use of social networking services (SNS) has increased, and communication tools have diversified. SNS can be easily used at any time regardless of the distance and have become the main communication tool. According to a survey performed by the Ministry of Internal Affairs and Communications, the average usage time and user rate of social media increased from 2012 to 2016 (Table I) [1]. In modern times, letters are no longer the main communication tool. However, the act of writing a handwritten letter has various advantages, such as facilitating communication and contributing to children’s language acquisition. Many efforts are being made to write letters actively in educational and medical settings.

Therefore, in this study, we aimed to create a chance to write a handwritten letter via the Shikakeology approach.

II. PRIOR RESEARCH

A. Letters in Modern Society

In the 1970s, personal computers aimed at document processing emerged, and since then, electronic media have spread and developed rapidly. Fig. 1 shows the number of mail items in Japan from 2001 to 2018 [2]. The role of letters was replaced by e-mail and SNS, and the number of letters has decreased. SNS such as LINE, Twitter, and Facebook are becoming an important means of communication. Currently, electronization has made it possible to communicate more easily, rapidly, and inexpensively, but there have been problems that did not occur with conventional telephones and letters. Otani (1998) states that messages with emotional and

TABLE I
AVERAGE USAGE TIME (MIN.) (UPPER TABLE) AND USER RATE (LOWER TABLE) OF THE MAIN MEANS OF COMMUNICATION ON THE INTERNET.

	Cellphone call	fixed-line phone	Internet call	SNS	e-mail
2012	6.3	2.0	3.1	8.8	28.6
2013	4.7	1.4	2.4	15.5	26.0
2014	6.5	1.7	2.5	20.1	26.2
2015	6.5	1.9	2.1	19.6	29.1
2016	6.1	1.4	4.1	25.0	30.1
2012	25.8 %	6.8 %	3.6 %	13.2 %	57.8 %
2013	21.1 %	5.3 %	3.7 %	21.8 %	50.7 %
2014	19.7 %	5.4 %	4.1 %	28.3 %	47.3 %
2015	21.0 %	5.1 %	4.5 %	30.5 %	49.9 %
2016	15.5 %	2.6 %	4.7 %	30.5 %	45.3 %

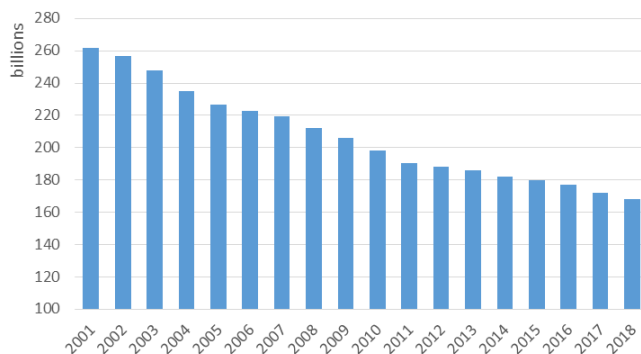


Fig. 1. Number of domestic mail items [2].

aggressive content are more likely to be sent via e-mail than via letters [3]. In the case of traditional mail, there are multiple stages to writing a letter and mailing it, which may discourage repulsive content. However, an e-mail can be sent in an instant.

Additionally, according to Mizushima (1996), misunderstanding in an e-mail conversation is likely to cause anxiety. In real conversations, we often forget or change what we say, and we can advance the conversation while reconstructing the context to resolve a misunderstanding. However, e-mail is highly recordable, and it is difficult to forget about inconveniences or change memories as in the case of a real conversation. Thus, intentions may not be properly communicated, causing anxiety [4].

According to Oe and Sugano (2006), letters have declined owing to the rapid spread of information technology (IT) media, but there is no positive or negative relationship between the usage of letters and the usage of mobile mail. Thus, there is no competitive or alternative relationship between e-mails and letters [5]. IT media should be positioned as a newly cultivated communication field, and the simplistic view that IT media have replaced letters as a communication tool is incorrect [6]. Moreover, it was confirmed that people who recognize letters as a means to convey feelings actually use letters more often. Whether letters are frequently used depends more on the awareness of letters than on attributes such as gender and age. Awareness of letters is greatly related to education and the thoughts of those around us [7].

B. Significance of Handwriting

In this study, candy-package envelopes were made to encourage participants to write handwritten letters rather than printed letters or e-mails. In this section, we describe the benefits of handwriting. Shibata and Omura (2011) compared the performance of reading and writing between paper and electronic media. According to [8], reading on paper is more efficient than reading an electronic document with regard to moving between pages and comparing a plurality of documents. Additionally, in the case of writing, the time required and the number of words were greater when a word processor was used compared with handwriting, but there was no difference in the quality of the document. However, there was a difference in the writing process. First, in word-processor writing, time is spent correcting surface errors such as typographical errors, and there are fewer significant corrections related to the overall structure compared with the case of handwriting. In the case of handwriting, surface and major corrections are balanced. When a word processor is used, there is a tendency to start writing without taking much time to consider the overall structure [9]. Conversely, in the case of handwriting, there is a tendency to spend sufficient time to develop the sentence structure.

The handwritten character has information that is not included in the input character [10]. When we look at handwritten characters, we can imagine the personality of the writer. Even with the same letter, the personality assessment of the sender on the part of the recipient varies depending on the document reference medium and the document style [11]. Regarding the document style, various studies have indicated that handwriting is more effective than typing in conveying compassion to others. Because handwritten letters can give impressions such as “heartwarming,” “joy to receive,” and “hearty,” it is effective for expressing gratitude. However, handwriting is not always optimal, and depending on the situation, it may reduce the attractiveness of the sender to the recipient. Handwriting reduces the sender’s perceived trustworthiness and reliability. Additionally, handwriting should not be selected when readability is important or when a formal or official impression is desired. Thus, media and fonts should be selected according to the situation.

How well-recognized are the benefits of handwriting? What proportion of documents are handwritten in daily life? According to a study by the Agency for Cultural Affairs, in response to “How often do you have handwriting in everyday life?,” 72.7% of the respondents answered “frequently” or “sometimes,” and 27.3% of them answered “not often” or “nothing.” In response to “Do you think future generations, not just you, should value their handwriting habits?,” 91.5% of the respondents answered “yes” [12]. Thus, although paperless electronic media are becoming popular, the significance of handwriting is recognized.

C. Example of Efforts

The usefulness of writing handwritten letters was discussed in the previous section. In this section, we describe our efforts to bring about an opportunity to write letters. In [13], the authors produced an animation to be played in a digital advertisement on a train. According to this study, letters can easily convey feelings, and opening the seal of the envelope is pleasurable. However, the writer may be worried about his/her poor writing, and there may not be an opportunity to write a letter. Thus, in the previous study, a quiz-style video was created that stated that the 23rd of every month was “Fumi-no-hi” (meaning “letter day” in Japanese), and an animation was included to portray letter-writing in a positive light. This video was expected to deepen the viewers’ interest in letters and create an opportunity to write letters. This study is similar to ours in that it focused on creating a letter-writing opportunity.

Restio examined the effects of letters in the medical field [14]. Effective communication with patients is important in the field of mental health. In many cases, doctor–patient communication is verbal, but written communication is considered to be clearer and more meaningful. Thus, when letters were incorporated into the communication between the clinician and the patient, they played a role in assisting treatment, and the symptoms were improved. Because letters can be reread, the patient was able to reduce his/her anxiety and excitement by repeatedly reading the letters from the clinician. In another study, there was an attempt to promote communication by allowing letters to be exchanged between adolescent children and parents [15]. Because letter exchange is more relaxed than verbal exchange, the parents and children were able to respect each other properly, strengthening the parent–child bond. Thus, letters play a very important role in facilitating communication.

An elementary school implemented a program wherein students wrote letters to each other. Writing letters promotes communication between individuals, which is very useful for children to learn languages. The objective was to give students a positive image about writing letters by preparing a mailbox and stationery in the school and providing students with the opportunity to write. The students enjoyed the letter exchange and began to write letters even at home. Additionally, their reading and writing skills were improved [16]. In a similar study in the field of education, children were encouraged to write letters as part of an international exchange. The exchange



Fig. 2. Candy-package envelopes.



Fig. 3. Workshop of the candy-package envelopes.

of letters promoted the sharing of cultures and improved the English skills of the students [17]. In educational settings, efforts are directed toward motivating students to write letters for improving their writing and reading skills and promoting communication.

III. OUTLINE OF CANDY-PACKAGE ENVELOPES

The candy-package envelope is an envelope made by simply crafting an empty snack box as shown in Fig. 2.

In our experiment, we used a TOPPO snack package. First, the box was opened using scissors. Next, the extra parts were cut off, and a letter written in advance was inserted. The box was then closed with double-sided tape. The letter could be removed by opening the front side of the envelope. The envelope could be sent as standard-size mail, by writing one's address and affixing a stamp. The objectives were to make people interested in the fun and unusual idea of creating envelopes from a snack package and to encourage people who do not usually write letters to do so. The method is a Shikakeology-based approach for creating a letter-writing opportunity.

Shikakeology refers to a study in which Professor Naohiro Matsumura systematized the implementation and verification of designs that change human consciousness and behavior. A snack-package envelope is a workshop-type Shikake that was conceived according to the Shikakeology concept. According to Matsumura (2016), a Shikake satisfies the following three requirements.

〈FAD requirements〉

- Fairness: No one suffers a disadvantage.
- Attractiveness: A trigger to invite action.
- Duality of purpose: The purposes of the sending side and the receiving side do not match.

First, the snack-package envelope is an initiative to create handwritten letters through a workshop for making envelopes using snack packages, and this is against nobody's interests. Thus, fairness is satisfied. Second, it is considered that the

idea of crafting a candy package into an envelope will attract people because it is unique and interesting. Thus, attractiveness is satisfied. Third, the purpose of the sending side is to write handwritten letter, and the purpose of the receiving side is to make the candy-package envelope because it appears interesting. Therefore, the purposes do not match, and duality of purpose is satisfied. Hence, it was confirmed that this approach satisfies the FAD requirements in Shikakeology.

As mentioned previously, even in the present day when electronic media are prevalent, letters play an important role for conveying feelings. Additionally, the significance of handwriting and people's recognition of handwriting were confirmed. Because handwritten letters are very effective in facilitating communication and improving reading and writing skills, efforts are being made to create handwritten letters in various situations. According to these considerations, for increasing the use of letters, we decided to use the Shikakeology-based idea of presenting a motivation for writing letters, rather than forcing people to write. We hypothesized that by using the candy-package envelope, we could make people who do not usually write letters want to write letters.

IV. EXPERIMENT

To confirm the usefulness of the candy-package envelope, we held a workshop at HIKARI Plaza in LaLaport EXPOCITY in Suita City, Osaka Prefecture (Fig. 3). LaLaport EXPOCITY is a large commercial complex containing grocery and other stores, which are filled with shoppers. HIKARI Plaza is located at the center of LaLaport EXPOCITY (1st floor), where various events are held. In this workshop, participants wrote letters and enclosed them in the candy-package envelopes that they made. The staff told the participants how to make the candy-package envelopes. Many people participated with their families. It appeared that they enjoyed writing the letters and making the envelopes, and the workshop was very lively. Their candy-package envelopes were collected and mailed together at a later date. After the experience, a questionnaire survey was

TABLE II
BREAKDOWN OF PARTICIPANT AGE.

under 10	10's	20's	30's	40's	50's	over 60
1	8	3	24	9	2	2

TABLE III
QUESTION 1: "HOW MANY TIMES DO YOU SEND LETTERS PER YEAR?"
(VALID RESPONSES: 48) (SINGLE-CHOICE QUESTION)

	# of responses
Nothing	18
Once	12
A few times	13
5-9 times	1
More than 10 times	4

conducted. We also performed a follow-up survey via e-mail at a later date.

- Experiment location: Osaka, Suita-city, LaLaport EX-POCITY, HIKARI Plaza
- Experiment date and time: 10:00 to 16:00 on June 1, 2019
- Number of participants: 49 (16 male, 33 female). See Table II for detail.

V. EXPERIMENTAL RESULTS

The questionnaire results are presented in Tables III—IX. The letters mentioned here do not include New Year's cards. First, the questionnaire conducted after the workshop confirmed that there were fewer opportunities to write letters compared with the past. Additionally, there were more private letters exchanged with family and friends than with work relations. Furthermore, it confirmed that the workshop was satisfactory for many people. Because there were 21 people who sent letters for the first time to the recipients who sent the candy-package envelopes (see Table VIII), the workshop created an opportunity to send letters for those who do not usually send letters.

Next, we discuss the results of the follow-up survey. When we asked about the reaction from the person who sent the candy-package envelope, we received positive responses, such as "happy," "amazed," and "pleased." Additionally, 9 of the 10 follow-up respondents said that they had talked to someone about the candy-package envelope after the workshop. Additionally, when asked to describe the good points of the workshop, many respondents said that it was good to be able to use familiar items that were readily available. It appears that the unexpectedness of using a candy package to make an envelope was interesting for the participants. Moreover, there were opinions that it was possible to realize the importance of communicating with one's own words and letters and that it was a good idea to recycle things that would otherwise be thrown away and to send letters that are not usually written. Finally, as shown in the Table, 9 of the 10 respondents stated that they wanted to write another letter as a result of this experience.

TABLE IV
QUESTION 2: "WHO DO YOU OFTEN WRITE LETTERS TO?" (VALID RESPONSES: 53) (MULTIPLE ANSWERS ALLOWED)

	# of responses
Families	14
Grand parents	12
Relatives	2
Friends	16
People around your working	3
Others	6

TABLE V
QUESTION 3: "ADVANTAGES OF LETTERS" (VALID RESPONSES: 96)
(MULTIPLE ANSWERS ALLOWED)

	# of responses
Handwriting	35
Various designs	9
Inconvenience	8
Looking forward to receive	18
Remains as a substance	22
Others	3
Nothing	1

TABLE VI
QUESTION 4: "HOW HAS THE FREQUENCY OF SENDING LETTERS CHANGED COMPARED WITH THE PAST?" (VALID RESPONSES: 47)
(SINGLE-CHOICE QUESTION)

	# of responses
Decreased	33
Slightly decreased	4
Nothing has changed	5
Slightly increased	4
Increased	1

TABLE VII
QUESTION 5: "ARE YOU SATISFIED WITH THIS EXPERIENCE?" (VALID RESPONSES: 49) (SINGLE-CHOICE QUESTION)

	# of responses
Yes	43
Yes, so-and-so	5
No, not so good	1

TABLE VIII
QUESTION 6: "HOW MANY TIMES A YEAR DO YOU SEND A LETTER TO THE PERSON WHO SENT THE CANDY-PACKAGE ENVELOPE?" (VALID RESPONSES: 46) (SINGLE-ANSWER QUESTION)

	# of responses
Once	10
A few times	8
Many times	7
First time	21

VI. CONSIDERATIONS

Previous studies indicated that opportunities for writing letters have decreased in recent years. This agrees with the decrease in the number of mail items from the statistics of the Ministry of Internal Affairs and Communications. The results of the survey in the present study confirmed that the frequency

TABLE IX

QUESTION 7: "DID YOU TRY TO WRITE ANOTHER LETTER AS A RESULT OF THIS EXPERIENCE?" (VALID RESPONSES: 10) (SINGLE-ANSWER QUESTION)

	# of responses
Yes, sometimes	8
Yes, on a daily basis	1
No	1

of letters has decreased compared with the past and indicated that fewer people write letters more than five times per year.

When asked about the good points of the letter, the most common answer was "handwriting." It can be said that the significance of handwriting is recognized even though the casual use of electronic media is now widespread. Handwriting is seen positively because it allows feelings to be conveyed more easily compared with text characters and gives a good impression.

In this study, we hypothesized that by using the candy-package envelope, we could make people who do not usually write letters want to write letters. Because 9 of the 10 respondents indicated that they wanted to write a letter after the workshop, the hypothesis appears to be correct to some extent. In a previous study, after a program to make students write letters at school, students started to write letters at home. Similarly, by creating a chance to write a letter at the workshop in the present study, we were able to raise awareness of letter-writing.

A new finding of this study is that the idea of making envelopes using familiar items was very impressive and interesting for the participants. In the free statement, 6 of the 10 respondents mentioned the unexpectedness of making envelopes from candy packages. It can be said that the idea of creating something unexpected using familiar items was interesting.

Additionally, 9 of the 10 respondents answered "yes" to the question "Did you talk to someone about the confectionary envelope after the experience?" It is thought that the experience was remembered because it was interesting, and then it became a topic of conversation.

VII. SUMMARY AND FUTURE PROSPECTS

In this study, we used candy-package envelopes to provide people with an opportunity to write letters as a useful communication tool. A questionnaire survey confirmed the effect of creating this opportunity to some extent, but the number of samples was insufficient, because the workshop was held for only one day. Therefore, we will continue our investigation at events and plazas in complex facilities and collect sufficient data. Additionally, when asked about improvements to the workshop in the questionnaire survey, participants expressed that it was difficult for a small child to make the envelope alone. LaLapport EXPOCITY is a place visited by many families, and there were many children and their guardians in the workshop. We wish to improve the method of creating the candy-package envelopes for making it accessible to children.

ACKNOWLEDGMENT

We express our gratitude to Lotte Co., Ltd., who provided the TOPPO used in the experiment, and Mitsui Fudosan Co., Ltd., who provided the location where the workshop was held.

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