

The Role of Learning in an Aging Society with Fewer Children: Referring to Education in America and New Zealand

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Abstract

A declining birthrate produces significant financial and practical challenges for education professionals at all levels. An increasing population of older people often means an increasing demand for educational services for learners well beyond the traditional school age. To successfully face these challenges, education must move beyond the view that the classroom is the only place to learn. The Internet and online tools have the potential to accelerate the quantity and quality of learning. The purpose of this international joint research program was to compare the learning conditions in three countries and suggest ways for all people to enjoy learning not only in the classroom but also throughout their whole lives. This study produces four main conclusions: (1) from dichotomy to synthesis: rather than viewing classroom learning and technology-based learning as opposites or opponents, we should view them as complementary strategies which can work together to achieve educational goals; (2) awareness and community: educational motivation is increased, and learning outcomes are improved, when students become aware of new realities, new possibilities, and new communities--Internet-based learning can make significant contributions toward this awareness in students of all ages; (3) expectations: higher expectations can lead to improved motivation and performance in both teachers and students--teachers should recognize the power of the Pygmalion effect (Rosenthal & Jacobson, 1992) and keep their expectations high for both traditional-aged and older students; and (4) evolving forms of learning: new teaching strategies evolve to keep learning relevant in a rapidly changing society--new technologies and older learners can be seen as opportunities for new learning invention.

Keywords: communication-centered learning, dichotomy, awareness, expectations, form of learning

1. Introduction

1.1 Background

This practical research has mainly followed three continuous grant studies about high school English classes (Kobayashi et al., 2013; Kobayashi, 2014b; Kobayashi et al., 2015). The first study focused on the development of teaching materials and methods to promote communicative activities, the second on external cooperation and online materials for integrated global learning with students abroad, and

the third on communication-centered active learning. The more these teaching methods were developed, the more collaboratively the students performed, and the more clearly their achievement rose.

Kobayashi has been identifying the causes of the above effects, which stem partly from teacher expectations (Rosenthal & Jacobson, 1992; Jussim & Harber, 2005; Kobayashi, 2014a), partly from a productive teaching method: divergent thinking (Guilford, 1977), and partly from the strategy of placing students in ability groups (Kobayashi,

1989), though objections to this kind of tracking are acknowledged (Sato, 2004).

The above learning designs advocated and practiced by Kobayashi in his everyday English lessons for senior high school students can be applied to other subjects and different learning circumstances, most notably to the aging society with fewer children in the future.

1.2 Purpose

Kobayashi started writing his doctoral thesis, which focuses on *collaborative learning with the help of ICT in an aging society with fewer children*, in 2014. Fortunately, in his second year in the doctoral course, he received an opportunity to carry out a study with foreign researchers as leader of the International Joint Research Project in the Center for Innovations and Support in Education (CISE), Graduate School of Educational Informatics (GSEI), Tohoku University.

Those circumstances taken into consideration, this article aims to suggest ways in which all people could conduct their own learning, not only in the classroom, but throughout their whole lives. These suggestions take on added importance in an aging society with fewer children. Therefore, Kobayashi points out three key areas of discussion:

1. (Cultural comparison) Whether there are any differences or similarities in characteristic learning tendencies among Japan, America, and New Zealand.
2. (Comparison by generation) Whether there are any differences or similarities in characteristic learning tendencies between the elderly and the young.
3. (Unique but necessary learning style) Whether there are any differences or similarities in characteristic learning caused by communication-centered active learning with ICT in the classroom.

2. Methods and Procedure

2.1 Methods

In order to carry out the research, Kobayashi proceeded through the following stages with Pascoe,

Scott, and Watabe (Professor in charge of GSEI).

1. Kobayashi's three preceding grant studies about high school English classes are shared with the other three researchers in order to establish a common base of understanding.
2. To discuss in the symposium, they focus on two factors: "aging" and "declining birthrate."
3. Drawing attention to "learning in an aging society with fewer children," they take up its characteristic phenomena in America and New Zealand.
4. As an example of collaborative learning in Japan, they introduce the three-year span of classroom activities in a private high school in Tokyo.
5. In the symposium, they integrate their findings in order to discover sustainable and sharable learning strategies.

2.2 Procedure

The above five stages were undertaken concretely and uninterruptedly during the symposium period as follows.

1. Web conferences have been held in Sendai connected to Iowa in America and Palmerston North in New Zealand for their joint research five times (*Photo 1*, 2015/05/26).
2. They visited the Tokyo National Museum to meet with Zeniya, the curator, the former administrative vice-minister of the Ministry of Education, Culture, Sports, Science and Technology (MEXT), and to listen to his pedagogical and practical advice concerning their research. Then they held a discussion at Gakushi- kaikan in Tokyo in order to summarize their joint research (*Photo 2*, 2015/07/16).
3. They practiced their methods with students aged 13 - 18 at a workshop in cooperation with Shotoku Gakuen High School in Tokyo (*Photo 3*, 2015/07/17).
4. The International Symposium successfully concluded after two keynote speeches and a panel discussion before a large audience comprised of university staff, graduate students, and Sendai citizens (*Photo 4*, 2015/07/18).

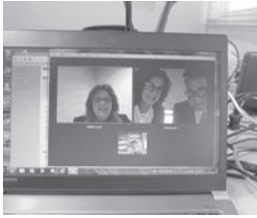


Photo 1. Web conference.



Photo 2. Joint discussion in Tokyo.



Photo 3. Workshop in Tokyo.



Photo 4. Symposium in Sendai.

2.3 Framework

This article consists of four chapters: 1. Introduction, 2. Methods and procedure, 3. Results, and 4. Discussion and conclusion. The four authors divided the chapters as follows.

Kobayashi: Chapters 1, 2, 3.3 Learning in Japan, and 4.2 Conclusions and prospects.

Pascoe: Chapter 3.1 Learning in America.

Scott: Chapter 3.2 Learning in New Zealand.

Watabe: Chapter 4.1 Arguing points and discussions. (recapitulated by Kobayashi)

Chapters 1, 2, 4 are based on the report (Kobayashi, 2015a). Chapter 3.3 mainly refers to the papers (Kobayashi, 2015b; 2016).

3. Results

The International Symposium was held in Sendai on Saturday, July 18, 2015. First, Pascoe delivered her keynote address on "Learning in America" (Photo 5, 2015/07/18), and, second, Scott delivered her keynote address on "Learning in New Zealand" (Photo 6, 2015/07/18), after which Kobayashi introduced his teaching practice. Finally, the panel discussed the points Watabe summarized so as to discover sustainable and sharable learning strategies that can be deployed using ICT in an aging society with fewer children.

3. 1 Learning in America

Arashi ga oka as Inspiration: Some Comments on Takarazuka, Cross-Cultural Teaching, and Educational Technology for Older Learners



Photo 5. Pascoe makes her keynote address.

3.1.1 Introduction

I am grateful to Professor Watabe and to Kobayashi sensei for the opportunity to participate in this symposium devoted to the educational future of societies in which the birthrate is decreasing and the number of elderly people is rising. I am also honored to speak alongside Dr. Adele Scott of New Zealand. I am a specialist in nineteenth-century literature at the University of Iowa, but five years ago, I spent a year in Japan as a Fulbright Instructor. My daughters attended Shotoku Gakuen Junior and Senior High School, and I taught American literature at Tsuda College and at Japan Women's University. While in Japan, I grew interested in Japanese versions of Emily Brontë's classic novel *Wuthering Heights*, and I started to study Japanese. I continued to study Japanese when I returned to Iowa, where I completed four years of undergraduate Japanese classes. Because I could not speak Japanese well, I accessed The Mixer web site (<http://www.language-exchanges.org/>), where people who want to converse in a foreign language can meet others who are willing to chat in their native language in exchange for the opportunity to chat in their target language. Most of my Mixer conversation partners were Japanese retirees who

wanted to improve their English. For example, one of my conversation partners, Miharu-san, is a 67-year-old who studies English every day, and who talks to me via Skype every Monday morning (Monday evening in Japan). Miharu-san and I are, perhaps, examples of the aging population of learners who are the focus of this symposium. In the remainder of this report, I will briefly survey my research on *Arashi ga oka* (the title by which *Wuthering Heights* is known in Japan), describe some differences between my teaching practice in Iowa versus in Japan, and comment on how new educational technologies (such as MOOCs) can enrich the lives of older learners.

3.1.2 Overview: The Explosion of Technology in Education

We live in a time in which the use of technology, especially media technologies, has expanded greatly and continues to accelerate. My own career illustrates this point well: I came to Japan five years ago with the idea of studying one specific English-language book and found that Japanese society had embraced and, in many ways, absorbed this book, transforming it into many different media forms, including translations, manga, novels, and stage performances. When I began teaching many years ago, computer use in the classroom was unusual. Now, classrooms at my university are typically supplied with computers, projectors, and Wi-Fi, and use of the Internet is routine. This media explosion offers educators many opportunities, but it also demands of them caution and thoughtful attention.

3.1.3 *Wuthering Heights* in Japan

I first became aware that Emily Brontë's novel *Wuthering Heights* is beloved in Japan when I came across a manga version in a Japanese bookstore. This manga was based on the 1939 film in which Laurence Olivier starred as Heathcliff. I began keeping an eye out for sightings of the novel in Japanese adaptations, such as its incorporation into Miuchi Suzue's long-running manga series *The Glass Mask*, and its reimaging by Mizumura Minae in *A True Novel*.

I became especially interested in a 1969 production of *Wuthering Heights* staged by the all-female Takarazuka theatre company, and starring Koshiro Miyako as Heathcliff. My interview with the retired Koshiro helped me to understand the key role that performance played in her life and career. Koshiro first encountered Brontë's novel when she was in junior high, at a time when the Olivier film was belatedly screened in Japan, and when Japanese classrooms featured anthologies of Western literature aimed at girl readers.

3.1.4 Cross-cultural teaching

My *Wuthering Heights* research brought home to me some of the problems students face when they read foreign literatures, and helped me empathize with the Japanese students in my classes at Tsuda College and Japan Women's University. The undergraduate population at the University of Iowa, where I usually teach, is over 22,000. The total number of students at Tsuda College and at Japan Women's University is much smaller, however, the number of students in my classes in Iowa is much smaller than the number of students in my classes in Japan. Perhaps because the classes were larger, perhaps because the students were all female, and almost certainly because they were being taught in a second language, my Japanese students were quieter than my students at Iowa, where students are regularly asked to participate in discussions.

Classroom technologies enabled me to help my Japanese students overcome some of their discomfort with communicating in English. One of the ways I made sure that my students understood the lectures and assigned reading was through the use of multiple media. In a class focusing on "The American Dream in American Drama," my students read Arthur Miller's classic play *Death of a Salesman*. Using clips from two different film versions of this play, I would show students the same scene two times with different actors. In the most famous scene in the play, the salesman Willy Loman's wife Linda insists that his sons and peers not forget the aging Willy. "Attention must be

paid,” Linda cries. By watching the same scene twice, my students were better able to understand Linda’s poignant line and its cultural context. I also asked students to draw particular scenes, and then projected their set designs so that all could see their classmates’ visualizations.

3.1.5 Education in an aging society

In both Iowa and Japan, my students have been typically 18 to 22 years old. They are known as “millennials,” a name given to the children of the baby boom generation. My students are also called “digital natives” because they have grown up with so many new modes of technology. For the most part, these students are comfortable with using technology and are fearless about “diving in” and exploring how a new, unfamiliar technology might operate.

But older learners often require more assistance and encouragement in order to adopt new forms of learning technology. It is important that educators understand this: older learners are not, for the most part, *opposed* to technology, but the usefulness of the technology to the learning goals must be more clearly and explicitly explained to older learners. As my own experience with The Mixxer has shown, technology can be extremely valuable, even irreplaceable, for learners of all ages. This is no less true for older learners. A recent article in the *New York Times* (Span, 2015) revealed that almost two million people over 65 years of age rarely or never leave their homes. Web sites like The Mixxer can help to ease the isolation of elderly people who are still motivated to learn. However, software designers will need to take into account the learning goals of older people. Unlike younger people, who are eager to try out new forms of social media, older people are unlikely to be early adopters of new communication technology. However, if new technologies can help them to achieve their specific goals, they will be more likely to expend the necessary effort.

At my own university, as at many other American universities, instructors are developing MOOCs (Massive Open Online Courses), courses which can

be taken by anyone in the world at no expense. For example, my colleague Professor Ed Folsom, has taught a MOOC on the poet Walt Whitman. Such classes allow students of all ages to become part of an online learning community. The experience with MOOCs, however, shows that new technologies in education continue to present significant challenges. It is well known that many more people start MOOCs than finish them (Parr, 2013). Attention must be paid to the hopes and desires of older learners so as to ensure that they are motivated to engage in the new educational opportunities afforded by online learning constellations.

The older language learners I have met through The Mixxer web site are strongly motivated to become fluent in a second language, and so they take advantage of web sites like jisho.org (which goes way beyond a standard dictionary), and Lang-8 (a site where native speakers correct the compositions of second language learners). New technologies sometimes leave older people behind, but they also have the potential to bring them along, to afford companionship and a sense of belonging. However, new learning technologies cannot completely replace face-to-face human interactions, especially for a segment of society that is most in danger of physical isolation. The Mixxer is a good example of an educational media technology that encourages real human interactions.

Biodata:

Dr. Judith Pascoe is Professor of English at the University of Iowa, where she has taught for twenty-two years. Her research focuses on 18th- and 19th-century literature and culture. She was a recipient of a Guggenheim Fellowship in support of a book she is writing about Japanese versions of *Wuthering Heights*. From 2009 to 2010, she taught at Tsuda College and Japan Women’s University as a Fulbright Instructor.

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3.2 Learning in New Zealand

Learning from each other: *AKO* A New Zealand perspective



Photo 6. Scott makes her keynote address.

3.2.1 Introduction

In the national New Zealand curriculum (Ministry of Education, 2007), emphasis is placed on the Treaty of Waitangi, signed in 1840 between the British government and the Māori people (the indigenous people of New Zealand). *Manaakitanga*, *whanaungatanga* and *ako* are three principles of learning that acknowledge Māori ways of thinking in the education system. All three principles also have relevance throughout New Zealand society, including for those who are the focus of this paper –people who have retired.

This section of the report begins with a brief description of New Zealand’s education system and a definition of the three principles. It then outlines some statistics relating to older New Zealanders and provides some examples of the principles in action.

3.2.2 New Zealand Education system

Compulsory education in New Zealand is from ages six to 16 and is based on the British education system. Schools are self-governing and are led by

the principal and Board of Trustees. The national curriculum is provided by the government and guides the teaching and learning programme. Within this curriculum are the following three Māori concepts of learning *manaakitanga*: looking after a person’s *mana*, mutual respect-especially to elders; *whanaungatanga*: relationship building, treating people as family members, commitment to nurturing others; and *ako*: learning with and from each other.

3.2.3 Retirement in New Zealand

There is no compulsory retirement age in New Zealand although many people retire around the age of 65. When people reach this age the government provides a modest pension and a ‘Gold card’ entitling the recipient to cheaper transport, health care and other discounts. According to the 2013 national census data (Statistics New Zealand, 2013), from a population of just over 4 million people, over 600,000 were older than 65 (about 15%). All statistics presented here refer to this 65-years-and-over age group. Between 1981 and 2013 this number nearly doubled, and is projected to grow to 23.8 percent in another 30 years.

Males and females both have increasing life expectancy with the average female expecting to live longer (to age 83) than the average male (to age 79).

Just over a quarter (27.5%) were born in countries other than New Zealand, around 88% were of European descent (not from Europe but ancestors from Europe), and 5.6% Māori.

The number of people in this age group in paid employment is increasing for both men and women. While 22.1% were managers and 20.1% were professionals, men were more likely to be managers and women were more likely to be in clerical or professional positions.

Most people in the over 65 age group (71%) believe they have enough money, 77% believe they have good health and 86% are happy with their life.

Older people in New Zealand are often engaged in a range of voluntary activities from household work, helping others, getting involved in community groups, or looking after a child who is not living with them.

Examples given from retired people include activities which demonstrate the concepts of *manaakitanga* and *whanaungatanga* (retirees who go to local schools to help children learn to read; Alex talking about photography and painting to groups at retirement homes; Kathy with her service to diabetes support groups, Lone and Jens supporting local bee keepers). And, in the spirit of *ako*, there were examples given of young people also spending time at retirement villages learning with and from the residents there.

As the proportion of older people increases around the world it is critical that concepts such as the three presented here are harnessed to ensure that the knowledge and skills of the older generation continue to be shared and valued. Focusing on these concepts also encourages younger generations to become involved in the community.

Biodata:

Dr. Adele J. Scott was born in New Zealand but lived three years in Japan as a child. She studied Japanese at University in New Zealand and Japan, and then taught Japanese at high schools in New Zealand and Australia. Dr. Scott was a teacher educator for 19 years at Massey University and is currently employed at the largest school in the country - Te Kura - which has over 20,000 students studying by distance.

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3.3 Learning in Japan

What's going on in communication-centered English active learning with ICT in a high school classroom

3.3.1 Collaborative learning

Kobayashi has taught English in a private co-

educational high school in Tokyo for 38 years. This school introduced Guilford's Structure of Intelligence (SI) theory: a creative teaching method in 1969; a small class English teaching system in 1984 (then transformed to ability group teaching); and six-year integrated education in 1991. Kobayashi started a group-based learning style (*Photo 7*, 2012/11/02) in 1992 and has been improving this creative lesson design to enable every teacher to make use of effective communication-centered active and collaborative learning methods.

The adoption of external cooperation is key to promoting the collaborative method. *Photo 8* (2014/11/13) shows the joint lesson with the Tokyo Indonesian School (TIS) students. It was easy and natural for the students learning in a group to evolve into the next stage: being cooperative, creative, and respectful to each other in the manner of those following the three Māori concepts of learning – *manaakitanga*, *whanaungatanga*, and *ako* – described by Scott. The Jigsaw method (Miyake et al., 2013) in *Photo 9* (2014/01/17) played a very important parametric role here as a bridge to an applied collaborative activity: poster presentation (*Photo 10*, 2014/12/15).



Photo 7. Group learning.



Photo 8. TIS students visit the class.



Photo 9. Jigsaw work in a group.



Photo 10. Poster presentation.

3.3.2 Current trends in the use of SNS

A survey done by Internet World Stats (2015) reveals that 46.4% of the world population use the Internet, while as to the three countries taken in the symposium, Japan reaches 90.6%, New Zealand 93.8%, and the United States 87.4% (Table 1). New Zealand, where the Internet society is supported by three Māori concepts of learning: *manaakitanga*, *whanaungatanga*, and *ako*, which Scott introduced (see 3.2.2), has the largest percentage, although the population is the smallest of the three countries.

	Population (2015 Est.)	Internet Users 30 Nov 2015	Penetration (% Population)	Users % of World
Japan	126,919,659	114,963,827	90.6 %	3.4 %
New Zealand	4,438,393	4,162,209	93.8 %	0.0012 %
United States	321,368,864	280,742,532	87.4 %	8.3 %
World Total	7,259,902,243	3,366,261,156	46.4 %	100.0 %

Note: This table was created with the data from Internet World Stats (2015) by Kobayashi.

PewResearchCenter (2015) says in *Americans' Internet Access: 2000-2015* that while older adults still report lower levels of Internet use today, seniors have the greatest rate of change since 2000, from 14% to 58% in 2015 (Figure 1). Most people ages late sixties have already experienced and received both benefits and disasters of the so-called ICT revolution in 1970s while studying or working, so that they are thought to be familiar with ICT tools like "Japanese retirees" Pascoe introduced (see 3.1.1). Over half of U.S. seniors are now regular Internet users, so Internet use is no longer unusual for older Americans. The change forms the background for the elderly to promote the positive access to the Internet learning opportunities.

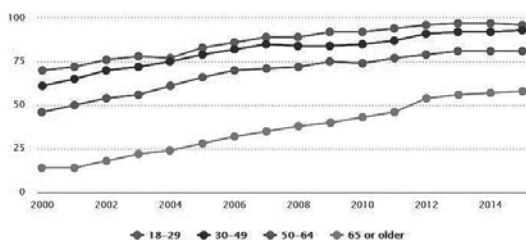


Figure 1. Among all American adults, the % who use the internet, by age. (PewResearchCenter, 2015).

MEXT (2009) indicates that 95.9% of all second year high school students in Japan own a mobile phone including Smartphone; 96.0% in big cities, 96.2% in cities with a more than 100,000 population, 95.5% in cities with an under 100,000 population, and 95.6% in rural areas (towns and villages). A survey by MIC (2015) shows that the number of Internet users older than six years old in Japan in 2014 is 100,180,000 with 82.8% penetration (Figure 2). The rate of Internet users of age 20-29 is 99.2% (top) and that of age 13-19 is 97.8% (second) (MIC, 2015; Figure 3). Cabinet Office (2014) reveals that 97.2% of all high school students in Japan in 2013 own a mobile phone, 73.0% of whom make use of the Internet for studying with a mobile phone and 85.4% of whom with a computer. In conclusion, the current usage of a mobile phone and the Internet by students in Japan has three characteristics below:

1. High possession rate with little difference among areas.
2. In the second top group as heavy internet users.
3. Making use of the Internet as one of their study tools.

Judging from the tendency above, teachers in school need to design the learning environment cooperated with students who have excellent skills in ICT tools and potentials in finding further effective use (see 4.1.3 A5-c).

Note: As to the drop below 50% in the over 80 group in Japan (Figure 3), further analyzing and comparison in three countries should be needed.

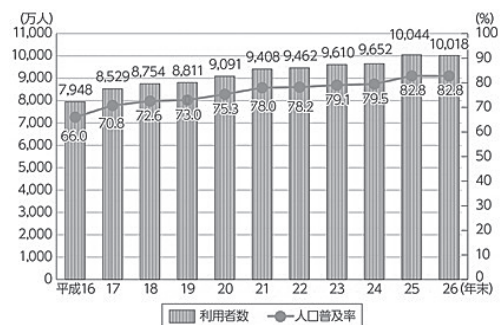


Figure 2. The number of internet users and penetration: 2004-2014. (MIC, 2015).

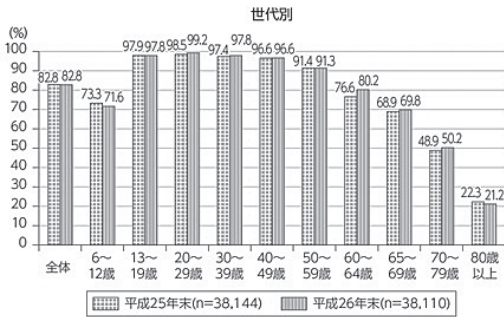


Figure 3. The rate of internet users by age group: 2013-2014. (MIC, 2015).

3.3.3 Practical use of ICT tools and materials

In 2012, Professors Asakawa and Tachibana of the Center for Culture and Language Education (CCLE), Tohoku University, emphasized to Kobayashi the effect of an online learning system, "Linc English (www.shotoku2015.lincenglish.com)," which they had developed and utilized with university students. After inspection of the online learning lessons at Tohoku University, Kobayashi adopted the tool and has made use of it in his classes for four years (Photo 11, 2013/06/29). He used this tool mainly for four-skill training and for solving applied tasks (Figure 4, 2014).



Figure 4. Task and a submitted answer paper on Linc English screen.

The development and entry of new ICT tools and materials into the classroom has drastically changed learning strategies for students and teaching strategies for instructors. Not only Kobayashi but also his students use computers, iPads, projectors, the Internet, and even the Interactive Whiteboard (IWB) in the class. As a result, learning strategies in his class have been evolving (Photo 12, 2013/07/19; Photo 13, 2014/12/03). One of the Internet tools, Skype, was very useful when conducting joint conferences with teachers abroad and distance lessons with students. For

the next round of joint research, Kobayashi, working with Panasonic staff members, has started another experiment utilizing a web meeting/teaching system: *Realtime Collaboration (RC)*. The first test was held between Kobayashi in Sendai and his students in Tokyo on July 28 (Photo 14, 2015/08/25).



Photo 11. Morning online training



Photo 12. Learning with ICT tools.



Photo 13. Info from laptop and iPad.

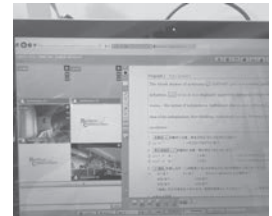


Photo 14. Distance learning by RC.

4. Discussion and Conclusions

Watabe summarized the main arguments of the two keynote speeches (4.1) and Kobayashi recapitulated what the panel discussed (4.2) (Photo 15).



Photo 15. Watabe (left) summarizes arguing points.

4. 1 Arguing points and Discussions

4.1.1 Pascoe's Keynote

Q1. In learning Japanese with The Mixxer (an Internet learning tool), Pascoe found that she could easily make friends with those whom she had never known before. For example, she was able to converse with people who lived far away or who were of different ages. In an aging society, face-to-face communication may play an important role, especially in retirement homes. Can communication by such an Internet tool, however, become the mainstream in a society in which the population is ever-decreasing? Or can the Internet replace face-to-face communication as a tool?

A1. A large country may have a great need to use the Internet or Skype as a communication tool. People who are geographically remote can enjoy the opportunity to communicate with distant family members.

Q2. Pascoe emphasized that practical use of ICT equipment is indispensable in order for the aging not to be isolated from society. But a considerable number of aging people are thought to be incapable of using ICT tools, especially in Japan. How about in America? What kind of effective strategies have been used in America to encourage elderly people to accept this challenge?

A2. a. The Internet is very attractive for those who have hobbies because it can offer information and entertainment to them. For example, the elderly can re-watch their favorite football games at any time of the day. This leads to an increase in confidence in their use of the Internet.

b. Net shopping is another trigger. If it excites a person, any entertainment, even "Takarazuka," could be good impetus for learning by means of the Internet.

4.1.2 Scott's Keynote

Q3. Scott introduced three Māori concepts of learning *manaakitanga*: respecting each other; *whanaungatanga*: nurturing others like family

members; and *ako*: learning with and from each other. Can these principles still be sustainable in the Internet society?

A3. When thinking about the online environment it would be important to consider

a. following appropriate "netiquette" behavior such as respecting other people's privacy.

b. how we relate to other people, the online relationships we form and how we learn from each other.

c. setting clear goals for learning: We need to be clear about *what* it is that we want to find out and *how* the Internet can best help us to do that.

Q4. A striking declining birthrate and aging population has been progressing in New Zealand, too. Will the role of education with ICT become more influential in such a society?

A4. I have heard that Japanese people are fond of surfing on the Internet but may not be as confident at communicating with others informally using social networking sites, as compared with New Zealanders. So how to communicate with other people and make use of the Internet will be key factors for education with ICT.

4.1.3 Common Topics

Q5. In Japan, how to make the best use of Internet tools such as MOOCs has been brought into conversations among universities. One context for this topic is the heated race to survive under reduction or integration initiatives induced by the falling birthrate, which has led universities to desperately look for ways to provide "better education." Is this true? Do the universities in America and New Zealand have the same condition?

A5. a. Before competition, it is necessary to build online learning communities. These kinds of communities can help both online learners and universities survive.

b. Although MOOCs have become very popular, the number of students who successfully reach their learning goal is very small, compared to the

number who succeed in face-to-face lessons.

- c. Learning communities mentioned by Scott can already be seen on applications like LINE for example. The problem lies in whether the teachers allow it or not. The ability of students to handle ICT tools is often beyond that of teachers.

Q6. Can the classroom lessons be converted into online lessons?

- A6. a. Online learning needs to make use of tools which give the learners quick responses.
b. Online lessons should have "feedforward" tools in addition to feedback ones.

The feasibility of applying sustainable and sharable learning strategies with ICT in an aging society with fewer children is discussed in 4.2.

4.2 Conclusions and Prospects

4.2.1 Conclusions

Conclusions derived from discussion on Pascoe's address:

1. The Internet has steadily and unconsciously taken root in everyday life, whether it is main or supplementary; regular or temporary; for individual or for family; and for shopping or for learning.
2. The Internet should raise motivation, proffer enjoyment, and give a clear goal. Especially in the classroom, ICT tools supplement the shortcomings of the class and encourage the learners. Both the tools and the learners evolve alongside each other. Pascoe's experiences in teaching *Death of a Salesman* to Japanese students with presentation slides or in learning Japanese with The Mixer helps us understand this evolution.

Conclusions derived from discussion on Scott's address:

3. It is no exaggeration to say that learning becomes more successful when based on esteem, collegiality, and collaboration. The concept above is embodied in netiquette: manners on the Internet.
4. As the aging population has been increasing, younger generations should share and value the knowledge and skills the elderly have built up so as

to live a life that is sustainable and collaborative. The Internet plays an invaluable role. The video clip of the happy elderly people at the end of Scott's speech proves it (<http://www.rymanhealthcare.co.nz/villages/diana-isaac>).

Conclusions generated from discussion on common topics:

5. It is increasingly the case that Internet tools like MOOCs are becoming popular, that reduction or integration is continuing in universities and high schools, and that the birthrate is falling. To build a learning community in the Internet, one must recognize that every phenomenon above has a relationship to the others. However, the development of a learning community will be of great help in all instances.
6. Face-to-face lessons are different from online learning. The low number of those who complete MOOCs, as compared to the completion rates of those who take face-to-face lessons doesn't demonstrate the difficulty of online learning but rather highlights one difference between the two teaching modes. Their roles are different. As to ICT handling ability, teachers should recognize the skills of younger people, who will produce new ideas and promote the ICT world.

4.2.2 Prospects

Kobayashi summarized the research findings, and placed those he would make use of for his doctoral thesis into the following four categories.

1. *Dichotomy* (see 4.2.1-1; 4.2.1-5; 4.2.1-6): When our concept moves from confrontation to harmony, from a choice of two alternatives to "concurrent accumulation" (Jussim & Harber, 2005), we can find unexpected but beneficial solutions.
2. *Awareness* (see 4.2.1-4): The line "Attention must be paid," introduced in Pascoe's speech, recalls the importance of "awareness." Feeling external existence makes us notice something important subsisting around us, in front of us, in us, but never seen before.
3. *Expectations* (see 4.2.1-3; 4.2.1-4): Any opportunity

available for learning throughout your life produced by the Internet is supported by human relationships as indicated in the three concepts shown in Scott's speech. It sometimes works as a "self-fulfilling prophecy" (Rosenthal & Jacobson, 1992). One's expectation yields more than what is really indicated as *Pygmalion effects* (Rosenthal & Jacobson, 1992; Simon, 2010).

4. *Evolving form of learning* (see 3.3.1; 3.3.3; 4.2.1-2; 4.2.1-5; 4.2.1-6): Declining birthrate, aging population, and Internet use have steadily been changing the form of learning, and influencing teaching strategies. For example, traditional lecture-style lessons have recently been supplanted. Instead, debating, presentation, active learning with ample ICT tools, collaborative learning, "permeating (shimikomi-gata)" lessons (Watabe, 2012; 2013), and so on are being foregrounded. Communication-based collaborative learning with classroom Internet tools, introduced in 3.3 by Kobayashi, doesn't resolve all learning difficulties, but holds an important and practical key to "concurrent accumulation."

Kobayashi, Pascoe, and Scott have started designing a continuous international joint research project with Dr. P. Howell (The University of Iowa, US) and Dr. N. Suruyati (Malang State University, Indonesia) focusing on how motivation to learn is influenced by expectations, and working from the viewpoint of cultural comparison.

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- Note: Every reference above originally written in Japanese is translated into English by Kobayashi.