

# A STUDY OF ONLINE CAREER DESIGN VISUALIZATION THROUGH MATRIX FORMAT

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## ABSTRACT

In this research, the researcher proposes a visualized online career matrix that describes university students' life from birth to their most recent year every three years and describes the interrelationships of each division in a matrix format. In this research, based on the theory of career anchors, which states that it is necessary for career education to deepen self-understanding in the long and short term, in addition to the conventional method of analyzing life stories, a method called career matrix is proposed and a model program is introduced. Then, the effect through the transitions of students' self-understanding is considered.

**Keywords:** Career Anchor, Career Learning, Online Learning, Zoom, Self-Understanding, Life Story, Career Matrix, Narrative research

## 1. BACKGROUND OF THE RESEARCH

The pandemic that hit the world in 2020 has significantly changed the learning environment of Japanese university students. It has become obvious that online learning increases stress and reduces self-affirmation. According to Career Anchors Theory [12], it is necessary to deepen self-understanding to choose a career. This research focuses on a program that promotes self-understanding in order to conduct practical verification of the online career program for university students. The purpose of this paper is to practice and consider career learning by incorporating the "Career Matrix" proposed by Prof. Kunio Ohno as a program. Then, the effect is examined by studying the transformation of self-understanding and self-affirmation of some college students.

## 2. PREVIOUS RESEARCH

Organizational psychologist E. Schein's "career anchors" theory states that it is necessary for career education to evaluate long-term and short-term self-awareness to know oneself [12]. A conventional life story is a subjective and objective story about an individual's life. It is one of the qualitative research methods that try to visualize the aspects and changes of a person's environment, society, and culture over their lifetime. As pointed out by Peacock et al. [9], this method has been applied in folklore and anthropology,

but it is also a widely used method in the fields of social sciences, including psychology, social psychology, and clinical practice. Yonemaru et al. [13] utilized a subjective life story as a means of self-understanding in career learning for high school students.

Ohno and Nishiguchi [7] developed the theory of career anchors and published a Matrix Resume; it is a new method of career analysis that analyzes a person's life story based on objective historical artifacts of the life of the past person and deduces the individual qualities and potentials from it. Nishiguchi [7] practiced the life story method called Career Matrix for technical college students, but there is still little research on the method being applied to university students.

Savickas et al. [10][11] point out that the framework for thinking about career counseling should be structured to be lifelong, holistic, and preventative counseling (the anticipation and avoidance of conflicts or problems for those facing stress in the future). He argues that the importance of thinking about life stories subjectively and objectively has become clear, and that there is still a need for "preventive," that is, something that complements the life story. According to APA handbook of career intervention [5], "preventative functions of counseling are important because they are based in a different set of values." However, the "Career Education Program Collection" [6] for university students commissioned by the Japanese Ministry of Health, Labor and Welfare does not assume an online program. In this study, the researcher introduced the career matrix as a model program in career learning and considered what kind of changes were seen in the subjects' self-understanding.

Also, according to psychologist J. Piaget and developmental psychologist E. Ericsson, humans have several "developmental stages." That is why the questionnaire is divided into three-year time periods.

According to a study (Kimura, [3]) using the results of an online questionnaire that was completed by 101 college students, as of 2020, college students had low self-affirmation, and many students wanted to deepen their self-understanding. The need for these self-analysis programs has become clear.

This research will allow students to think about their careers subjectively, objectively and matrixially, based on their own photographs, albums, essays, things, such as crafts and writings that they produced themselves, etc., using an online method. The researcher proposed and put into practice a model program framework. To gauge the effect, the researcher measured the transformation of the students' perception

of self-understanding after participating in a model program.

### 3. OUTLINE OF THE RESEARCH

In this study, life from birth to the present was divided into seven categories of three years each based on the participants' school year. Then, in addition to the conventional description of the life story, the program describes the interrelationship of each division in a matrix format. The goal of the research is to practice a model program in an online format and to consider the transformation of self-understanding of college students.

The subjects of the research were students in the first year to the fourth year of their university studies. The researchers explained to the participating students that their privacy would be protected when presenting the research results, and the researcher received a research participation agreement from them. The participants were asked to fill out a questionnaire after the session.

During the session, the author explained "subjective life history" and "objective life history," and Prof. Ohno was asked to explain the method of S-3 and take a role as a guest practitioner. The researcher observed the session online and gave feedback when necessary.

The analysis data consisted of (1) video recordings of the research progress, (2) questionnaires obtained from three online surveys. In addition, (3) memo notes and online photographs of the session were taken by the author. In the camera photography, students' photos (with their names deleted) were taken as records of individual process.

### 4. METHODOLOGY

In the Japanese school system, kindergartens are for 4-to-6 year olds, elementary schools are for 7-to-12 year olds, junior high schools are for 13-to-15 year olds, and high schools are for 16-to-18 year olds. As mentioned above, the research looks at university students' life from birth to their most recent year every three years. (It is easier for students to remember their past episodes by school periods.) And we also divide elementary school years into lower and upper grades as there are developmental difference between these two.

As shown in Figure 1, the program was composed of three sessions with the theme of creating a life story. The three sessions were about one's self-understanding subjectively, objectively, and matrixially.

	Session content
S-1	Self-understanding in the subjective version
S-2	Self-understanding in the objective version
S-3	Self-understanding in the career matrix version

Fig.1 Session structure

Kimura and Prof. Ohno prepared each online questionnaire for S-1, 2 and 3 with Google Spreadsheet. Then, they were distributed through the chat function on Zoom. The author also explained that the sheet could be freely deleted by those who did not want to share it. The time allotted to fill out the program was set at 90 minutes (Fig. 2).

Activity (time)	Instructor guidance	Student activities
Greeting (2)	Greetings, confirmation that the student's learning environment is ready	Greetings, preparation for lectures (headphones, PC charging, etc.)
Warm up (3) (Reflection)	Distribution of materials online	Open material
Content understanding (20)	Explain how to use the materials and activities	Understand the content and ask questions
Practice (30)	Student entry and guidance	Fill in the materials
Looking back and fixing activities (20)	Have students' presentation and share (do not force)	Make own presentation, listen to other students' presentations
Summary / Review (15)	Ask some questions. (If there is, present the issues until the next time)	Listen to the instructor, answer questions, and ask what you don't understand

Fig.2 Progress chart

The purpose of the model program was for students to independently gain self-awareness in the process of looking back on their own life stories from three perspectives.

### 5. RESEARCH RESULTS

Since the research subjects had to participate online in all three sessions, in the end, only five students participated.

In the responses to the questionnaire of the S-1 session, it was found that the self-affirmation of all the subjects was low. In Session S-1, students commented that their self-images are "interesting" and "something cute," and there were also comments such as "I can't remember when I was little," "I cannot remember (I can't remember), bcz it was an unpleasant era." There was a statement that it was easy to remember. But one of the students kept the output private after the session and this means he doesn't want his responses to be made public.

In their responses on the S-2 worksheet, the students made comments such as, "yourself who has been doing activities" and he, "who is turned out doing my best," the students made remarks such as, "I've done this, wow" and "I'm doing my best." There were also positive comments that "we can do this work." There was also an opinion from a student that the second session led students to a sense of self-affirmation.

Students' comments in the S-3 worksheet (see Figure 3) included, "It was not wasteful than I had been imagined myself, how the past 20 years of life were,"

"dotted life,,,,, dots of my life became lines" and "that the experiences had come along with me until now." There were also comments that "I was able to rediscover my strengths by noticing that everything was connected" and that the factors of the past were being utilized, such as "ah, that time was being utilized." By visualizing their past, the students were able to recognize their past and proceeding efforts. They nodded a lot during the session and sighed a lot. They seemed to have positive reactions to this session.

S-3	4-year old	7-9 yrs old	10-12 yrs old	Junior High School Student	High School Student	University Student
born to live old (baby)	interested in many things	like to know unknown things	joined to many clubs	joined to B club	went to continue ball games	joined to the D club
had an older brother	had many new things	had many new things	had many sports and had some success experience	played, skills were higher	played some sports	can play more sports
made many mistakes	the coach	made friends	the first member of club with a friend	the food cooked a lot	the food cooked much more	A food experience will be little settled
lost many funny things	the dog escaped from my house for many times	could not even touch them	could not even touch them	could not even see them	could not even see them	no interest in bags and can touch them
lost many funny things	lost many funny things	could not even see them	could not even see them	could not even see them	could not even see them	no interest in bags and can touch them
interested in a toy puppet	started studying	became bad at studying	became bad at studying	can't catch up with English	English became trouble	efforts to overcome title by title
lost bags and mistakes	a dog arrived to my house	the dog passed away	the dog passed away	the dog passed away	a new dog has arrived	a new dog has arrived
	interested in making clubs	interested in soccer clubs	joined a top-of-war club	joined to soccer and PP creation	Make best future setting with Excel	Make an entrepreneurial plan with PP
	joined a chess group	joined a chess group	joined to a chess club	became a manager of a club	joined to the E club	joined to the E club
	started ball game	started ball game	started ball game	a friend invited me to join a club	started ball games again	started ball games again
	lost many games	lost many games	lost many games	lost many games	lost many games	lost many games
	he had at English	he had at English	he had at English	he had at English	he had at English	he had at English
	made friends	made friends	made friends	made friends	made friends	made friends
	made new friends	made new friends	made new friends	made new friends	made new friends	made new friends
	belong to the student organization	belong to the student organization	belong to the student organization	belong to the student organization	belong to the student organization	belong to the student organization
	staff a part-time job	staff a part-time job	staff a part-time job	staff a part-time job	staff a part-time job	staff a part-time job
	became 20 yrs old	became 20 yrs old	became 20 yrs old	became 20 yrs old	became 20 yrs old	became 20 yrs old
	concern with friends game	concern with friends game	concern with friends game	concern with friends game	concern with friends game	concern with friends game
	interested in programming	interested in programming	interested in programming	interested in programming	interested in programming	interested in programming

Fig.3 S-3 Student sample C

## 6. ANALYSIS AND INTERPRETATION OF THE RESULTS

After subjectively recalling their life history, students commented that while it was an "interesting" practice, "I never looked back on it this way," and "it reminded me of the negative side." As in previous studies, when the researcher approached such subjects from the perspective of accepting counseling, she found the expression "(this program) looks interesting." In addition, when one's life history was drafted from the evidence that one can see oneself objectively, the tendency of affirming oneself was seen, such as the expression, "I have worked hard." There were subjects who expressed their motivation to take part in this research by writing "the session can be done although this could be hard work."

In the third part of the study, based on the objective facts of subjects' life, such as photographs, the researcher used a matrix method, examining how each element is connected to the present person, so far. There was also a student's opinion that his self-affirmation had increased by noticing the connection between the activities that he had done in the past and the present. There were many subjects who said, "I'm glad I did it [the program]." Another student commented that "I want to know more" and want to continue learning the program to understand myself. A week after the session, some students who were interested in self-understanding had a Zoom session to read and study literature in English to deepen their self-understanding. The students also seemed eager to learn in English in order to better understand how their past can give them ideas about what career to pursue in the future.

In the first interview, all five subjects said that their self-affirmation was low, but after the online program, they commented, "I felt the effect" and "I am interested in such efforts."

The model program of this study seemed to improve self-understanding and self-affirmation in the process of accepting oneself subjectively, accepting oneself objectively, and recognizing skills and talents which they may not have thought about that could be useful in deciding what to do in the future. It was also found that the students themselves were interested in the field. There is an ARCS model (see Figure 4 below) advocated by educational psychologist J. Keller [2], This model corresponds to the researcher's proposed model, and the researcher thinks that it can be used to increase the motivation and self-understanding of learners and to create an environment for spontaneous learning.

According to Keller, "The ARCS Model defines four major conditions (Attention, Relevance, Confidence, and Satisfaction) that have to be met for people to become and remain motivated." (see Figure 4) The ARCS model can be applied over and over in the program described in this paper as a way to motivate learners.

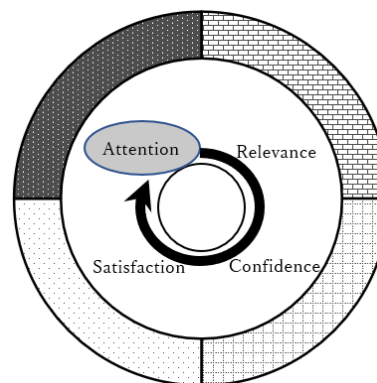


Fig. 4 ARCS model by J. M.Keller

The number of people who participated in this research study was small, and the researcher would like to continue to investigate the effectiveness of the online model program through further research in the future. Since the skill of self-understanding can be learned from various fields, it is possible that in the future study, along with career learning, lectures using self-understanding can be given in English as a way to also advance their language education.

This study explained the possibility of improving students' self-affirmation through the use of an online program. In addition, the author thinks that students can collaboratively participate in this model.

In this era of an uncertain future, the author would like to do further research focused on career learning that will lead students to evaluate themselves and their lives and think about their future through the development and utilization of online programs.

## 7. ACKNOWLEDGMENTS AND GRATITUDE

The researcher would like to thank the Yokohama College of Commerce for its special research grant.

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