

Works
Report

2018

The 100-Year Life x Technology

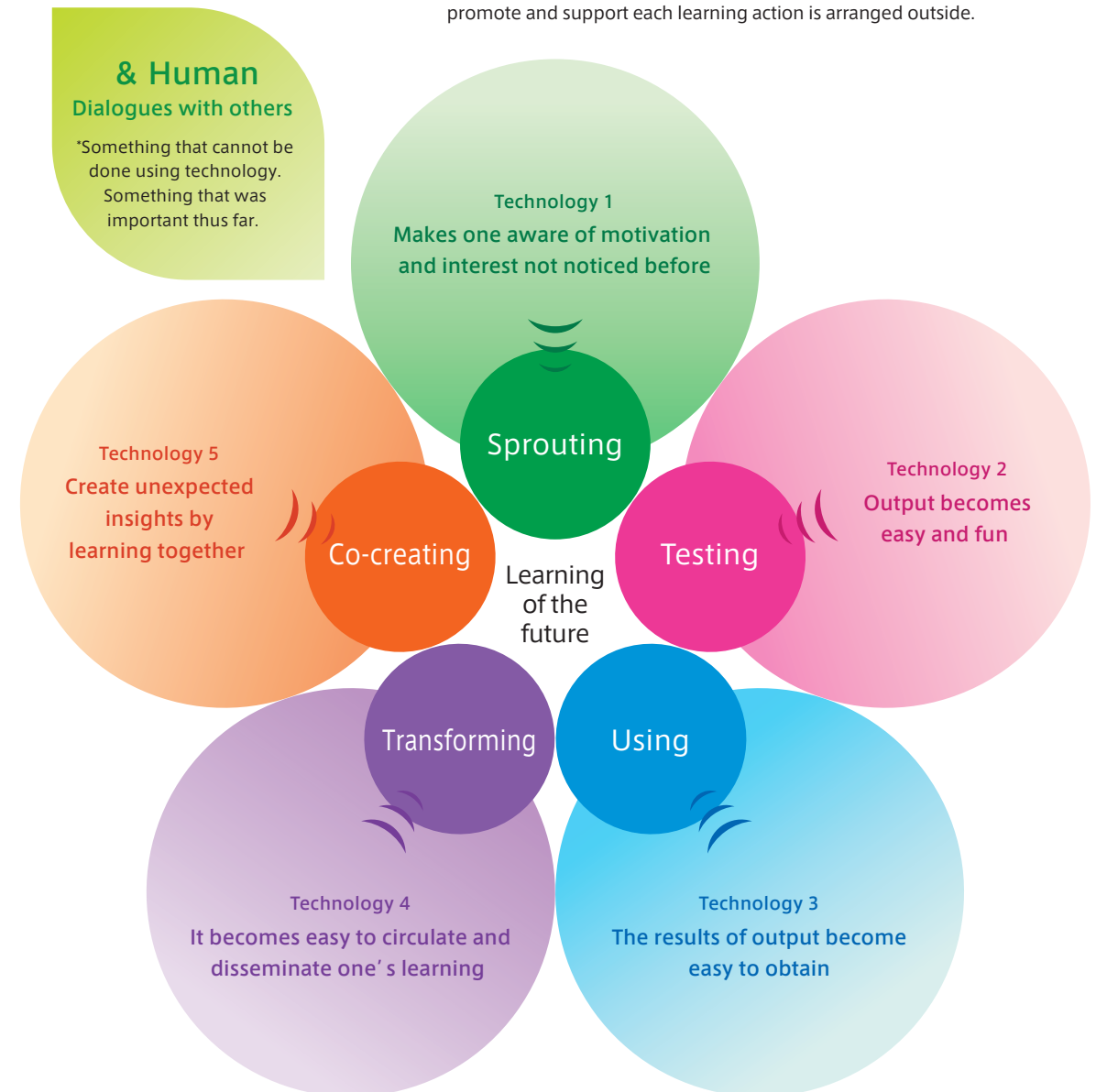
"Creative" Learning Model for working adult

By 2030, learning will become a “creative activity”

The rise of learning technology will bring about dramatic changes in working and learning. The turning points for an individual will become more frequent than ever, and people will learn throughout their lives and change repeatedly. Working, learning, and living will be integrated, and learning will not just be “accumulating knowledge” in a predetermined place or manner, as it has been until now, but will come to mean “making” and “sending” things whenever we wish. Informal learning materials that utilize technology have already appeared, but in the future it will become easier to acquire learning that matches one’s pace, learning frequency, and level. Further, new mechanisms will emerge to disseminate what one has learned and experienced oneself. The learning of the future will overturn the very foundation of the “view of learning” thus far.

Learning Model 2030

The learning model consists of five learning actions and dialogues with others. There is technological support corresponding to learning needs. The inner circle refers to individual learning, while the function of technology to promote and support each learning action is arranged outside.



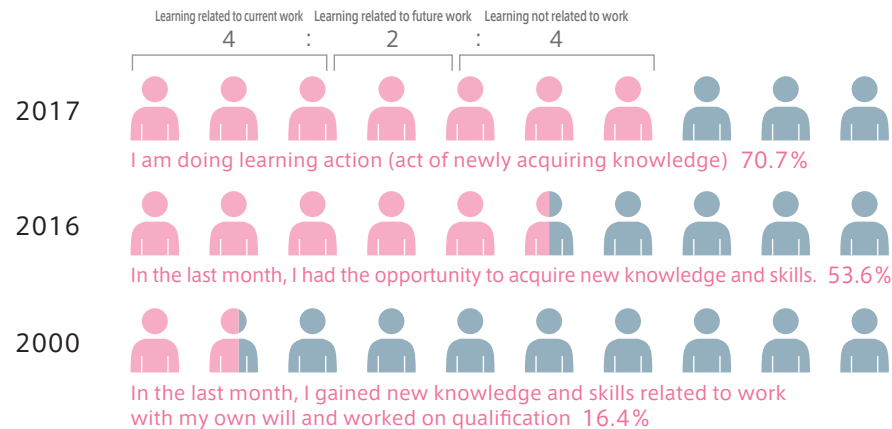
Formal Learning will be more informal and diverse.



FACT1

Learning begins easily, unconsciously

Recruit Works Institute is investigating the learning behavior of adult every year since 2000. The learners were 16.4% in the 2000 survey and 53.6% in the 2016 survey. Looking at only this number, it appears the majority of full-time employees are “not learning.” But is this really so? In surveys targeted at adults so far, “learning” was considered in the rather limited sense of undergoing training or attending school. However, adult learning should be more diverse and free. When we redefined adult learning as “learning behavior that includes all actions where one acquires new knowledge,” and conducted a survey again, we were able to identify many adult learners. In particular, we found that people who find “a method of learning suitable for them” and learn successfully do not stop at formal learning, such as attending school, but find units of learning suitable to them that are simple, easy, and thorough.



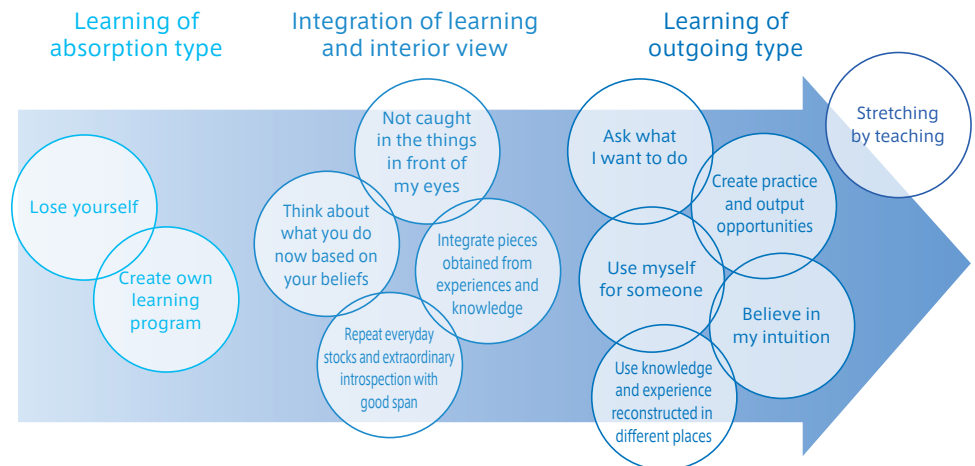
From “Japanese Panel Study of Employment Dynamics” (2016), Recruit “Working Pleasure Survey” (2017)



FACT2

Individual learning is not dependent on place, time, or method

Next, we interviewed those who practiced “learning suited to me.” In an interview asking about individual learning entitled, “Evolution model of learning,” it became clear that the ways of understanding learning and its definitions are diverse, and that practical learning more suited to the individual is conducted. For example, learning among corporate workers who think about what they want to do and learn through involving their surroundings, or learning of chefs who enjoy experimenting with their colleagues, saying, “Learning without a goal is not motivating,” is characterized by its independence from study, place, time, or method. For us in the future, learning will not be something provided by the school or workplace during a particular period of life, but something suitable to us that we create for ourselves from among many choices; something that we exchange, work towards cooperatively with others, and will be useful for society.



Abstracted from “Evolution model of learning” (2018)

With the evolution of learning technology, learning disseminates and expands

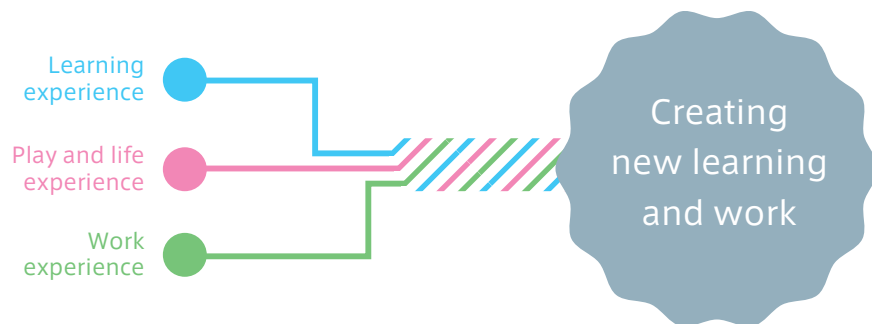


All experiences and learning will be visualized and circulated

According to learning and AI experts, by 2030 an individual's experience log (record/history) will be able to be stored as a personal database by applying blockchain technology. Based on this log, it will be easy to identify interests or motivation not previously noticed even by the individuals themselves, and it will be possible for people to realize several things that they "wanted to do."

Furthermore, conventional learning has been discussed in two aspects, "what is taken in as input" and "what will be the result (=outcome)," but in future learning, data from play, lifestyle, and work will be integrated, creating a new type of learning and work.

The quality of the new content created by individuals will be guaranteed using the blockchain-based platform and will promote exchange of new content value.



Career is created from learning, play, living, work.

About Learning Model 2030

Learning in the age of self-expansion is composed of the five actions of "sprouting," "testing," "using," "transforming," and "co-creating." The evolution of technology will increase the richness of learning.

5 learning activities and changes according to technology

- Sprouting

Data not only on personal behavior and experience, but also on brain activity and the process of introspection will be gathered and visualized. Individuals will be made aware of their interests in new fields they had not noticed before.
- Testing

By visualizing and expressing personal interests and experiences gained from their living and working spaces, individuals will likely develop new values.
- Using

In learning as it is today, what one learned is not directly related to one's career, but in the future, the results of learning will be guaranteed. An individual's output will certainly catch someone's eye and help people and society in unexpected ways.
- Transforming

Traditional learning is fragmentary, but learning in the future will involve the personal experiences and cultural backgrounds of people other than oneself. An individual's small units of learning and experiences will start to circulate with his or her stamp, and its fame and reputation among others will create a new learning chain.
- Co-creating

As the learning community evolved, it became possible to exchange learning with others, even among those who find it physically difficult to collaborate. The informed self becomes a part of others, enabling the creation of more open knowledge.
- &Human

Due to the evolution of technology, dialogue with others has become even more indispensable. There is always someone who stands beside one who learns. The existence of others always makes us aware of the existence of the things intrinsic in individuals.

The impulses lying dormant within ourselves become likely to develop one after another

To help technology weave its own learning stories

In the future, you will not have to narrow down the work you want to do to one thing; in the economic ups and downs of a 100-year lifetime, the concept of “working for one company” will no longer exist. Rather, turning points will be reached time and again. In addition, technology will make learning more efficient and will lead to results in a shorter time than ever. Thus, there will come an era of self-expansion in which **all of one’s experiences are stored as data and visualized, and possible choices are suggested one after another.**

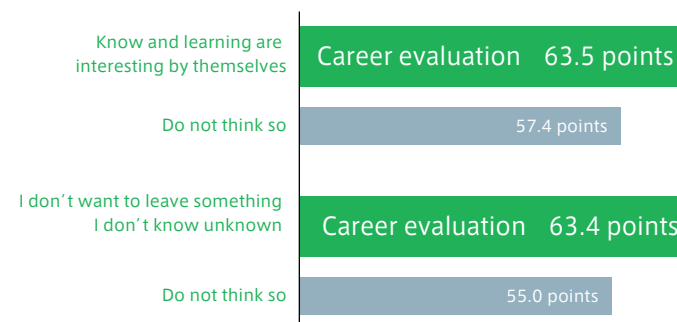
Learning in this era of self-expansion will be realized by “sprout” one’s impulses (internal motivations) one after another. In a survey by Recruit Works Research Institute, people who learn through intrinsic impulses such as “learning and studying are interesting in themselves,” or “I do not want to leave something unknown” rate their career highly, and have discovered their natural goals or had self-realizing experiences (Figure 1). In other words, **curiosity and interest in unknown things**

are at the core of one’s learning and career, and voluntary learning brings about a good cycle even in work (Figure 2).

Going forward, a type of learning that the individuals themselves do not recognize will be discovered by technology that explores one’s experiences and activities, and it will become easy to develop one interest after another. Based on data regarding interests and concerns displayed not only in work but also in play and life, learning will transform into a process created by oneself, which respects the inner personality of the individual. It will not be a standardized and impersonal education structure, like those that have existed thus far, but one in which individuals can freely explore various interests irrespective of age, and turn their interests into strengths. It is expected that this budding of each individual’s learning will bring about a flourishing, diversified society.

*In addition, voluntary learning refers to all acts of acquiring new knowledge, including learning related to one’s current work, learning related to work one intends to do in the future, and learning not related to work.

<Figure 1> Those who learn through intrinsic motivation evaluate themselves highly in their careers



Source: Created from Recruit Works Laboratory (2012), “Survey on motivation to learn and work” https://www.works-i.com/pdf/r_000280.pdf

<Figure 2> 80.0% of people with high job satisfaction and 84.1% of people with a high feeling of growth are learning



Source: Created from Recruit Career, “Working pleasure survey” (2017)

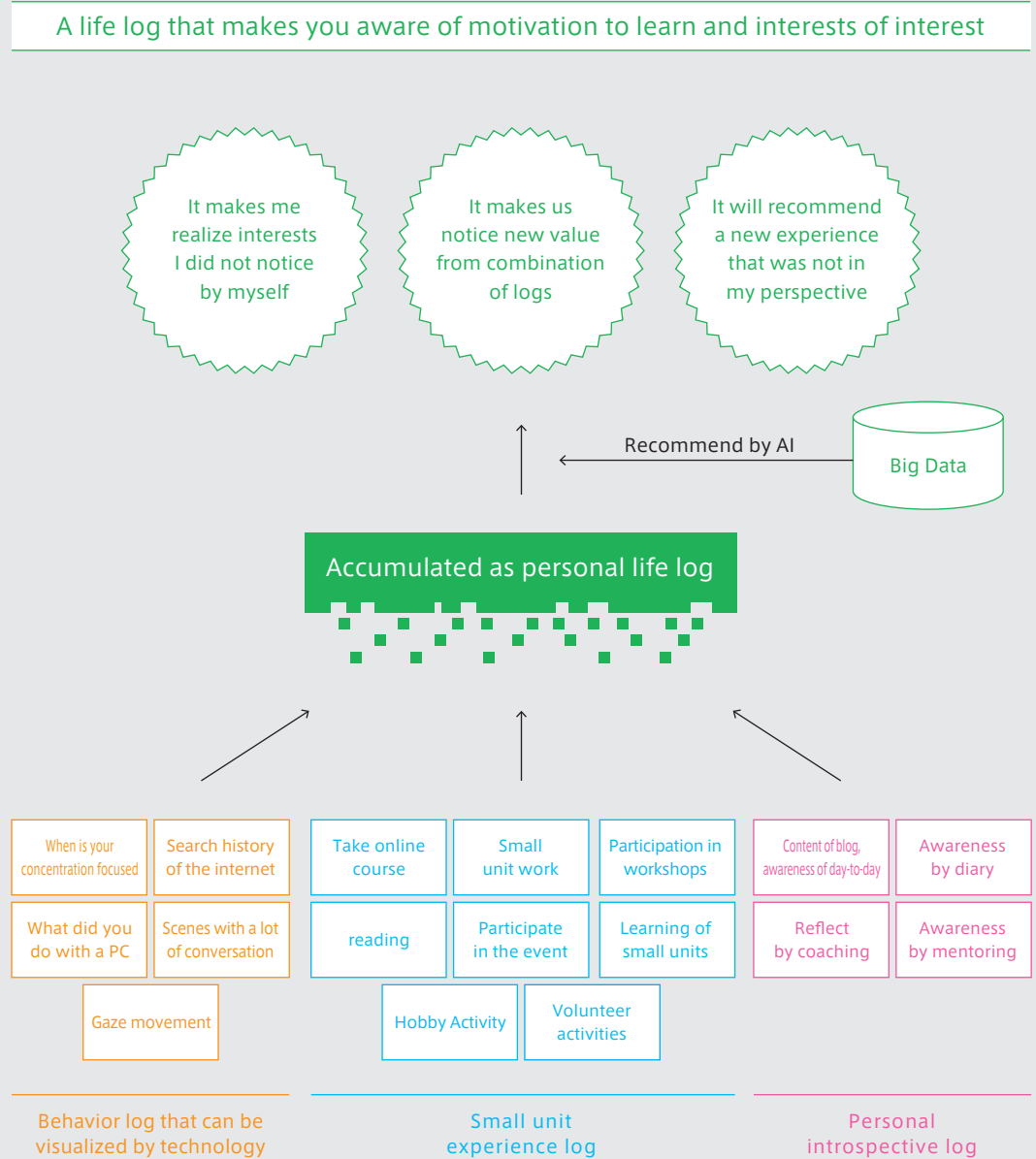
Experience, introspection, behavior: Three logs that reflect a constantly changing self

In a lifespan of 100 years, life, work, and play are conducted simultaneously, and mutually influence each other. The “self” that continues to change and expand will be captured by the accumulation of three logs that record the process of change itself. It will no longer be necessary to undergo “diagnostic tests.”

The first is an “experience log,” which records one’s experiences of small units of learning and work. Instead of spending two to four years learning, like for a degree, the history of small units, such as five minutes of daily English vocabulary practice or volunteer activities, are stored along with work and life experiences. The second is an “introspection log,” a subjective history including awareness obtained from experiences and personal thoughts, which have been stored thus far in the form of blogs and notes. The third is a “behavior log” clarified by technology, in which one’s interests are digitized and “a way of learning suitable to oneself” is objectively visualized.

An example of a “behavior log” is the data collected by wearable devices. For example, the eyewear-type wearable device JINS MEME can acquire data related to the eyes, such as line of sight and blinking. Along with bodily data, such as posture misalignment and head inclination, concentration and activity level can be measured. The device can collect and analyze the data automatically, and identify where and when concentration will increase at any moment through a “live relay.”

The records actively output by oneself and the records automatically collected by a device help to visualize the “self.” In addition, because personal life logs are stored as big data, AI will be able to recommend new experiences not already in one’s field of view, or make one aware of the possibility combine experiences one already has to create new values.



Mainstream learning that can be easily and comfortably tried

The material and learning method that suits you makes your learning easy and enjoyable

Even if you have new interests or intrinsic motivations, you probably do not know where to start or how to learn. Why are the hurdles to learning so high?

The characteristic feature of a person who learns well is mastery of a personally adapted method and style of learning. The percentage of people who learn independently is higher (Chart 3) among "people who think about what style of learning suits them when learning." The so-called learning strategy of "learning about my own learning style" leads to independent learning. In addition, people who learn have "their own learning rhythm" (Chart 3). In the flow of life, by working at one's

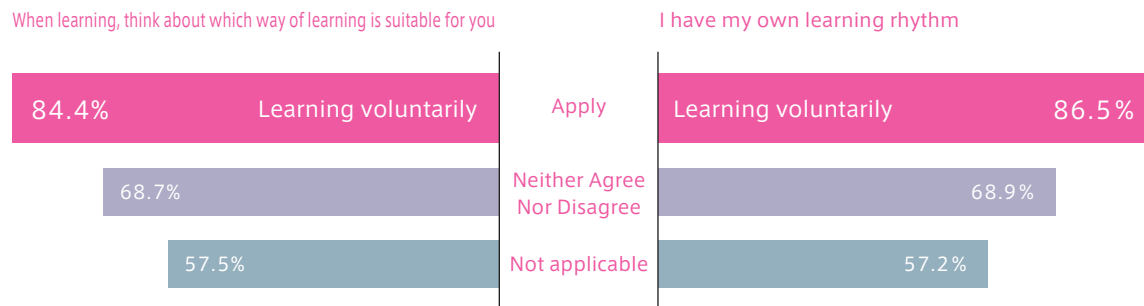
own pace while inserting elements of play, people make learning a habit. Knowing how to learn in a way suitable to oneself makes learning more efficient, easier to continue, and more likely to produce results. It is easy to continue if learning is fun rather than hard work. Learning according to each individual's rhythm depends upon a technology that supports it.

Because this learning will be based on the mind of the individual, the method of learning is of course also individual, and will be different for each person. Learning will no longer be a difficult thing, and if something interests people even a little, they will be able to actually try it in their

own way. Technology helps initiate learning and speeds it up.

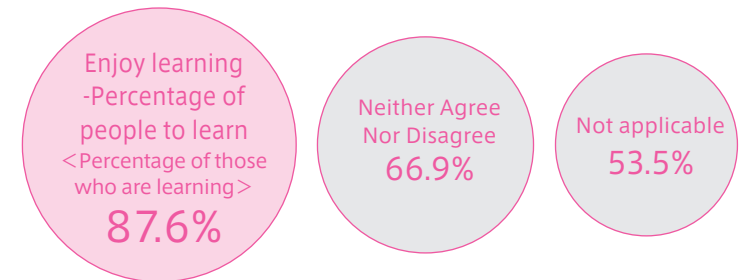
It used to be said that "studying is painful," because studying was heteronomous. The learning that was imparted in this way can no longer be called learning. In fact, the proportion of students learning by themselves is higher among those who "enjoy" learning (Chart 4). The boundary between learning and play is also dissolving. Technology allows people to try while playing. Learning also includes enjoying the results of something tried on one's own.

<Figure 3>The more people learn by themselves, the more they know "how to learn" and are into "habits"



Source: Created from Recruit Career, "Working pleasure survey" (2017)

<Figure 4>87.6% of those who enjoy learning are learning voluntarily



Source: Created from Recruit Career, "Working pleasure survey" (2017)

Pile up while trying small units, and a scheme for encouraging continuation using game elements

Learning tools have diversified, classrooms have become portable, and learning has also been made available in small pieces and units. Courses from famous colleges are being divided into 5- to 10-minute units as MOOCs (Massive Open Online Courses) published online. In this way, an environment is already being realized in which one can learn themes matching one's interests by combining use of various tools, and the evolution of technology will increase this simple and easy output style of learning more and more in future.

For example, in the programming industry, materials that one learns while "trying" are increasing. Take as an example the HTML course of the programming learning site Progate. From how to set display font style and size to designing a web page based on specifications, each step is segmented, and learning happens through repeated inputs and outputs. One can start a lesson from any point and in any order. It is also possible to pick and choose courses on different programming languages to learn according to one's interests.

There are also services that provide content at different times depending on how an individual learns, thus helping make learning a habit. For example, the language learning site Duolingo allows users to pre-set their daily goal (time spent learning), and the goal is achieved every day consecutively, users can acquire virtual currency or buy a bonus item that can ignore a skipped day.

With diverse materials such as these, which are centered on practical output, organize learning like games, and are presented in such a way that they can be tried easily, it becomes easier for individuals to learn how to learn at their best.

Learn while trying

① Learn with several slides (Learn easily in small units)



② Implementation of the program (results can be confirmed immediately on the same screen)



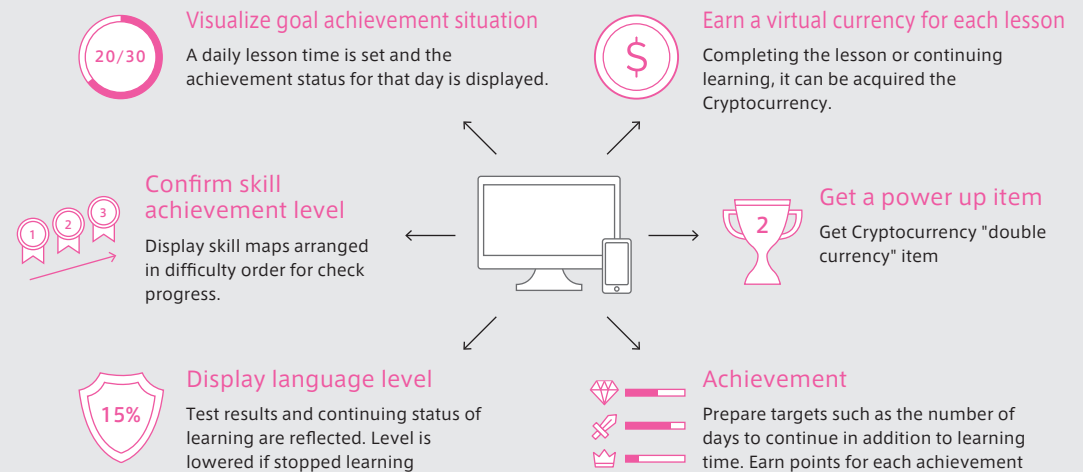
Immediately practice

Return immediately to the slide if someone cannot understand

cf. Progate (<https://prog-8.com/>)

In Progate, you can learn the basics in order, or you can choose how to learn, such as beginning at the advanced level for skills you are confident about. Because the next content to be learned is decided based on immediate feedback, it is possible to raise the difficulty according to your level.

Habit of learning by gamification



cf. Duolingo (<https://www.duolingo.com/>)

In Duolingo, a goal for the day (time spent learning) is set in advance, and the number of questions in the test changes according to this time goal. In addition to charting every day's target achievement, game-like elements are included, which makes learning enjoyable.

Someone can make use of the output and we can gain feedback

Learning guarantees results and is linked to the willingness to keep learning

The reasoning that “what I learned is not directly linked to my career” may be cause lack of motivation to learn. However, in the future, **not only will it be possible to access one’s desired career, but technology will also make sure that the output can catch someone’s eye and help someone in an unexpected way.**

The results that can be obtained have great influence on motivation to learn. According to a survey by Recruit Works Institute, people who are more conscious of the ROI (return on investment) of learning “always get higher results than expected” (Chart 5).

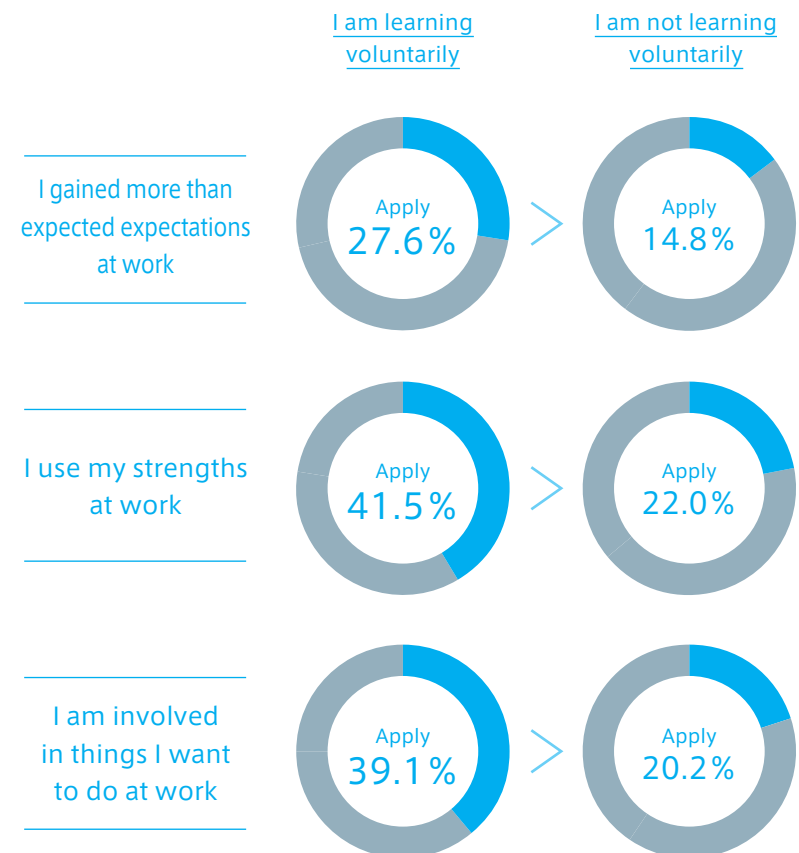
Although it is difficult to predict learning returns in advance in times of high uncertainty, efforts are being made so that leaders can help students acquire the skills to set goals themselves. **Learning by understanding how you can use what you learn will make it additionally possible to understand what further learning is necessary, and how to raise and expand one’s**

own expertise.

For this, as seen in the “ Learning Model 2030,” the outgoing type of learning is useful. People who “try to utilize what they have learned in real-life situations such as work” are those who are “making use of their own unique qualities” in jobs today (Chart 5). Further feedback is obtained when learning catches someone’s eye. For example, by sharing one’s knowledge and experience, one can receive greater awareness, and thus a wider return. The person teaching is also learning, as is the person sharing an experience only they can talk about.

Feedback on output arouses further interest. There is no perfection in the pursuit of something you like. People who are “involved in what they like” learn voluntarily (Chart 5). **By learning from others and giving feedback, people create a return on learning in a broad sense,** and can build a society full of emergent and interactive learning.

<Table 5> Those who learn voluntarily are conscious of the outcome of learning



Source: Created from Recruit Career, “Working pleasure survey” (2017)

Learn the skill of battle-readiness at a “non-teaching” school, make use of it, and get results immediately

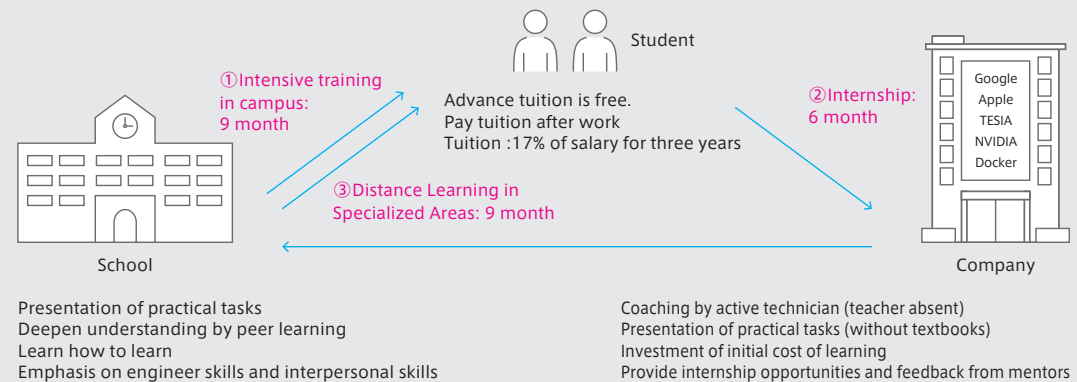
Learning in the future will be of a utilization type, in which mastery and transmission of results are simultaneous. Everyone will be able to easily share their learning process and results. Using what one has learned makes it knowledge for someone else, and it is given a new context and creates new value for society.

With respect to the utilization-type learning cycle, signs of change are confirmed in the software development field. The rapid evolution of technology always seeks new skills, and therefore always speeds up learning cycles. At Holberton School, necessary skills are learned not from textbooks but simultaneously with the progress of output through participation in ongoing development projects. Soon, a degree will no longer act as a certification of skills; only “possessing the skill of the moment” necessary for immediate output and “knowing how to learn” to keep up with changes will have any value.

Further, the evaluation individuals obtain when they broadcast their strengths improves learning. It has become possible for anyone to send the results of their learning out into the world, such by as selling their work on the Internet, publishing it on blogs, and so on. Creative results achieved during the process of learning or skills unique to a person are thus seen by others and create new value.

Online services have also lowered the hurdles to sharing learning processes with others or teaching as a lecturer. After teaching introductory courses at sites to attract customers as an experiment, one can get feedback from others and discover their next subject.

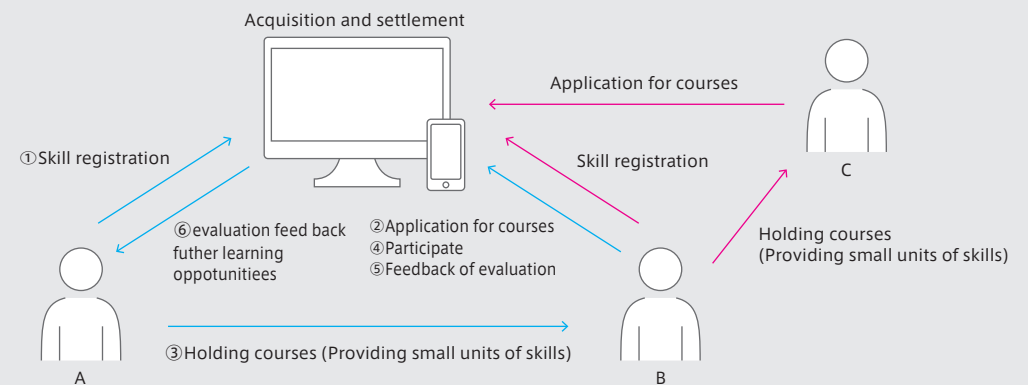
School to learn while working



cf. Holberton School (<https://www.holbertonschool.com/>)

Holberton School trains battle-ready software engineers. The school employs neither textbooks nor teachers. Practical tasks are learned from the first-line active engineers through project work. Another feature is that the school offers opportunities to learn how to learn.

By teaching with small unit skills, everyone becomes a teacher, everyone becomes a student



cf. StAca (<https://www.street-academy.com/>)

Street Academy: Anyone can become a lecturer and attract customers to lectures, or the so-called online learning market. The content of courses ranges is versatile from programming to cultivation of perennial vegetables. Reactions from learners are tabulated and evaluations are obtained.

Things learned circulate and increase in value while accumulating responses/empathy

Conveying one's learning brings about changes in oneself

The point of learning thus far has been to accumulate knowledge divorced from individuals' social context.

Knowledge and experience compiled in textbooks are easy to disseminate, but difficult to apply. This is because knowledge and experience are only available after understanding the context—that is, in what kind of situation it can best be used. However, with the evolution of technology, processes and outcomes of learning, such as what to learn where, how to use learning, whether one has contributed, and so on have been visualized, and are more easily communicated to others.

The use of SNS (Social Networking Services) has surpassed 70%, and people have gained the ability to connect with each other (Figure 6) and share their individual knowledge or stories and

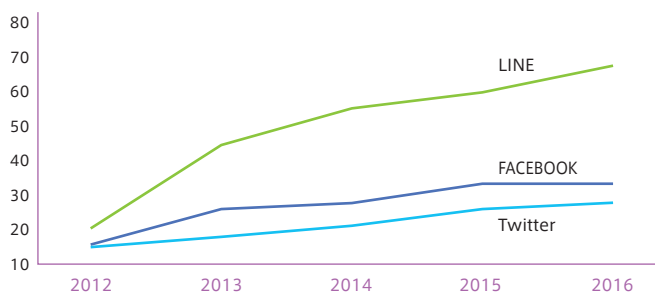
experiences. According to a survey by Recruit Works Research Institute, people who "convey the experiences they have cultivated to the next generation" voluntarily learn (Chart 7). In other words, learning is a manifestation of the desire to "convey experience." This dissemination of thought gathers responses and empathy from others, and subsequently brings about one's own transformation for further value.

For example, non-anonymous information dissemination builds trust and reputation. Evaluation obtained from trusted people creates new trust. Trust and reputation create a chain of further value. The interactions brought about by learning can be represented by blockchain technology. Essentially, trading is an act in which parties benefit by exchanging possessions. As soon

as the transaction becomes visible to others, various ideas are remembered, which can benefit third parties. It becomes possible to pay it forward based on trust. This exactly describes the chain of learning. What one can do earns others' trust, and can be put to use in another form.

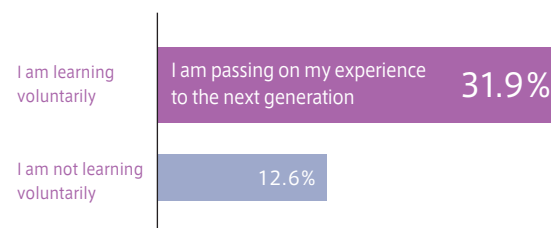
People who "have been able to transcend traditional values and methods" are also learners (Chart 8). Not only in the real world, but also in the virtual world, the question is, how can one disseminate one's knowledge and experience gained through learning while changing its form? How should one want to change oneself through this? People join in the learning chain seeking the transformation caused by technology and the unexpected connections brought about by it.

<Figure6> Representative SNS usage rates continue to increase



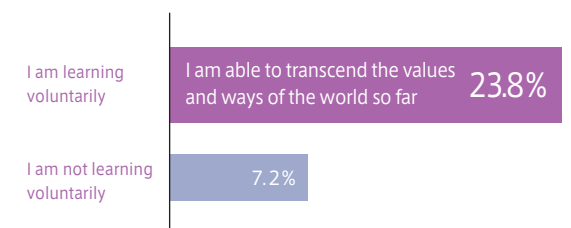
Source: Japan Ministry of Internal Affairs and Communications statistics
<http://www.soumu.go.jp/johotsusintokei/whitepaper/ja/h29/html/>

<Figure7> People who learn voluntarily are passing on their cultivated experience to the next generation



Source: Created from Recruit Career, "Working pleasure survey" (2017)

<Figure8> People who learn voluntarily can transcend the values and ways of the world so far



Source: Created from Recruit Career, "Working pleasure survey" (2017)

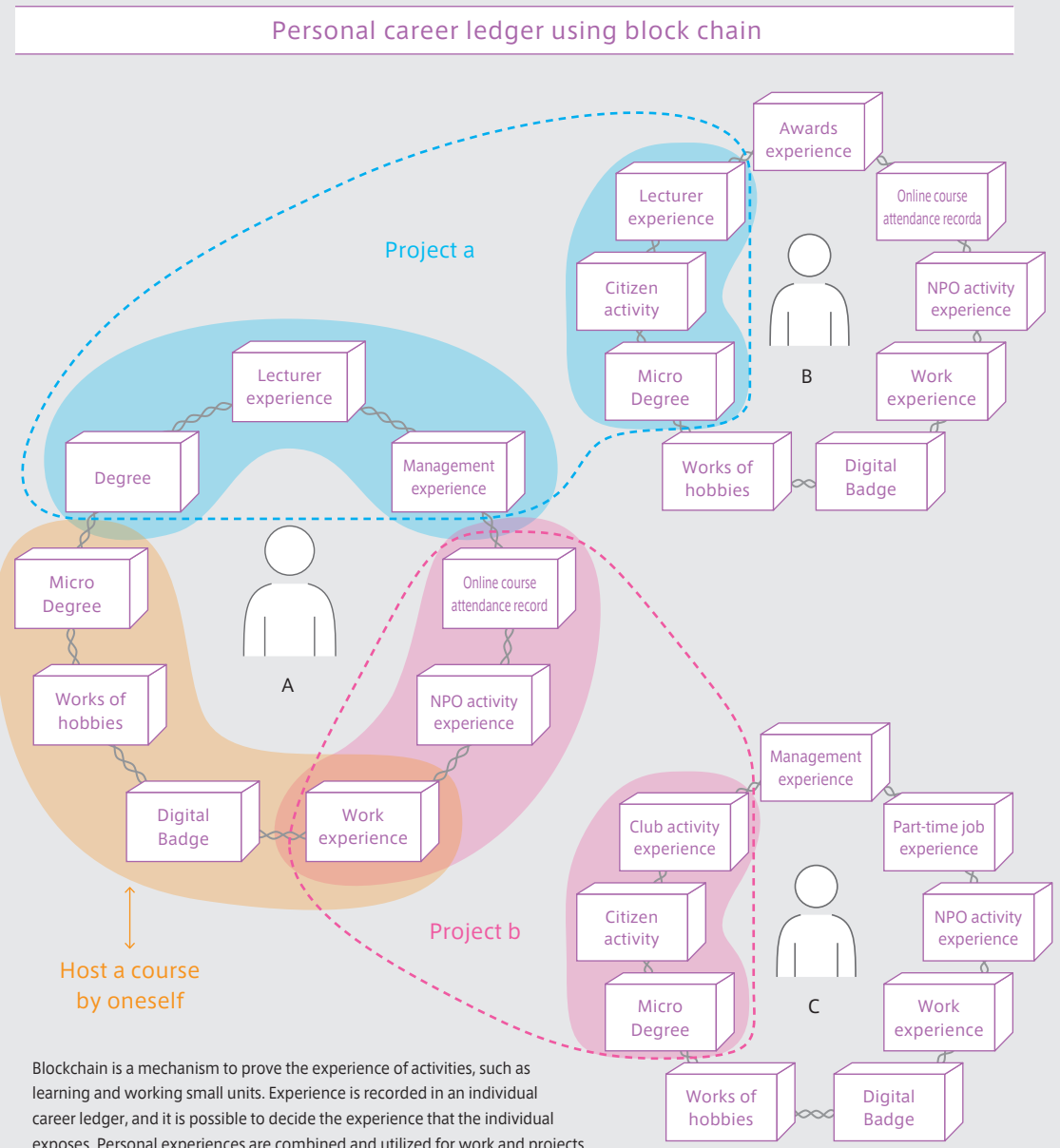
The computer network ledger guarantees one's learning history and promotes dissemination

Although public degrees and qualifications have been accepted thus far as certifications of learning, evaluation of one's history of skill acquisition and small-unit learning was difficult. However, it seems that a new mechanism for dissemination of learning experiences will boost future learning. Digital badges and blockchains are receiving attention as potential ways to bring innovative changes to value judgment in the market of learning.

A digital badge is proof of a small unit of learning, such as acquisition of a MOOC unit or skills. Open Badges and Degreed have already been established as internationally unified management and standardization services, and the results of learning are being valued and certified.

Blockchain is a technology used in virtual currency, a system in which records of learning or experiences of small units are exchanged with non-renewable reliability. Since trust guarantee of learning is made without relying on schools and organizations, the public learning institutions, this technology is expected to play a role as a ledger that enables individuals to save, manage, and trade learning records and experiences such as digital badges. The use of diploma certificates and contest winning certificates has already begun, and going forward even smaller learning and experience records will be certified. Learning history and acquired skills will create new value that has not yet existed due to the exchange for value with others. Further, these small learning combinations will create new opportunities for utilization and will be a powerful technology to support individual learning breakthroughs.

Based on skills and learning history certifications, we will be able to compile the achievements of lecturing or work, and its evaluation will raise awareness and build trust. By creating social value and online circulation, a hidden value will be created. The potential for what we learn in this way to lead to dissemination of individual learning, changing form, and acquiring getting responses is becoming clear.



Blockchain is a mechanism to prove the experience of activities, such as learning and working small units. Experience is recorded in an individual career ledger, and it is possible to decide the experience that the individual exposes. Personal experiences are combined and utilized for work and projects.

Micro Degree is a program that reduces the issuance unit of learning certification. Sometimes referred to as Nan degree

By learning together, motivation to be lazy is removed, and it is possible to bring about “co-creation”

An environment of learning and stimulation across organizations creates new learning opportunities

In an interview with learning technology and AI experts, most pointed out that “there are always people around learners.”

For example, the head of Google’s computer science strategy department regularly exchanges information with the manager of another department, with whom he studied with in the past. The principal of the Millennium School, a next-generation middle school in San Francisco, periodically holds a “forum” to create a place where people of different generations can talk with awareness of each other.

Exchanging knowledge gained through your own experiences with others brings new insight.

With what kind of people do those who voluntarily learn establish relationships? First of all, looking at the relationship with others in the workplace (Chart 9), the reason for the high proportion of people who learn voluntarily is that they take great interest in the work and growth of their colleagues and supervisors, and they are given feedback with which they can objectively grasp their own characteristics. As in a workplace, if one wants results in a team, it is important to make mutual use of each person’s individual intrinsic motivations. By knowing what each individual cares about and making that the stimulation, it

will be possible to bring about new results. Chart 10 shows that those who are more interested in a variety of areas learn more. People learn in a network and with the network.

Technology helps learning communities to evolve. People can learn from and put questions to others, even those whom it is difficult to meet in person, at any time, from anywhere, and for little cost. Teachers and mentors, and open and fair evaluation systems that have shaped the learning community, will be provided through technology and human interaction without the constraints of time and place.

Furthermore, technology makes it easier for stories of personal knowledge and experience to circulate. Digitalization encourages the informatization of a variety of personal information. For example, writing or tweeting on SNS increases the recognition of the information sender, and in some cases this is cut out, edited, and made part of others’ experiences, thereby making it easier to share feelings and accumulate knowledge. Those who share the same goal are connected, and with a feeling of commonality, create new knowledge through digital space. Learning about such co-creation is becoming possible.

<Figure9> People who are at a workplace where interest in one another’s goals and achievements is high tend to learn voluntarily



Source: Created from Recruit Career, “Working pleasure survey” (2017)

<Figure10> Regarding family, friends and acquaintances, hobbies, work, and area of residence, people who take an interest in a variety of domains tend to learn voluntarily

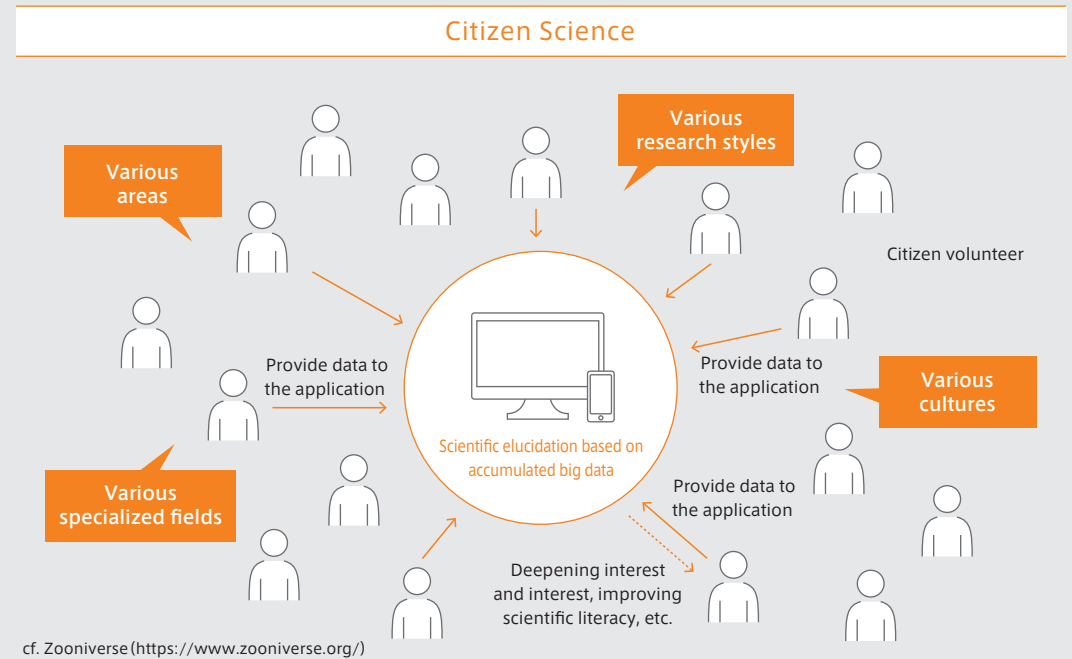
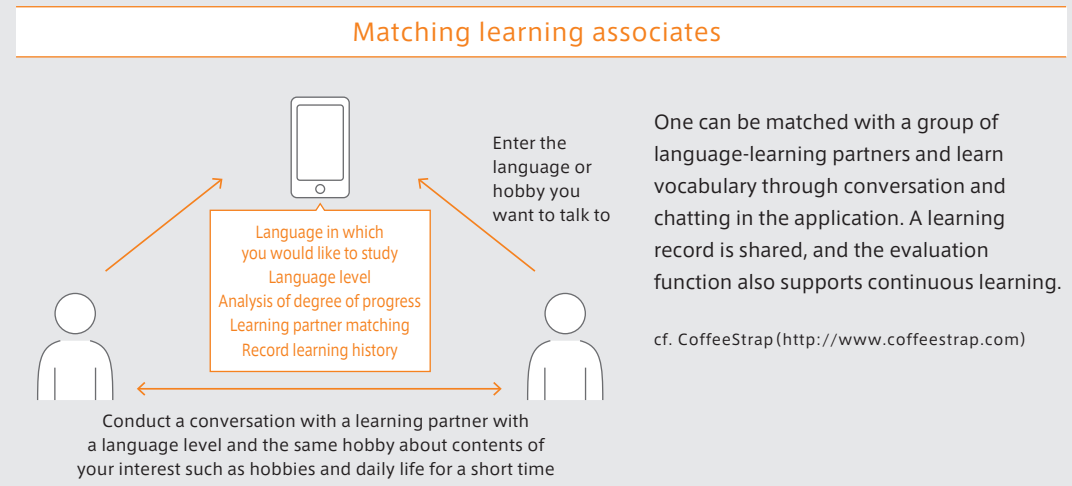


The higher the point, the more important it is to feel that 5 items of family, friends, hobbies, work, living area are important

Source: Created from Recruit Career, “Working pleasure survey” (2017)

Connect fellow learners and create unexpected insights

Fellows who learn together to maintain learning motivation and deepen their learning are indispensable. Technology such as networks and algorithms will release personal learning from solitude, provide a place for unknown classmates to learn together and create new insights. For example, CoffeeStrap, a language-learning application, finds individuals a matching learning partner based on their needs and interests. Because there are countless partners online, one finds friends from all over the world, and it is possible to learn while talking to each other via the application and exchanging texts. Discussions between individuals with the same interests are not limited merely to language learning, but are a virtual experimental ground that brings forth new ideas. When individuals with inquiring minds participate and gather scientific data, it may become possible to throw light even on the problem of the size of space. "Citizen Science," which has been attracting attention in recent years, is a large-scale research activity based on the collaboration of citizens and researchers. Citizens with smartphones or tablet devices acquire scientific knowledge related to everyday life by sending their respective observation data as citizen researchers. By taking this role, they can gain project management experience and get feedback on their research results from fellow scientists. Although it is unknown what part of science citizens will be responsible for, the "creation of scientific knowledge" between citizens and scientists with diverse ideas and cultures will continue to push towards dynamic co-creation through technology.



Citizen Science—On the "Citizen Science" website within Zooniverse, citizen researcher data is accumulated and analyzed by a dedicated application.

Interview

Evolution model of learning

Based on the interview conducted by Recruit Works Institute, people who learn well do not stop at formal learning, but find a method suitable for them, make it a habit, and change the study of small units into different forms. Their style of learning gives hints at how to create a style of learning suited to oneself from among many choices.

<http://www.works-i.com/research/learning/sinka/>

Using



Consciously set up opportunities for practice and presentation and try to achieve results

Yuma Ako/CEO: Tourism Creation Lab, Inc.

Ako resigned from a privileged position at a finance company and made sightseeing his career, even his life's work. Tourism Creation Lab, Inc. was established in 2017. Starting with the experimental tourist experience promotion facility Japonica Lodge, he is trying various projects to promote travel to and develop rural areas of Japan. What drives Ako's evolution is his practical skills. "All my many

business ideas are summarized in a planning document. In particular, what I am trying to do is make presentations at places like business contests, for example. This is to judge the success or failure of my own ideas, because getting evaluations and opinions from the judges is a great learning experience. I think that if you look around with a purpose in mind, there are countless opportunities to learn."

Developing



Feel "realities" at the workplace with all five senses, and discover a role for the new you

Yu Nishiwaki/Administrative scrivener

Nishiwaki struggles as the sole administrative scrivener in a depopulated city with a population of a little over 2,000. What made him switch careers from being a singer-songwriter was that he placed himself on the scene as part of a community building effort, and used his eyes and ears to feel for "something missing in the town." "The town suffered from the problem of vacant houses. This was because there was no administrative scrivener." Because he was

from the law department and was qualified to be an administrative scrivener, he immediately felt that he had found his new role. "When I started business, the areas I wanted to cover, such as inheritance and will-making, expanded even further, and now I am aiming to become a judicial scrivener." With his clear goal of being useful to the town, using what he has learned, receiving feedback, and creating new learning, he has an extremely good cycle in place.

Transforming



Send your activities "outside" using SNS Attract learning opportunities

Kaoru Ariga/Soup writer

Ariga got the title of "soup writer" when he started making soup for his family. However, he was not aiming to be a soup writer from the beginning, and is unenthusiastic about it: "Making soup is fun for me; it is like repeating a pleasant experiment. Doing things and learning things are fun in themselves. I am often told, 'Every day is amazing,' but it is the same as leaving your

children alone and having fun." What connected Ariga's "play" to his work was dissemination through SNS. "Since I started posting on SNS, thinking of it as a diary, I have gotten comments from everyone that make me happy. Besides, from time to time, I can connect with people, get advice, get job offers, and so on. This is what has led to my current activities."

Trying



Systemize one's thoughts and ideas and try to make something actually work

Alon Halevy/Computer scientist, entrepreneur, educator

Alon Halevy, widely known as an authority on AI, declares, "Learning expands my mind and brings a positive sensation." For Mr. Alon, the most effective learning is now "coding." "Since code can be written, I systemize my thoughts and ideas first and try to make it actually work. Then, I try to modify it and integrate it with other information, and in this way build up my learning." Previously, the

action of "just trying and seeing," that took a huge amount of time and money, has become much faster. "Coding can be done without anyone's help, and the cost is also almost nil. This convenience is due to the evolution of technology, and I fully support the 'good way of learning' of practicing first."

Co-creating



Enrich the imagination with people through introspection with different specialists and people with different age

Chris Balme/Founder and head: Millennium School

Chris Balme founded a new junior high school, saying, "I want to do something about students losing their passion for learning. Three years before its establishment, I was working to compare and shape my ideas and research content with fifteen cofounders from four universities." His reasoning is that "by working together, you can imagine even greater things for human beings." This attitude is also handed

down to the current school management, and they continue to study and conduct experiments on lesson research in the fields of brain science and learning motivation in collaboration with UCLA and Stanford University. They also operate a place called "the forum," where people of different ages gather to think deeply. They say that there are many things to be learned from children's reflections.

Past learning was an act of acquiring knowledge.
Future learning will be a means to be yourself

Chris Balme
Co-Founder & Head of School,
Millennium School



Past learning is a fixed thing that happens only for a period of life.
Future learning will change to continuous and dynamic things

Sara Skvirsky, Research Director, Institute For The Future

Past learning is independent from machines and computers.
Future learning will be with computer and AI.

Oren Etzioni, Ph.D.,
CEO, Allen Institute for Artificial Intelligence



Learning in the past was something given at a fixed time
at one's school or workplace.

Learning in the future will be conducted at one's own pace,
throughout one's lifetime.

Brigid Barron, Ph. D.,
Professor, Graduate School of Education, Stanford University



Past learning was controlled by the school system.
The learning of the future will be controlled by
the student himself / herself

Chris Stephenson,
Ph.D., Head of Computer Science Education Strategy, Google

Past learning is cramped for those who like studying.

Future learning will be something that many people
can enjoy freely and richly

Toru Fujimoto, Project Assistant Professor
Center for Research and Development of Higher Education , The university of Tokyo



Learning in the past was something vague, like "it is good to finish it."
Learning in the future will be an indispensable tool for people to achieve happiness.

Alon Halevy, Ph.D., CEO, Recruit Institute of Technology, Inc.

Learning in the past is like prepared course meal.
Learning in the future to design by a la carte method

Takashi Muto
specially-appointed professor
Shiraume Gakuen University



Past learning is to gather knowledge from good schools and famous experts.
Future learning will be based on experience. Learning and working are integrated.

Parminder K. Jassal, Ph.D., Director, IFTF Work+Learn Director



cf. How will future learning change? <http://www.works-i.com/research/learning/tech/>

Project Overview

To discuss Learning Model 2030,
Works Institute conducted the following three research studies.

1 Interviews of adults, Japan and USA, who “learn on their own” <http://www.works-i.com/research/learning/sinka/>

Regarding learning at the time of transition, we surveyed and interviewed each person regarding their original way of learning.
Interview associates: Yuma Akaho: CEO, Tourism Creation Lab, Inc.; Kaoru Ariga: Soup writer; Kota Takamori: Member Success Group; Yu Nishiwaki: Administrative scrivener; Haruka Fujishiro: Ebara Corporation; Chris Balme: Co-Founder & Head of School, Millennium School; Chris Stephenson: Head of Computer Science Education Strategy, Google *Titles omitted

2 Survey of “working learners” in Japan

We conducted a survey to determine the presence or absence of learning activities among working people, the purpose of their learning, and their methods.

Survey method: Interview monitor survey

Specimen design: The parent set consisted of working people nationwide aged 15 to 64 years old. Sex, age (10-year increments), form of employment (3 categories), and residential area (4 areas) were collected so as to match the population composition.

*Parent set data source: “Labor Force Survey” (2012-2016), Bureau of Statistics, Ministry of Internal Affairs and Communications

Sample size: 5,624s

Survey period: December 14-December 19, 2017

Survey title: “Working Pleasure Survey”

Researchers: Recruit Career, Recruit Works Institute

3 Interviews of experts, domestic and overseas <http://www.works-i.com/research/learning/tech/>

We interviewed experts in the fields of learning, education, gamification, and technology.

Research associates: Chris Balme: Co-Founder & Head of School, Millennium School; Brigid Barron: Professor of Learning Sciences, Graduate School of Education, Stanford University; Oren Etzioni: CEO, Allen Institute for Artificial Intelligence; Toru Fujimoto: Tokyo University Special Lecturer, Comprehensive Education and Research Center; Alon Halevy: CEO, Recruit Institute of Technology, Inc.; Takashi Muto: Professor, Shiraume Gakuen University Graduate School; Sara Skvirsky: Research Director, Institute for the Future; Chris Stephenson: Head of Computer Science Education Strategy, Google *Titles omitted

Processing of analysis data

P4 Sprouting ————— The degree of job satisfaction is classified into three stages of high, middle and low, “1. Very satisfied ~ 5. Very dissatisfied”. The real feeling of growth is classified into 3 stages of high, middle and low as “1. I feel strongly ~ 5. I do not feel” feeling growing through work. After that, we analyzed the proportion of voluntarily learned people. Only regular employees.

P8 Using ————— We divided into two groups, one learning voluntarily and one not learning voluntarily, classifying “1. apply to 5. not apply” for each item into three stages of high, middle and low, and expressed the proportion. We targeted Only regular employees.

P6-P10 Trying-Transforming — For each item “1. very applicable ~ 5. not apply at all” was classified into 3 stages of high, middle and low. Analyzed the proportion of voluntarily learned people. Only regular employees.

P12 Co-creating ————— 1. Family, 2. Friend, 3. Hobbies, 4. Work, 5. Living area After evaluating with “1. Very Important ~ 5. Not at all Important” for these 5 items in the area 1 to 2 (important) *as one point, the total number of items which I feel important is added up. Only regular employees.

Learning Model 2030 "2030 : Learning as Creative Activities"

■ “Learning in a 100-year life span” project

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