

Educational and Technological Perspectives in Doraemon - Hope and Dreams in Doraemon's Gadgets

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Abstract—A Japanese manga character, Doraemon, was made by Fujiko F. Fujio in 1969, was made into animation in 1973. The main character, Doraemon, is a robot cat, and is a well-known Japanese animated character. However, Doraemon is not only regarded as an animation character but it is also used in educational and technological programs in Japan.

This paper focuses on the background of Doraemon, educational and technological perspectives on Doraemon, and comparison of the original Japanese animation and the US remade version, and the animator Fujiko's dreams and hopes for Doraemon will be examined.

Since Doraemon has been exported as animation and manga to overseas, perspectives toward Doraemon have changed. For example, changes of stories and characters can be seen in the present Doraemon animation. Not only the overseas TV productions which broadcast Doraemon but also the Japanese production has to consider violence, sexuality, etc. when editing episodes. Because of representation of cultural differences, Japanese animation is thought to contain more violence, discrimination, and sexuality in animation. With responses from overseas, the Japanese production was cautious about the US remade version. They cared about the US Broadcast Standard, and tried to consider US customs and culture in the US remade version. Seeing the difference, acculturation is necessary for exports of animation overseas. Moreover, observing different aspects of Doraemon domestically, Doraemon provides dreams and hopes to children.

Keywords—Animation, Change, Doraemon, Gadgets, Manga, Technology.

I. INTRODUCTION

DORAEMON, a Japanese manga created by Fujiko F. Fujio in 1969, provides children not only educational and technological knowledge but also dreams and hopes in Japan. The original Doraemon manga was published in six magazines simultaneously in 1969, and in the total of 1344 stories in 45 volumes were created. It won the first Shogakukan Manga Award for children's manga in 1982, and Osamu Tezuka Culture Award in 1997 in Japan. Moreover, Doraemon was selected as one of the 25 featured Asian hero by TIMES Asia in April 2002 because of high television rating. Doraemon has been the highest TV rated program for 18 years since 1996 in Taiwan. Therefore, The Taiwan Society of New York chose Doraemon as a culturally significant work of Japanese pop culture in 2005. The Japanese Ministry of Foreign Affairs chose Doraemon as the first anime cultural ambassador in 2009

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because Doraemon was recognized for the contributions to the expansion of Japanese anime all over the world. After the Fujiko F. Fujio Museum opened in September 2011, Doraemon was admitted as an official resident in Kawasaki city, one hundred years before he was born [1].

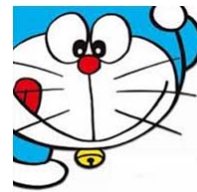


Fig. 1 Doraemon

It is popular not only in Japan but also all over the world. It has been translated and published in Asian countries such as Taiwan, Korea, Hong Kong, Macao, China, Indonesia, Malaysia, Thailand, Vietnam, Philippines, Singapore, India, East Timor and Myanmar, in Latin American countries such as Brazil, Colombia, Chile, Argentina, Ecuador, Bolivia, Peru, Paraguay, Honduras, and El Salvador, in European countries such as Spain, Italy, France, Portugal, Poland, Belarus, Russia, and the Middle Eastern countries such as Saudi Arabia, Qatar, UAE, Oman, Israel, Turkey, Algeria, Libya, Tunisia, and Lebanon since 1981. Doraemon has even reached the South Pacific Islands such as Fiji. In the USA and Canada, digital Doraemon manga has been disseminated through digital means. As in any success story, criminal elements will try to make exploit the Doraemon craze, and pirated Doraemon comics appeared in Hong Kong, Taiwan, and other locations. In Vietnam, a pirated version sold ten million copies [2].

In animation version, it has been broadcasted in more than thirty-five countries including East Asia, South Eastern Asia, South Asia, North America, Central & South America, Europe, the Middle East, and Africa. With its popularity, Doraemon is commercialized globally. Doraemon is found on many stationary items, toys, and video games. He also appears not only in Japanese textbooks, but also study guides textbooks, and even questionnaires of university entrance examinations.

Moreover, Doraemon is regarded as educational and technological programs in Japan. He has a fourth-dimensional pocket from which he can take out of his gadgets such as "Anywhere Door," "Hopter," and "Translation Gummy," etc. which make the story more adventurous, scientific, and dreamy. According to Fujiko, the concept of Doraemon is to

provide dreams and hopes to children [3]. Moreover, Doraemon encourages the human character Nobita, who cannot do anything by himself, and Doraemon protect Nobita when he is in trouble.

II. BACKGROUND OF DORAEMON

To understand Doraemon more, in this section, the background of Doraemon: its overall storyline; theme, and Doraemon's character to see its uniqueness will be examined.

A. Overall Story and Theme of Doraemon

Doraemon, a robot cat, travels back to the present from the 22nd century to help a boy, Nobita. He was dispatched from the future to the present by Nobita's grandson, Sewashi. Sewashi wanted to send a super-robot to help his grandfather, Nobita, to change his family's fortunes because Nobita who experiences adversity and is dogged by ill luck, runs into debt caused by his company's bankruptcy, and troubles his children in the future. With Sewashi's limited budget, a defective robot, Doraemon, was sent to Nobita [4]. It is obvious that the story teaches lessons of friendship, honesty, and courage.

Fujiko F. Fujio (Doraemon's creator, a penname of Fujimoto Hiroshi.) decided on different storylines for different ages of children in the six magazines, e.g., different interesting secret gadgets for 7 and 8 years old children, Nobita's spiritual development for 9 and 10 years old and environmental issues for 11 and 12 years old. Fujiko used the different themes which were appropriate to the ages and education levels of the children. He used many societal themes such as global warming, endangered species, homeless animals, pollution, and deforestation.



Fig. 2 Doremon eating his favorite sweet bean cake

B. Characteristics of Doraemon

Doraemon is a blue robot cat, which has unique characteristics. Although he is a robot cat, he possesses no ears, and a blue body. This robot cat has a custom of eating and toileting like other human characters on a daily basis. Here we see his unique characteristics such as 1) No Ears and Pale Body and 2) Secret of Toilet specifically.

1) No Ears and Pale Body

Doraemon is quite famous for its earless, bald head (Doraemon Hyakka). He was bitten by a mouse, and he turned blue although he was yellow originally. In the movie "Birth of Doraemon 2112" ("2112nen Doraemon Tanjyo"), after Doraemon was bitten by a mouse robot, he took a medicine called "mix of spirit" to be back on his feet. However, he mistakenly took "mix of tragedy", and cried for three days and

nights. Then his body metal was taken off, and became blue. However, according to Fujiko, he used the blue color for Doraemon because the front page of weekly manga is usually yellow, and the title is red, so he used blue to distinguish colors [5].

2) Secret of Toilet

Although Doraemon is a robot, he uses a toilet. Before Nobita's uses the toilet, Doraemon insists on saying that he is using the toilet first before Nobita. As a robot, Doraemon likes to eat his favorite "dorayaki" (pancakes with red bean paste) every day, and uses a toilet [6]. His impersonation gives viewers and readers to treat him like a human character, and gives them an image of Doraemon's amiable character.

Accordingly, the uniqueness attracts viewers and readers of Doraemon. His amiable round face and helpful character are loved by many people.

With its popularity, Doraemon is commercialized globally. Doraemon is found on many stationary items, toys, and video games. It is also used as a logo on the Art Hikkoshi Center, a moving company, and Cocos, the restaurant chain. It was used in Spanish language commercial by Nocilla, a hazelnut and chocolate spread company. In this commercial, a white cat with a blue T-shirt and "Hopter," one of Doraemon's flying gadgets, holds a Doraemon's glass, and a boy bites into a food item covered with Nocilla. In a Japanese commercial, a French actor Jean Reno was casted as Doraemon for Toyota Motors. He uses his "Anywhere Door" gadget which can transport you anywhere you wish. Thus, Doraemon has been heavily commercialized resulting in high sales volume due to the many of the Doraemon endorsed products in Japan. According to Fujiko, the concept of Doraemon is to provide dreams and hopes to children. Indeed, Doraemon encourages Nobita, who cannot do anything by himself, and protects him whenever he is in trouble.

However, an exportation of Doraemon's animation and manga to overseas has different perspectives toward Doraemon. Because of representation of cultural differences, Japanese animation is thought to contain more violence, discrimination, and sexual elements in animation by overseas viewers. Adjusting for different customs and cultures, the Japanese production remade the US version by considering violence, sexuality and etc. when editing episodes. Keeping their themes, they made minimum changes of characters' names, locations, food, and Doraemon's gadgets.

III. EDUCATIONAL AND TECHNOLOGICAL PERSPECTIVES IN DORAEMON

Although Doraemon is a comic and animation character, he is frequently used in educational and technological fields in Japan. In this section, we see how much Doraemon is dedicated in these fields. Here we see Doraemon's creative gadgets.

A. Doraemon's Impact on Japanese Educational System

However, in Japan, Doraemon, introduces study as a textbook guide in the elementary school textbooks. He is also frequently used in the entrance examinations for universities.

In 2002 National Center Test for University Admission, Doraemon gadgets were questions in physics. Musashino Art University asked to redesign Doraemon by using geometric configuration for the entrance examination in 2006. Chiba University, Japan, also asked examinees to choose one of Doraemon's gadgets, and write an essay on whether it is feasible or not for the entrance examination. Accordingly, it is common to see Doraemon in educational fields in Japan.

1. Integrating Doraemon into Technology

Now we see Doraemon's gadgets which attract many people. Doraemon helps develop technical fields in Japan. On August 8, 2014, the first 3D CG film of Doraemon, "Stand by Me Doraemon" has been released. Along with the 3D movies' release, a confectionary company, Glico, which sells pocky, pretz, caplico, colon, bisco, etc. makes 3D's moving images of Doraemon at the bottom of the package boxes. After coloring Doraemon's design in the box, customers could download the special application onto their smartphone. When you choose the menu screen; the colored Doraemon floats with its moving images. Doraemon's "Gulliver Tunnel" is attached to the colon package. "Anywhere Door" is attached to the caplico. "Time Machine" is in Glico's pretz's package. "Hopter" is in Salad flavored pretz package. Glico made different images of Doraemon, so fans could enjoy different Doraemon with his gadgets.

Doraemon also explains Einsteins' theory of relativism [7]. When Nobita went to Suneo's house, he saw a science fiction movie about an astronaut who returned from the space travel for a year, but actually fifty years have passed. Nobita asks why the pilot spent only a year instead of fifty years. Suneo answered, "the closer the motion of an objects get to the speed of light, the slower the time passes. It is called relativism." In other words, time passes slower in the rocket. Then Shizuka explained relativism using Urashima's story. "It is like an old Japanese story about Urashima. When Taro returns from Ryugujyo for three days, he returns home, but it actually passed three hundred years had passed. It is like a space travel. The one who helps Taro is a tortoise-like alien (in the story, tortoise), and with a tortoise rocket (a tortoise) takes Taro to a wonderful star, Ryugujyo." "Eight days in Ryugujyo" (Ryugujyono Hachinichikan) [8].



Fig. 3 Gravity painting

B. Realization and Acceptance of Doraemon's Gadgets

Doraemon has many kinds of gadgets to help Nobita. He has a pocket called "fourth-dimensional pocket" to produce gadgets from the future. From his pocket, he can take out proper gadgets. Especially his neatest gadget is "Time Machine" which takes you a place you want to go in the past or in the

future. His approximately 4,500 gadgets are popular among children and adults. Doraemon's gadgets are full of dreams and are mainly difficult to bring into the reality. Interestingly, there are some gadgets that have been created after comics:

1) "Phonetic Typewriter" (Kikigaki Typewriter),

The speaker's words are typewritten on the screen.

2) "Prompt Travel Camera" (Instant Ryoko Kamera),

This instant camera has image composition, which shows a person's picture taken and allows it to be combined with different scenery.

3) "XYZ Stereo-Roentgenography" (XYZ Lines Kamera),

With its perspective image, it is possible to see naked images with this stereo-Roentgenography. Now it is used for anti-terrorism policy.

4) "3D Copy Machine" (Rittai Kopiki),

The 3 Dimensional copy machine makes objects clear and realistic.

5) "Dress up Camera" (Kisekai Kamera),

When you insert a picture of clothes you'd like to wear, you can take a picture with that costume. (Mushi Production Comic Vol. 3)

6) "Bamboo Helicopter" (or "Hopter": Take Copter),

It is a small bamboo propeller. There were actual experiments to make "Hopter", but they failed, because it was too heavy to use it. Actual developed version of "Hopter" (Bamboo Helicopter) is a flying machine attached to the shoulders. The mechanism of "Hopter" has gravitational field to protect the rider, and flies and moves wherever they want to go.

7) "Gravity Paint" (Jyuryoku Penki),

When you paint the whole walls and ceiling in a house with gravity paint, you can walk and sit any surface of the house. The reason of objects fall down is because there is gravity. Using this paint, gravity works down. Thus, Doraemon, Nobita, and others, go to his friend Abaraya's house for Christmas party, but he has a big family, and has barely enough space to fit everybody, so Doraemon uses "Gravity Paint" to enjoy the party[9].

8) "Call Buzzer" (Yobituke Buza),

Nobita appreciates Doraemon who always cares about him, so he asked Doraemon to take a vacation. Doraemon went to Iriomote Island with his girlfriend. When he left, he gave Nobita a "Call Buzzer" so that Doraemon could come back immediately after the call. Knowing that Doraemon is not home and Nobita has the buzzer, Jyaian and Suneo bully Nobita to use it. However, Nobita never used it. He did not even use the buzzer when he was bullied by other boys in another town. Seeing Nobita with his strong will break the buzzer so as not to use it, Jyaian and Sueno help Nobita[10].

9) "Catholican" (Manbyoyaku),

Nobita asks Doraemon to revive Shizuka's favorite dog,

Bero. Although Doraemon makes Nobita's request reality, he says to Nobita what happens to the world if so many animals never die. Doraemon wants to teach natural providence even though people like to keep their favorite animals forever [11].

10) "Super-thin and super-light TV" (Cho Usugata Keiryō Terebi),

With "Super-thin and super-light TV," on the wall with a string, a screen divides nine panels [12].

11) "Clone Medium" (Kuron Baiyoki),

To create a clone from hair, you can create a person that looks like you. People have to take care of a clone if you keep it. Nobita made Jyaian and Sueno clones take care of them, but Nobita does not like to have them because they are rebellious. He switches off the button to keep clones. It was mistakenly delivered from the future. In the actual clones, we cannot use buttons to control them [13].

12) "Self Shogi" (Self Shogi)

There has been a software game named Shogi, a Japanese chess. With this "Self Shogi," a robot actually uses a hand to play Shogi, and has eye movement sensors. In 2014, Fuji Xerox Co., Ltd. and other companies have introduced "Self Shogi."

Actually, Doraemon's 4,500 gadgets are very convenient, but are difficult to make. However the affiliation announced that they would try out to create real versions of Doraemon's gadgets. Commonly, many Japanese creators were Doraemon's fans who were brought up with Doraemon comics and animation. They were fascinated with Doraemon's gadgets in their childhood and wanted to make the gadgets into real life applications.

C. Different Perspectives of Nobita's Character and Language Usage

Japanese viewers understand Nobita's weakness of lack of effort and laziness as a character. Because of Nobita's weakness, Doraemon supports Nobita, and what Doraemon is for. It is clear that Doraemon can be seen as a story of Jyaian's bullying and Nobita's feasible character. The negative aspect of the story tells Nobita's poor grade and bullying all his life. Nobita who always depends on Doraemon to temporarily solve his problems such as

- 1) Getting a good grade on his exam
- 2) Learning the storybooks such as Arabian Night, and others
- 3) Meeting his grandmother in the past
- 1) Nobita uses "Memory Bread" (Anki Pan) to memorize the whole textbook for his exam. He uses "Memory Bread" on the telephone book as a trial. He puts bread on the book, and eats it. Then he succeeds to memorize everybody's number in the book. Then the next day, he tries to study for the test, but he is too full to eat "Memory Bread", so he cannot eat it and memorize any lines in the textbook.
- 2) Visiting the world of storybooks, Nobita uses "Shoes to Enter Storybooks" (Ehon Hairikomi Gutsu), but he loses his shoe in a storybook and has to find one. He has to get in different stories. The story of "Arabian Night" is where he loses his shoe, and he traveled a story in the book.

- 3) Nobita uses "Time Machine" to meet his grandmother who passed away in the past. "Time Machine" helps Nobita to know his family roots in the past.

Accordingly, Nobita's experiences vary experiences variously with Doraemon's gadgets. It is true that with Doraemon's assistance, Nobita improves himself little by little. However, views toward Doraemon in other countries are different.

1. How Doraemon is Viewed in Taiwan

In Taiwan, an educational group in Gaoxion disputed that Nobita's weakness induces Jyaian's bullying [14]. Jyaian, one of Nobita's friends, is depicted as a strong aggressive character which controls others with his power. Jyaian's philosophy is "Yours is mine. Mine is mine." He is obsessive and aggressive to other kids. It started from one of groups' assertion, but later Jyaian's bullying scenes were accused of promoting bullying by NCC (National Communication Commission) in Taiwan. NCC (National Communication Commission) seriously regarded bullying in Doraemon, and demanded that TV company to stop broadcast the scenes of bullying such as physical and verbal violence. Since Doraemon is very popular and influential in the country, it is not good to broadcast the scenes where Jyaian bullies Nobita.

However, Jyaian's character transforms gradually. Especially in the movies, Jyaian is a good guy who helps Nobita and his friends. In the movie, "Holiday to Doraemon!" (Doraemon ni Kyujitsuwo!), Nobita is bullied by other kids in another town. Then, Jyaian cares about Nobita. He comes up and tries to protect Nobita from other bullying kids. Another character, Sneechee bullies Nobita with Jyaian in the old animation, but he also changes a good guy to help Doraemon and Nobita at the end of the story. Without exception, Nobita who is lazy and weak, sometimes becomes courageous, and becomes strong to protect his friends and Doraemon in the movies.

2. How Doraemon is Viewed in the USA

In the US version, some scenes such as Jyaian's bullying over Nobita, and Sue's taking a bath are omitted. Her scene of taking a bath is regarded as sexual. It is required to adhere to US broadcast on violence, discrimination and sexual content based on the US Broadcast Standard.

3. How Doraemon is Viewed in Bangladesh

Doraemon has been translated and broadcasted in more than thirty-five countries. In Bangladesh, they broadcasted in Hindi rather than the native language Bengali. The Bangladesh government feared that children prefer speaking Hindi instead of Bengali because Doraemon's TV rating is seventy percent. They banned broadcast Doraemon, but they translated the Doraemon episodes into Bengali [15]. Language interpretation is different from the circumstances in each country, so it needed adjustment in Bangladesh. In the next section, the original Japanese version to the remade US version will be compared to find changes of two versions and Nobita's description of character by the Japanese productions.

IV. COMPARISON OF THE ORIGINAL JAPANESE ANIMATION AND THE US REMADE VERSION

Doraemon's popularity spread all over the world through print and video media. Many of the episodes were translated or subtitled. The US version was the first remade version. Although Disney XD broadcast runs episodes, TV Asahi Fujiko, F. Fujio Production, and Shinei Animation still own the copyrights. Actually, Ted Turner, a CNN producer, proposed a licensing agreement for 50 episodes of Doraemon's broadcast right in 1985, but it did not materialize. Twenty-nine years later in 2014, Doraemon had its initial episode broadcasted on the US network. There were 26 episodes, with 5 times a week broadcast commencing on July 7, 2014 [16]. When the Japanese production company remade this series for the American audience, they searched the different customs and cultures in the USA, and adjusted the character's name, name of places, food items, objects, and Doraemon's gadgets. Thus we can see the differences between the original Japanese Doraemon and the US version.

TABLE I
CHANGE OF CHARACTER'S NAMES

Original Japanese Names	Remade English Names
Nobita	Noby
Shizuka	Sue
Suneo	Sneech
Jyaian	Big G
Jyaiko	LITTLE G
Dekisugi	Ace
Doraemon as a metaphorical figure (Raccoon Dog)	Seal

TABLE II
CHANGE OF NAMES OF PLACES

Original Japanese Names	Remade English Names
Japanese Towns	The US Fictional Towns

TABLE III
CHANGE OF NAMES OF FOOD

Original Japanese Names	Remade English Names
Dorayaki	Yummy Bun
Sweets	Fruits
Rice Omelet	Pancake

TABLE IV
CHANGE OF OBJECTS

Original Japanese Names	Remade English Names
Chopsticks	Folk
Sweet potato Stall	Pop Corn Truck

TABLE V
NAMES OF DORAEMON'S GADGETS

Original Japanese Names	Remade English Names
Dokodemo Door	Anywhere Door
Takekoputar	Hopter
Honyaku Konnyaku	Translation Gummy
Anki Pan	Memory Bread

Compared to the original Japanese version, the US remade version changes names of characters, places, objects, and Doraemon's gadgets. It is changed by the Japanese productions

out of consideration of the US customs and culture. They care much about cultural differences. Some of the examples can be seen in the scenes such as shortening the time of the eating Dorayaki (Yummy Bun), promoting healthy dietary life to change sweets to fruits, and the change of an unfamiliar rice omelet to pancakes.

However, the Japanese productions worry about Nobita's character. Nobita is absolutely bad at study and sports, and do not make efforts in his daily life. He is lazy, but he is a kind good-natured fellow. His dependence on Doraemon may not be well accepted by the US viewers because the US people like to admire self-reliant and assertive characteristics. It is true that his weak personality of his "idleness and the weakness that he represents is one true aspect of human nature," and his character has been widely accepted.

Although Nobita is a character easily found in Japanese society. The creator Fujiko said that "Nobita is a part of me." Susumu Sakuragi, a writer of "Doraemon will be Really Born in September 3, 2011" (2011 Nen 9 Gatsu 3 Nichini Doraemonwa Hontouni Tanjyosuru), says, "I did my best without a setback and never gave up my failure to enter university. Doraemon supported me." Surely enough, Doraemon encourages Nobita who is lazy and helps to support Nobita to fight for what he needs.



Fig. 4 Upper original version: Doraemon with a bandage on his face, and lower US version: pizza

V. CONCLUSION—DREAMS AND HOPES IN DORAEMON

Looking at Doraemon's background of educational and technological perspectives, it is certain that Doraemon has been loved by people from all over the world. Although the characters of Nobita and Jyaian were criticized for improper behavior in animation scenes by overseas viewers, they still like to watch Doraemon. Because the production tries to change or omit the scenes where viewers criticized, or in the case of Bangladesh, they change their preferred language, both creators and viewers adjust the way they would like to change. Even more, the Japanese production tries to improve the characters of Nobita and Jyaian. By changing their characteristics from a weak to a courageous character for Nobita, and from an aggressive to a thoughtful character for Jyaian, they avoid criticism.

Moreover, Doraemon is a character which always helps feasible persons in society and helps Nobita with his convenient machines. Doraemon not only fulfills children's dream with his forth dimensional pocket, but he also helps Nobita who cannot handle daily life well. Nobita always uses Doraemon's gadgets

to overcome the many difficult situations, but he mostly fails because he does not know how to correctly use them, or sometimes misuses them. Nobita draws a retort from Doraemon's gadgets because he abuses them often. Thus Nobita learns real life lessons as not to misuse them and to be dependent on Doraemon and others, but personally analyze his current situation, decide on a course of action and then assess the outcome of his action in order to change his life positively. In other words, Doraemon is the story to give hopes and dreams to children to instill positive change in themselves, the people and society around them and make the world itself as a better place.

With Doraemon's gadgets, Doraemon becomes a magician that makes children's wishes come true. What is more wonderful about Doraemon is to create Doraemon's gadgets in real life. As a scientist Einstein says, "Imagination is more important than knowledge. For knowledge is limited to all we now know and understand, while imagination embraces the entire world, and all there ever will be to know and understand" [17]. As he said, with imagination, we can develop more convenient stuff with knowledge, and contribute future inventions. Many technicians were encouraged to create their own Doraemon's gadgets and apply into the educational fields.

It is true that knowledge helps people to develop technology, but without creativity, we cannot make inventions. We can create with hopes and dreams for the future. To have dreams and hopes in life, we need to "keep moving forward, opening new doors, and doing new things, because we're curious and curiosity keeps leading us down new paths"[18] as an animator Walt Disney says. In this sense, Doraemon's gadgets provide audiences much curiosity, hope and dreams. Fujiko also suggests "[i]f you want to do something, you have to only enthusiastic to it. You do not think of any other things. Concentrate on it" [19]. In fact, he had some hit animations such as "Obake no Qtaro" (Ghost Q-taro) and "Espa Mami" (Esper Mami), but he gave up creating them because of Doraemon. Fujiko wants to interpret his wishes to Doraemon. His respector, Tezuka Osamu, "God of Japanese Animation," says that "we should draw drams in children's manga. It is all progressive in every sense" [20]. Fujiko and Tezuka's words to audiences show future consciousness and realization of our dreams.

Accordingly, as discussed in this paper, Doraemon is not only popular in pop culture, but also into the educational and technological fields. Indeed, Doraemon has been changed with influences from overseas viewers, and acculturation is necessary since their perspectives are varied. However, with enthusiasm, Fujiko created Doraemon, and with his great imagination he has given hope and dreams to many children around the world.

NOTES

Images of the paper are used from the related websites of Doraemon, etc.



Fig. 5 Left: Nobita, and right: Doraemon

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