Persona Marketing for Fujitsu Kids Site

● Yumi Hisanabe

In December 2007, Fujitsu published the "Guide to Creating Web Contents for Kids" with the aim of popularizing the concept of universal design and promoting the creation of high-quality content for children's Websites. When developing our own "Fujitsu Kids Site", we took a new approach called "persona marketing" that allows us to visualize and better understand our target users. Persona marketing allows users to participate in the process of developing products and services, thereby clarifying their needs to be satisfied. The method has attracted much attention and has begun to be used widely in the fields of human-centered design and marketing. This paper describes the characteristics of persona marketing, explains how personas were created when we developed the Fujitsu Kids Site and used during site reviews, and discusses their effectiveness in creating better content.

1. Introduction

In Japan, the distancing of children from science and mathematics has come to be acknowledged as a problem and there are hopes for a society-wide effort to revitalize children's education. Against this background, Fujitsu considered what it could do as one company and established the Fujitsu Kids Project based on the concept of "helping children, the future of the nation, realize how wonderful technology can be".

In March 2007, we launched the "Fujitsu Kids Site" as an information portal targeting higher-grade students in elementary schools to inform them about technology that can make the dreams of mankind a reality.[1] The Fujitsu Kids Site provides content that can teach students about information technology (IT), the environment, universal design, and other important subjects, with each subject including fun characters, quizzes, and other attractions so that children can learn while having fun.

Then, in December of the same year, Fujitsu published the "Guide to Creating Web Contents for Kids" to promote the use of universal design and the creation of high-quality content. This handbook comes in two editions: Basic and Persona Marketing. The Persona Marketing edition describes the "personas" that we created in developing the Fujitsu Kids Site and the practice of "persona marketing".

"Persona" is derived from a Latin word meaning mask, character, or person. The aim of a persona in software design and product design is to define the image of a typical user of a product or service as a virtual person. Persona marketing is a method for establishing an abstract customer model of the most important elements defined by a persona and using that model as marketing data.

In this paper, we describe the characteristics of persona marketing, present the process of creating the personas when we developed for the Fujitsu Kids Site, give examples of putting personas to use, and discuss the effectiveness of perso-

Tomoko Suzuki, 28 years old
(company employee, office work)

Family details	Parents, younger sister, and pet Chihuahua. She lives at home in Meguro ward
Interests	Gourmet food, shopping, and diets
Personal activities	She enjoys decorating her room and buying general merchandise, visits retail shops and cafes on the weekend. She has a good relationship with college friends to this day and sometimes has dinner with them on weeknights on her way home. On days that she has an appointment with friends, she plans her work so that she can leave on time. She also has a good relationship with her family. She reserves a restaurant in Tokyo whenever any member of the family has a birthday so that the entire family can celebrate together.
Work activities	She is in charge of preparing materials in a technology-related department in an IT company. Upon arriving at work in the morning, she checks various news sites but somehow turns to viewing entertainment news. However, on finding a site that provides straightforward explanations of technology, she bookmarks it for future reference. She is not fluent in specialized technical terminology. Although somewhat busy, she works efficiently and manages to finish her work during regular hours as she tries to avoid working overtime as much as possible.

Figure 1
Example of persona.

nas in creating better content.

2. Persona features

A persona gives a profile of a virtual person including age, gender, and family details and describes lifestyle and values. It also describes—in story form—when, where, for what purpose, and in what state of mind that person uses products and services (**Figure 1**). Establishing personas provides three main benefits.

1) Enables users to be visualized

A persona represents target users as a specific virtual person such as "Mrs. Sato" or "Ms. Suzuki" instead of placing them into an abstract group such as "housewives" or "company employees" in which attributes have been averaged out. This enhances people's awareness of users and lets them imagine user behavior. Visualization in this way promotes understanding of user problems, needs, and objectives. It can also close the gap between the user image held by the provider of a product or service and actual users.

2) Helps maintain user awareness

A persona enables developers to always keep the user in mind over the course of various processes in product/service development. Discussions and development based on the user's viewpoint can be performed consistently over all processes, making it easier to create products and services with high user value.

3) Enhances motivation and communication among developers

Establishing a persona representing a virtual but specific person enables developers to empathize with users, which can enhance their motivation. It also enables concerned personnel to discuss improvement policies from the viewpoint of a shared persona. This makes consensus building and decision making easier and enhances communication among team members.

The use of personas makes it possible to understand users, listen to their opinions, and communicate with them. If users participate in each process of product/service development, their problems can be solved and their needs satisfied. The persona approach has attracted much atten-

tion and has begun to be used widely in the fields of human-centered design (HCD) and marketing.[2],[3]

The following sections introduce the implementation of persona marketing in the construction and operation of the Fujitsu Kids Site.

3. Problems after launch of Fujitsu Kids Site

In June 2007, soon after the launch of the Fujitsu Kids Site, two issues emerged when attempts were made to improve the site and add content.

1) Understanding user image and user needs

The Fujitsu Kids Site targets higher-grade students in elementary school but includes teachers as users because the content is mainly educational. However, no members of the Fujitsu Kids Project at that time had a sufficient understanding of the state of Internet usage by elementary-school students, much less that by professional elementary-school teachers. As a result, nothing could be shared about the users other than "higher-grade students in elementary school" and "elementary-school teachers" and no concrete image of how target users use the Internet could be constructed.

2) Eliminating discrepancies in user awareness among Fujitsu Kids Project members

A number of departments within Fujitsu contributed to creating content for the Fujitsu Kids Site. Although they shared information about producing Web content oriented to children, members of the Fujitsu Kids Project were not in complete agreement on user awareness, making the resolution of this disagreement an issue to be addressed.

4. Solving problems by using the Persona method

The above problems were solved by applying the following two features of the Persona method (**Figure 2**).
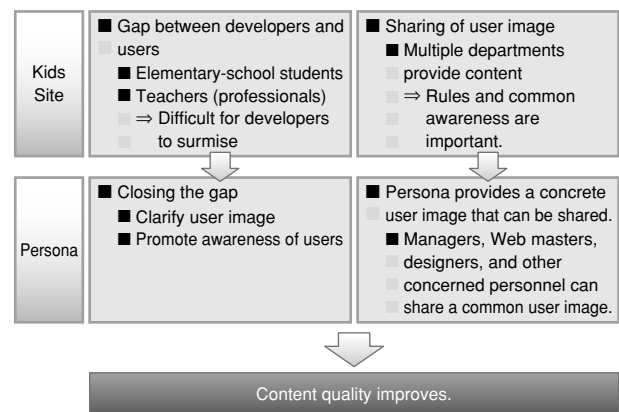
1) Clarifying user image

Figure 2
Solving problems with "Fujitsu Kids Site" by applying Persona method.

The use of a persona can provide a concrete user image that can close the gap between the users pictured by site developers and actual users. Having a good understanding of target users enables developers to provide the content that is needed by users and that fits their usage patterns. This is particularly true in the case of children's content in which the gap between developers and users can be quite large.

2) Enabling user image sharing

The existence of a common persona means that the user image can be shared among concerned personnel. Because project members can now picture common user needs and usage patterns, a sense of uniformity in content format and goals arises. In this way, it was thought that the creation of personas for the Fujitsu Kids Site and their disclosure and sharing within Fujitsu could improve the quality of content.

5. Creating a persona

The process that we used for creating a Fujitsu Kids persona is described below.

1) Preliminary surveys
• Internet survey (quantitative survey)

We collected and closely examined the results of a questionnaire on children's life and computer usage (quantitative survey) that we put

Computer usage by children (at home)
- 1–2 days a week at home (40% or more)
- 1 hour or more a week (more than half)
- Children are 5 years old when they use a computer for the first time.
- Use computer together with a parent (70%)
- Share computer with parent (80%)
- Computer use rules are established (50%)
- User for studies (50%)
- Can handle input on their own
- Enjoy using the computer, but would like to become better at it
- Computers are used more by students with good grades.
- Searches related to current events come up as part of cram-school studies for passing exams.
- Games are often played using the computer.
- Broadband connections are used.
- Use Windows operating system (90%)

Computer usage by children (at school)
- Some classes provide 1 hour or more of computer use a week (30%).
- Portal sites are used in class (more than 70%).

Cell phone use
- Making calls to the family from a cell phone is a frequent occurrence.
- First cell phone received while an elementary-school student (30%)

Life
- Return home at 3:00–4:00 in the afternoon (50%)
- Return home with a friend (65%)
- Play at friend's house after school (65%)
- Boys entertain themselves with games, TV, and books and comics; girls with TV, books and comics, and games
- Attend cram school and after-school enrichment courses (cram school, music, swimming, English) (75%)
- Like school events
- Interested in love

Communication with children (parents)
- Time spent with children is sufficient (70%).
- Communication with children is sufficient.
- Prefer face-to-face conversations with children more than E-mail or using computer together (96%)
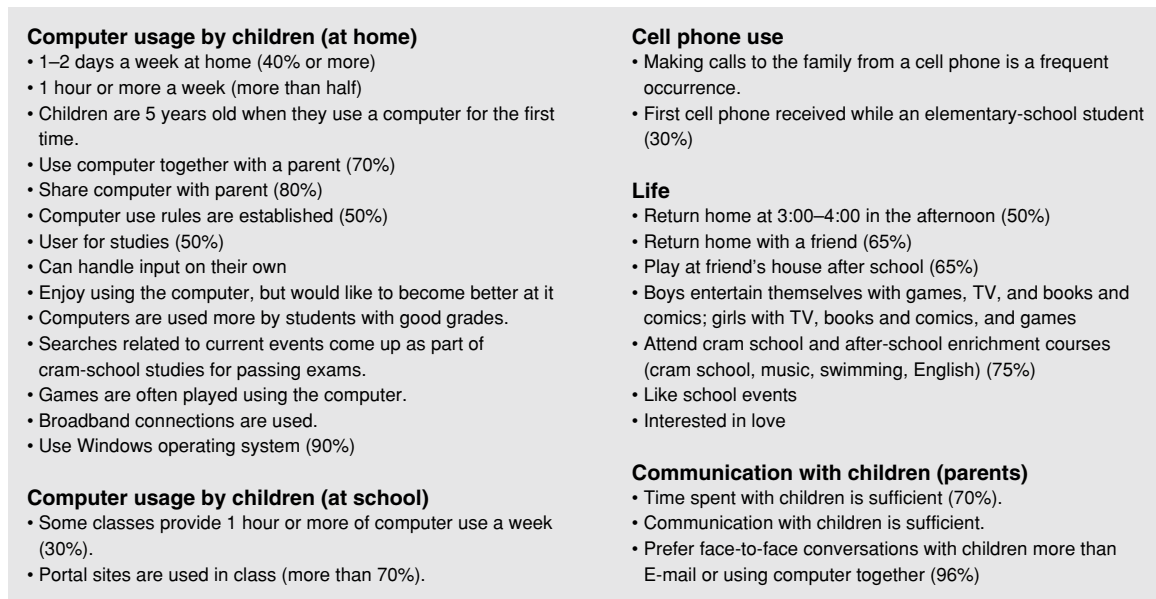
Figure 3
Skeleton.

on the Internet.

- Simple interview (qualitative survey)

At the same time, we conducted a simple interview with colleagues having children in elementary school and middle school, teachers with whom we were acquainted, and supervisors at affiliated companies that were already operating a site for children. We collected the results of the interviews and itemized them in the form of a "skeleton" (**Figure 3**).

2) Hypothesis

- Set policy

From the preliminary surveys, we found that Internet use by elementary-school students could be broadly divided into two categories: entertainment such as playing games and study as in doing homework. Considering the purpose of the Fujitsu Kids Site, we took its target users to be those that use the Internet for the latter purpose.

- Establish a provisional persona

Using the information so obtained, we prepared a provisional persona specifying name, age, and family details and describing personality, interests, daily life, etc. It also included a photo-

graph obtained from a Fujitsu image library.

3) Detailed interview (qualitative survey)

Next, we had an outside specialist interview four elementary- and middle-school teachers and five guardians having elementary-school students in the 5th or 6th grade. These interviews were conducted to investigate the everyday life of elementary-school students and the way they use the Internet and computers. At the end of each interview, the provisional persona described above was presented and the interviewee was asked whether he or she was familiar with any elementary-school students of the type described by the persona. Using the provisional persona in this way stimulated discussion enabling more specific talk about users to be extracted.

4) Supplementary survey

We found that the Internet and computers are used as part of "navigational learning"[note] classes

note) Navigational learning is a class format that places importance on having children collect information and organize and present it on their own. This may involve libraries and museums as well as the Internet, which suggests that the ability to access the Internet at school is an important need.

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in school. With this in mind, we decided to collect a set of school textbooks and analyze the keywords appearing in them. Furthermore, with the aim of determining what sites children actually visit, we surveyed search keywords entered in other portal sites for children.

5) Persona refinement

Using the results of the above interviews and surveys, we revised the provisional persona and added new information. While there was no need to make any major change to the direction of the provisional persona, we used the information obtained from these surveys to provide more detail and substance and make the persona more realistic.

6. Features of three personas used for Fujitsu Kids Site

In addition to the "Misaki Sato" persona for an elementary-school student, we prepared two other personas as users of the Fujitsu Kids Site: an elementary-school teacher and a guardian of elementary-school students (**Figure 4**).

- "Misaki Sato" elementary-school student persona

She is a 5th-grade elementary-school student. Cheery and mild-mannered, she is popular in class. She is curious by nature, and when something interests here, she does not stop asking questions until she understands what it is all about. She enjoys her computer class at school, which is given about once a week. She performs searches on Yahoo! Kids, and when she cannot find the information she wants, she uses Yahoo! to browse general Web sites not oriented to children [Figure 4(a)].

- "Mr. Matsumoto" elementary-school teacher persona

He is a teacher at a public elementary school. He identifies with children and likes to help, so he has become well liked. After returning home from school, he prepares lessons and materials for the next day's class and also searches for Websites that he can show his students. He

has no free time to relax on weekdays, and he is constantly thinking about his class and students [Figure 4(b)].

- "Yukiko Sato" guardian persona

She is a full-time homemaker very concerned about the education of her daughters. While not wanting to force them to study excessively, she would like them to go on to a school with educational continuity into college, so she has them go to a neighborhood cram school. She is always worrying about her children's safety. She has taught them how to use a home computer and basic net-etiquette, so she generally trusts them on the computer. She wants them to visit only safe and secure sites as much as possible [Figure 4(c)].

A persona document includes locations for entering symbols that indicate information sources (such as questionnaires, interviews, and literary references) so that the real-world background to the persona can be checked if desired (**Figure 5**).

7. Examples of using personas and their effects

Using the personas created in the above way, we conducted design reviews three times, as described below, on environmental content called "Let's Protect the Environment Together!"[4] on the Fujitsu Kids Site. This content teaches children about how the destruction of tropical rainforests contributes to global warming, the state of biodiversity, and Fujitsu's tree-planting activities among other subjects. In these reviews, the reviewers imagined actual usage scenes such as "What did Misaki feel when she first encountered this page during her navigational-learning class?" and "What does Mr. Matsumoto do first when preparing for the next day's class?" and then held discussions from the viewpoints of those personas.

1) First review: without using personas

An operations manager and a production manager each performed a review without personas being used. Each pointed out what they liked

Misaki Sato, 10 years old
(5th grade)

Family details	Four-person household. Father works at a major manufacturer and mother is a full-time homemaker. She has a younger sister.
Personality	Cheery and mild-mannered, she is popular in class. She always does homework and gets excellent grades. Being full of curiosity, she'll keep asking questions and looking for an answer about something she's not sure about until she understands.
Activities	She plays a lot with Moe, a girl in the same grade living in the neighborhood. She also plays with Haruka, her friend since she was small, who is one year ahead of her. She has been going together with friends in the neighborhood to a private cram school (juku) since the fourth grade. She is thinking about taking a middle-school entrance examination. Homework is somewhat difficult, but by going to juku, she can meet friends who go to different schools; the teacher is very pleasant and going to juku can be fun. She has been studying piano since she was three. She practices classical music in her lessons, but she also buys sheet music on her own and practices popular music that she hears on TV and music from movies too. She participates in a recital once a year and looks forward to it, especially now that, since the 5th grade, she has been able to choose her own pieces. On free days, she visits friends in the neighborhood at their houses. Her father sometimes drives the family to the shopping mall to do some shopping.

(a) "Misaki Sato" elementary-school student persona

Hideyuki Matsumoto, 32 years old
(teaches 5th grade at a public elementary school in Tokyo)

Education	Graduated from the faculty of education at a national university
Family details	Four-person household consisting of father, mother, older sister, and himself (single, living his parents)
Interests	Model construction
Activities	Because he identifies with children and likes to help, he has become well liked by them. He is interested in what the children in his class are up to and asks about their favorite TV programs. He knows that Internet-related problems involving children are on the rise and hopes that none of his students are ever victimized. He wants to instill in them good Internet skills. Perhaps because he is relatively young, other teachers sometimes ask him questions about computers and the Internet. He can generally answer their questions but not in detail, and he often consults with an acquaintance. In the morning, he arrives at school before the students, and after returning home, he prepares lessons and materials for the next day's class. He might also search for a Web site that he can show his students. During the work week, he has no free time to relax and is always thinking about his students and the class. He tries to give his students homework every day. He knows that some households have no computers, so he does not give any problems that require use of the Internet, but some of the students do research on the Internet and bring a printout to school just the same.

(b) "Mr. Matsumoto" elementary-school teacher persona

Yukiko Sato, 38 years old
(full-time homemaker)

Family details	Four-person household consisting of husband, two daughters (3rd and 5th-grade elementary-school students), and herself
Interests	Preparing sweets and pastry and watching movies
Activities	She will sometimes have lunch with other housewives in the neighborhood or take along sweets to have tea at someone's house. Because many of those housewives have children of about the same age, she spends time with them like family. Together they worry about their children's grades. She is very concerned about her daughters' education. While she does not want to force them to study excessively, she would like them to go on to a school with educational continuity into college, so she has them attend a neighborhood cram school. She also wants them to learn some artistic skills from an early age and is having them take piano lessons. She is thinking of having them take English lessons too as early as possible. She is always worrying about her children's safety and gives them a cell phone whenever they go to cram school or other lessons.

(c) "Yukiko Sato" guardian persona

Figure 4
Personas for Fujitsu Kids Site.

• **Persona document**

Usage in class

| B 3-1 |

There are classes in school that use a computer about once a week.

• **Basic data**

B3. Use of computer in class

ID	Basic data	Information source
B3-1	There are classes in school that use a computer for one hour or more a week. (25.3%)	① vol. 4, ④
B3-2	Computers are sometimes used in ordinary classes for showing video programs.	④

• **Information source**

① vol. 4: 4th survey on Internet use by elementary-school students. Results of survey on "Children's Learning Ability" (research survey by goo, a popular site in Japan [http://www.goo.ne.jp/])

④ : Interview conducted by a specialist

Figure 5
Mechanism for indicating information sources.

or disliked about the design of the content and often expressed opinions from a developer's viewpoint, taking into account the amount of work involved (**Figure 6**).

2) Second review: using the "Misaki Sato" persona

Next, another review was conducted using the "Misaki Sato" persona of an elementary-school student. Misaki enjoys her weekly computer class and looks forward to it very much. However, the abundance of text and lack of any animation make for difficult-to-understand pages that tend to bore her. To make Misaki's computer experience more enjoyable, it was suggested that the content be given a quiz format with animation that could not be achieved on paper so that she could study while having fun.

Using a persona in this way allowed user viewpoints to emerge without subjective bias and led to the unanimous adoption of an idea that resolved user problems with the content [**Figure 7(a)**].

3) Third review: using the "Mr. Matsumoto" persona

Finally, a review was conducted using the

A photograph of children would be better in the title. I would like to use one of my favorite photographs here. (operations manager)

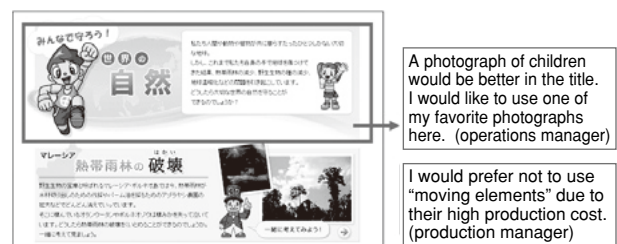I would prefer not to use "moving elements" due to their high production cost. (production manager)

Figure 6
Review without using personas.

"Mr. Matsumoto" persona of an elementary-school teacher. Mr. Matsumoto searches the Internet for materials that he can print and hand out to his students in his class. Although he has some knowledge of IT, he is not a computer expert. As a result, he may find suitable materials on the Internet but will sometimes have trouble copying or printing them. To solve this problem, it was proposed that a separate page be designed for providing content in printer-friendly format [**Figure 7(b)**].

Using personas in this way makes for discussions with more substance. It is clear that using personas for an elementary-school student and

Apply animation and easy-to-understand expressions.

Although this class is held to teach computers, I get bored with hard-to-read pages that are full of text with no animation ….

I can study while having fun!

Where's "Malaysia"?

What's "palm oil"?

Using "Summary" here diverts attention to this section only.

Make into a quiz format asking user to find a country on the map.

Present familiar examples like "chocolate".

Use "Review" and change text to question form.

(a) Review using the "Misaki Sato" elementary-school student persona

Create a page for printing.

I can copy the map and use it as teaching material! But the images don't copy ….

I now have perfect materials for tomorrow!

When I right-click to save materials for use in class, the images are lost.

Prepare a separate page for printing that includes the images

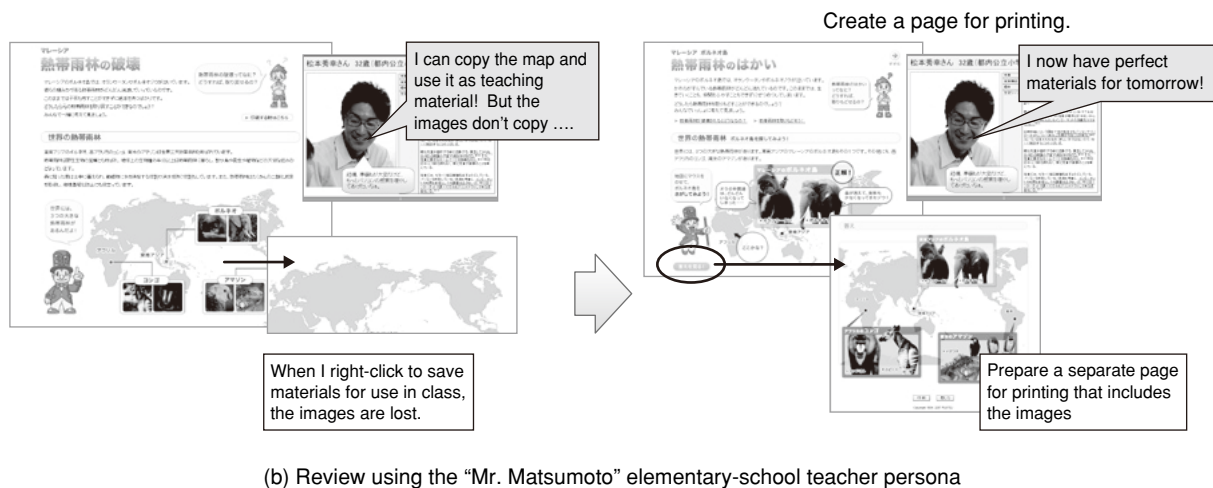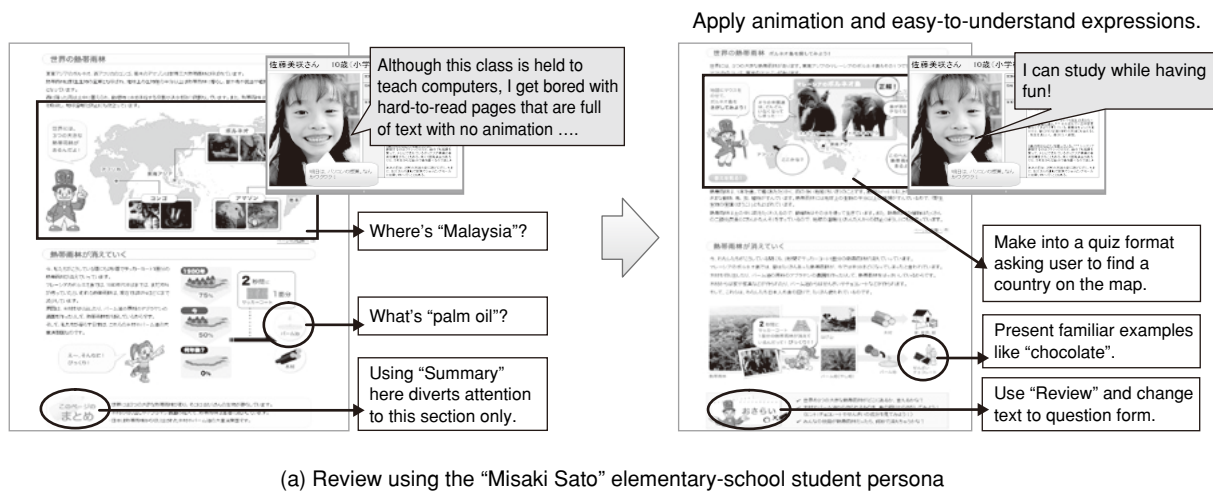(b) Review using the "Mr. Matsumoto" elementary-school teacher persona

Figure 7
Reviews using personas.

teacher generates different opinions from those generated when personas are not used and gives birth to ideas based on user viewpoints. Personnel involved in development work who have different opinions about direction can entrust personas to make a decision for them and remove subjectivity from the process. The use of personas promotes smooth consensus building, on-the-spot proposals for making improvements, and constructive discussions.

Performing three different reviews in the above manner demonstrated the effectiveness of personas in practice.

8. Making the Persona method available outside Fujitsu

In December 2007, Fujitsu made its "Guide to Creating Web Contents for Kids" (**Figure 8**) available to the public at no charge with the aim of providing quality Web content for children and providing guidance to companies and organizations that would like to develop such content. Also released at that time was the Persona Marketing edition of the handbook. This edition describes the Fujitsu Kids personas originally created for use within the company. We have come to realize that persona marketing can be applied for improv-

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(a) Basic edition   (b) Persona Marketing edition

Figure 8
"Guide to Creating Web Contents for Kids".

ing quality not only in the Fujitsu Kids Site but also in other content targeting children throughout society. This change in consciousness regarding persona marketing was perhaps driven by the powerful voice of the "Misaki Sato" persona that seeks out truly useful content. With more than ten thousand copies of this handbook downloaded in the first six months after its initial release, the handbook continues to be used widely.

Releasing personas that are part of a company's strategy is an exception in Japan, and releasing personas oriented to children's sites is a first in Japan. Fujitsu has attracted the attention of various media in this regard. As of August 2008, Fujitsu activities related to the content of the Fujitsu Kids Site introduced here have received the following awards from outside organizations.

- Fiscal 2008 Good Design Award
- 2nd Kids Design Award, Research Department
- Environment goo Grand Prize 2007, Kids Department, Award for Excellence
- 6th Consumer Educational Materials Award for Excellence

9. Conclusion

Persona marketing can promote user un-

derstanding in line with the concept of HCD and enable the provision of content services that satisfy user needs. The release of Fujitsu's "Guide to Creating Web Contents for Kids" outside the company has also improved the quality of educational content throughout society and has helped instill the HCD concept in many people.[5] Fujitsu Design Ltd., is now applying persona marketing with good results to its own products and services as well as to business negotiations with customers, demonstrating its effectiveness beyond the Fujitsu Kids Site. Fujitsu is involved in a wide range of activities related to persona marketing, including workshops and seminars in affiliated companies, presentations at academic conferences, and the publishing of papers as part of its efforts to promulgate HCD. Looking forward, Fujitsu plans to continue its efforts in implementing and expanding persona marketing inside and outside the company.

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Yumi Hisanabe
Fujitsu Design Ltd.
Ms. Hisanabe received the B.A. degree in Environmental Information from Keio University, Fujisawa, Japan in 1999. She joined Fujitsu Ltd., Kawasaki, Japan in 2003 and has been engaged in brand design centered on Websites open to the public and internal Fujitsu ones. She has been with Fujitsu Design Ltd. since its spin-off in October 2007.