THE FIRST-YEAR EXPERIENCE INCORPORATING THE ORGANIZATIONAL DEVELOPMENT APPROACH AT KOBE TOKIWA UNIVERSITY

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Abstract

In Japan, the first-year experience that rapidly gained attention at the beginning of the twenty-first century was clearly positioned in 2008 as formal undergraduate educational programs (The Central Council for Education, 2008). The term "first-year experience" is defined as a "comprehensive educational program primarily created for freshmen" to promote their smooth transition from high school to university and to create successful academic and social experiences at university (The Central Council for Education, 2008). Thus, the first-year experience is a specific program with activities implemented by diverse universities to fit the unique needs of their first-year university students (Tachi, 2008). One important issue of the first-year experience within the undergraduate program has been identifying ways to guarantee the quality of education. Kobe Tokiwa University's four departments (medical technology, nursing, child education, and dental hygiene) require students to gain strong abilities to collaborate and cooperate in teams to be responsible for future team medical care or a school as a team. Therefore, in 2018, the university implemented a first-year experience program that incorporated the organizational development approach instead of the conventional human resource development approach. This article shares our experiences using a first-year experience program that incorporates the organizational development approach, and we discuss the potential of this approach for the first-year experience. To estimate the effectiveness of organizational development approach in FYE, we analyzed and compared the interim data that were reported on students in 2017 and 2018 using a text mining method. By introducing this "Organizational Development" approach into the students' first-year educational curriculum, results suggest that it is possible to "deepen self-understanding" and "cooperate in self-understanding of others" at an early stage of a student's enrollment. It is thought that this approach could become another effective method for universities to use for training professional persons as interpersonal aid workers.

Keywords

1. Introduction

In the United Nation's Educational, Scientific, and Cultural Organization (UNESCO) 1998 report, "World Declaration on Higher Education for the Twenty-First Century: Vision and

Action" (UNESCO, 1998), UNESCO stated that one of the missions and functions of higher education is to educate highly qualified graduates and responsible citizens who are able to meet the needs of all sectors of human activity; relevant qualifications, including professional training which combines high-level knowledge and skills, are offered through courses and content continually tailored to the present and future needs of society.

The Organization for Economic Co-operation and Development (OECD) has indicated that Japan's university enrollment rate was 51% in 2010 (OECD, 2012). Japanese universities have changed from an approach that is characterized as "mass type" to a "universal access type" thereby, the quality of the students has also changed significantly. Thus, it is becoming increasingly important and/or difficult to educate highly qualified graduates and responsible citizens. The drastic change in the circumstances of the society surrounding higher education necessitated the university reform in Japan.

While competency-based education has become a popular topic in the field of higher education, it has only recently been introduced in most Japanese universities. Kobe Tokiwa University is currently undergoing reforms, one of which involves competency-based education (Kirimura et al., 2018). Our university has developed a common evaluation indicator called "Tokiwa competencies" that students can acquire through regular, quasi-regular (remedial), and extra-curricular (club) activities.

For example, quasi-regular curricula are remedial while extra-curricular are club activities. Tokiwa competencies include 19 types of competencies: Culture, Common Sense, Professionalism/Expertise, Media Literacy, Logical Thinking, Critical Thinking, Intellectual Curiosity, Exploration, Continuity, Self-Management, Reflection, Design Thinking, Presentation, Judgment, Implementation, Responsibility, Contribution, Communication, and Cooperation and Collaboration (Nakata et al., 2017).

The Japanese Association of First-Year Experience at Universities and Colleges (JAFYE) was established in 2007. The first-year experience (FYE) program was introduced in many American higher education institutions beginning in the late 1970s until the early 80s (JAFYE, 2007). FYE has been acknowledged as an effective educational program to facilitate the "success" of students and control their dropout rate, and has now spread to many countries around the world.

As a background to this program, as higher education has become increasingly universalized, a diverse population of students has advanced to higher education. Meanwhile, it is expected that quality assurance at the time of graduation is a given, that the first year's education is effective in assimilating students enrolled in a university program, preventing setbacks such as dropping out, and creating pathways for success. It is because evaluation is getting higher (Tanigawa, 2013; Keidanren, 2018).

In 2017, as one example of university reform (Kirimura et al., 2018), Kobe Tokiwa University created a new FYE course called "Academic Skills and Deep Learning I (Mitsunari et al., 2018)." Nineteen teachers teach this course to approximately 350 students, with 16-17 students per class. In this class, the students form groups of approximately six students. It is difficult for the 19 different teachers to evaluate students equally.

In a previous study, using the Steel-Dwass test, we found that the teachers of this course did not evaluate the students in a standardized way (Nakata, Kozaki, Kunisaki, et al., 2018). We aimed to determine whether a standardized evaluation rubric would ensure standardized and equal student evaluation among the teachers of this course. In addition, in 2017, Kobe Tokiwa University started another new FYE course called Academic Skills and Deep Learning II, which was designed to follow Academic Skills and Deep Learning I. Following our detailed discussion with all teachers and students on the evaluation process implemented for Academic Skills and Deep Learning II, we concluded that there were no significant differences in the teachers' evaluations of students, which we established via multiple comparison analysis (Nakata, Kozaki, Mitsunari, et al., 2018).

This shows that the relationship that is required between teachers to equally evaluate students plays an important role. Therefore, this led us to consider the concept of Organizational development (OD). OD is a type of initiative which facilitates the ability of a group of people to function as an organization. In order to increase the effectiveness and stability of the organization in the organization, this approach entails a systematic intervention within the organization while utilizing the theories and methods of behavioral science, to promote the organization's cultural reform. While human resource development targets "people" as individuals, OD focuses on encouraging "relationships" and "interactions" between people upon which the people themselves are then ideally motivated to improve.

In recent years, team building, facilitation, and world café (Brown, 2005) were all invented as OD approach. In today's complex and interconnected world, it is more important than ever that we work together collaboratively. Facilitation plays an important role in engaging group members in that process. A gathering of competent individuals is not an excellent organization by default. Work on "relationships" between people and people, not people.

OD approaches, which originated from concepts from within social psychology, such as group dynamics and organizational psychology, were founded in the United States in the late 1950s. Originally, since society is composed of people with diverse backgrounds in terms of race, ethnicity, religion, and culture, and also because of individualized national character, companies in Europe and the United States have a large amount of employment I've been struggling to organize and make them work. As a result, the concept and technique of "organizational development" emerged.

As you can see from this background, organizations are not simply formed from the gathering of people. Furthermore, a group of talented individuals does not necessarily become an organization with good performance. What is an organization in the first place? Edgar Schein, a leader in organizational development, says, "To achieve common objectives, or goals, through the division of labor and differentiation of functions, through the hierarchy of authority and responsibility, the activities of many people It is to make it cooperate reasonably (Schein, 2010)." OD is an approach which intentionally and systematically builds an organizational structure in such a way that a group of people functions as a collaborative system.

Even though the same personnel issues to be solved are the same "retention", the concept of the solution developed by different approaches, whether it is detained by personal assistance or improvement of treatment, or a workplace that you want to stay on your own will also change.

2. Research Issue

In the introduction, we briefly introduced the importance of collaboration, not only in higher education but also in the workplace. OD is a type of initiative that allows a group of people to function as an organization and encourages "relationships" and "interactions" between people and which the people themselves then develop in a favorable direction (Figure 1). Therefore, we applied OD approach to FYE in higher education. Our university has an FYE which is implemented through the class mentioned previously, "Academic Skills & Deep

Learning I". We constructed and performed an interim report for FYE. To estimate the effectiveness of OD approach in FYE, we analyzed and compared the interim data that were reported on students in 2017 and 2018 using a text mining method.
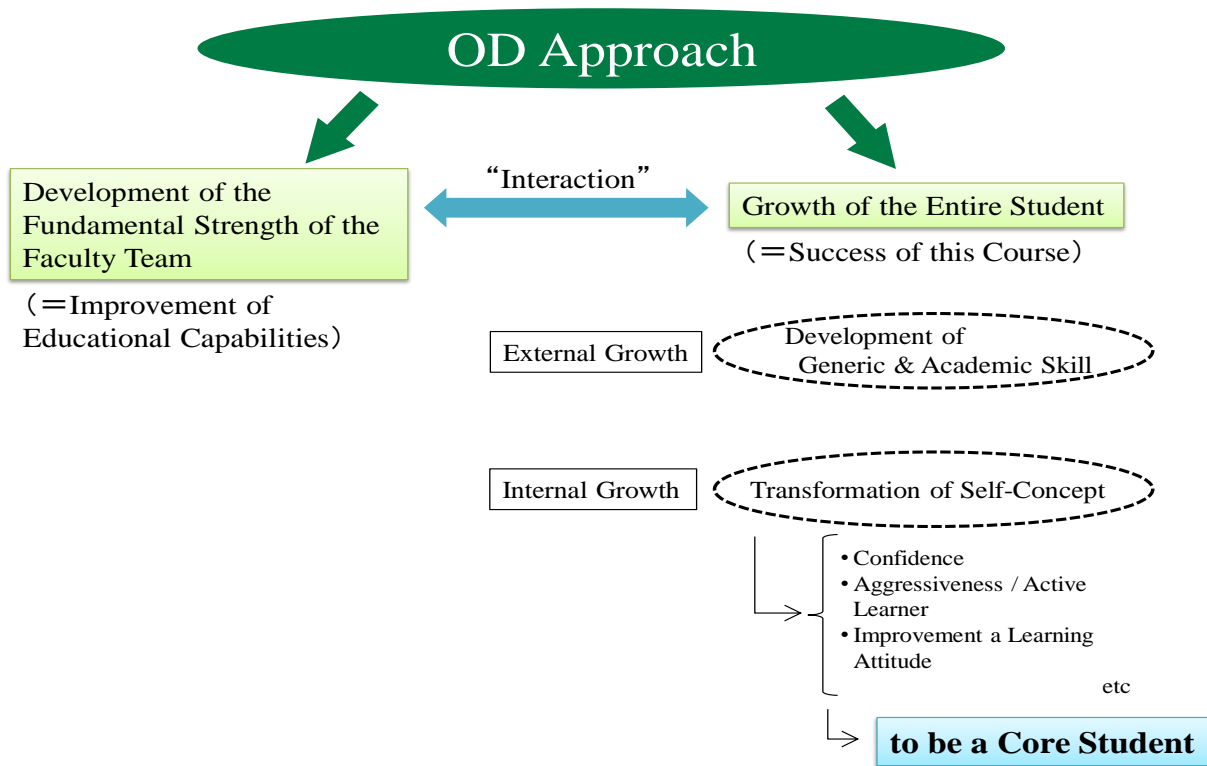

Figure 1: *Overall Image of Educational Activation Using OD*

3. Methodology

3.1 Objective

We obtained the interim report (which was a task given at the end of both the 15th and the 30th lectures) written by students who attended "Academic Skills & Deep Learning I," which we then analyzed. Our university uses a cloud-based educational assistance service called "manaba," which is provided by Asahi Net, Inc. In view of this, we analyzed the data of 271 students from the interval report and those of 308 students from the final report, which was submitted on manaba by the students.

3.2 Analysis Method

3.2.1 Quantitative Content Analysis or Text Mining

Based on the data of 271 students from the interval report and those of 308 students from the final report, to clarify <meanings> which were had student to acquire the subject, we performed calculations that used text analyzing / text mining. In this article, we defined the measurement of text / text mining as "a way of content analysis modifies or analyze text style data with using quantitative analysis method". We only performed the extraction of frequency words and the creation of a co-occurrence network as "stage of searching situation of data with using auto extracted words avoiding operation which might be arbitrary interference". Furthermore, we did not "evaluate" the data by stepping into the "stage in which analysts take subjective and explicit data concepts and analyze deeper" (Takamatsu, Kozaki, Kishida, et al., 2018).

Here, we mention background that uses co-occurrence network to analysis. Through this analysis, we wanted to grasp the meanings which the students were able to subjectively derive. Meanings are invisible, for example, the word Apple has associated meanings such as, "red," "edible," "sweet," "round," "eaten by elephant" and meanings exist, "As cluster not individually," as we also mentioned. According to Willard Van Orman Quine, knowledge (belief) should be regarded as a network which is structurally linked with other types of knowledge in a cluster (Quine, 1980).

In recent theories of complicated networks, it was revealed that a huge cluster (connected network) of words was comprised of 96% of the whole data set in an experiment of word association. That is to say, knowledge and belief do not exist individually, and are linked with each other in a relationship wherein close to one thing or sparse one thing. Moreover, we live in a world that is networked by meanings. Accordingly, we should mention that whole things of meanings were grasped by students in the learning process they experienced in "Academic Skills & Deep Learning I," which was revealed through this analysis.

In the co-occurrence network, which was the result of the analysis conducted in this study, words which had a high frequency are indicated by a larger node (vertex), words with a high co-occurrence relationship are indicated with a thick line, and the colors blue and dark pink indicate words with nodes that have a high degree of mendicancy.

3.2.2 Software of Statistics Analysis

We used KH Coder (Ver. 3. Alpha.9), which is a free software used for quantitative content analysis or text mining. It is also utilized for computational linguistics (Higuchi, 2016; 2017).

The KH coder is free software developed by Associate Professor Koichi Higuchi of Ritsumeikan University and can perform text-mining or quantitative content analysis using a graphical user interface. The KH coder makes various types of weighted text analysis possible using R (statistical analysis software) (Ihaka & Gentleman, 1996), ChaSen (morphological analysis software) (Matsumoto, 1997), and Mysql (free database search software) ("mysql," 2018). The advantage of the KH coder is that it allows the user to perform many instances of text mining easily, even if the calculation cannot be expressed with a formula. KH coder can perform an extracted word search, hierarchical cluster analysis, co-occurrence network analysis, multidimensional scaling, related word analysis, and correspondence analysis, among other types of analysis. In addition to supporting Japanese and English data, KH coder also experiments with Dutch, French, German, Italian, Portuguese and Spanish data.

3.3 Ethical Consideration

For the students who participated in "Academic Skills & Deep Learning I", we obtained their consent in advance in both verbal and written form, as shown below. We used recorded materials submitted in this course as research materials for improving classes, gave students the right to withdraw from the study, ensured the protection of their privacy and the anonymization of data, and informed them that they would not suffer negative consequences if they chose not to give their consent for participation.

4. Conclusion

We show the top 30 most frequent words from the students' written assignment in 2017 (Table 1) and the co-occurrence network from 2017 (Figure 2). We also show the top 30 most frequent words from students' written assignment in 2018 (Table 2) and the co-occurrence network in 2018 (Figure 3).

In both 2017 and 2018, the words that ranked 1st and 2nd place in terms of frequency were the same: "Opinion" and "Myself". The frequency of the word, "Opinion", which was ranked first in 2018 (1,658) had almost the same frequency as 2017, when it was also ranked first

(1,622). However, the frequency of the word ranked second, "Myself," in 2018 (1,601) was 30% greater than the frequency of that same word in 2017, although it was still ranked second (1,190). The frequency of "Partner" in 2018 was 70% greater than the frequency of the same word in 2017, the frequency of "Communicate" in 2018 was 30% greater than the frequency of that same word in 2017, and the frequency of "Listen" in 2018 was 20% greater than the frequency of the same word in 2017.

The difference between human resource development and organizational development is that the targets of human resource development are people, whereas the targets of organizational development are relationships and interactions among people. In other words, organizational development is a function that derives the energy, self-discipline, and mental independence in an organization, with the idea that changes in relationships among people and their interactions will change the organization. The "Team Building" program, utilizing the "Organizational Development" approach was intended to help students "understand ourselves deeply while learning about communication and leadership, not waiting for teamwork that can be achieved spontaneously, education and training methods that deepen mutual understanding, integrate goals, and combine forces to achieve the goal, to experience such processes experientially." By introducing this "Organizational Development" approach into the students' FYE curriculum, results suggest that it is possible to "deepen self-understanding" and "cooperate in self-understanding of others" at an early stage of a student's enrollment. It is thought that this approach could become another effective method for universities to use for training professional persons as interpersonal aid workers.

Table 1: *Frequent Words in Students' Written Assignment in 2017 (Top 30 Words)*

Extracted word	Frequency	Extracted word	Frequency	Extracted word	Frequency
Opinion	1,622	Partner	382	Know	258
Myself	1,190	Team	335	Squad	249
Suppose	916	Idea	311	Story	240
Person	909	Differ	306	Good	233
Group	820	Need	293	Discussion	214
Learn	631	Communicate	291	Communication	213
Class	610	Talk	278	Department	209
Think	552	Feel	270	Appear	195
Listen	429	Disclose	263	Work	193
Important	418	Tell	261	Other	189

Table 2: *Frequent Words in Students' Written Assignment in 2018 (Top 30 Words)*

| Extracted word	Frequency	Extracted word	Frequency	Extracted word	Frequency
Opinion	1,658	Listen	530	Discussion	289
Myself	1,601	Class	494	Need	283
Person	991	Talk	440	Task	270
Learn	976	Communicate	379	Know	255
Suppose	950	Work	363	Listening	246
Group	892	Communication	352	Differ	231
Think	673	Feel	342	Role	229
Partner	663	Story	319	Ability	228
Important	636	Idea	313	Information	224
Team	577	Tell	294	Importance	223
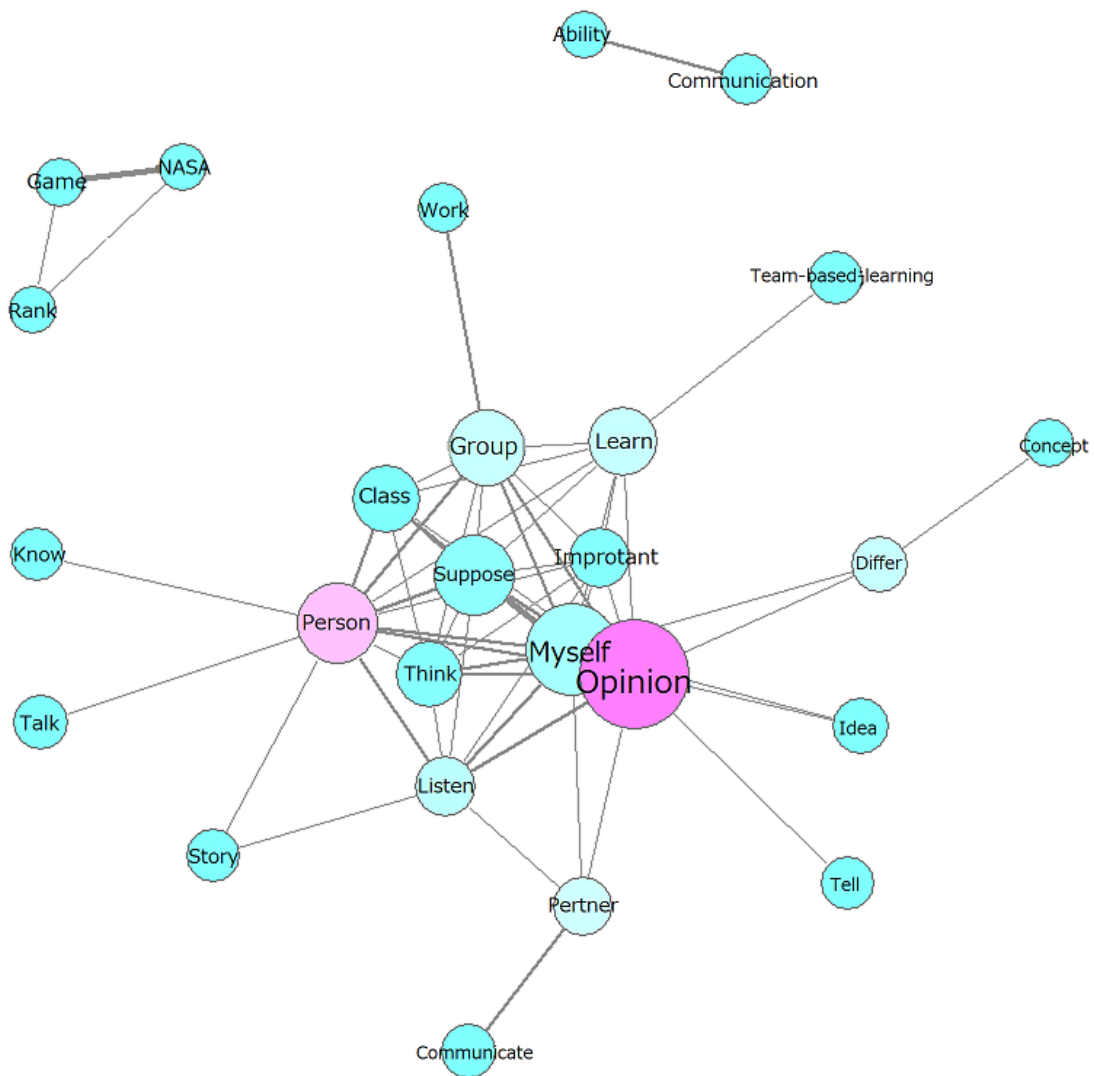
Figure 2: *Co-Occurrence Network in 2017*
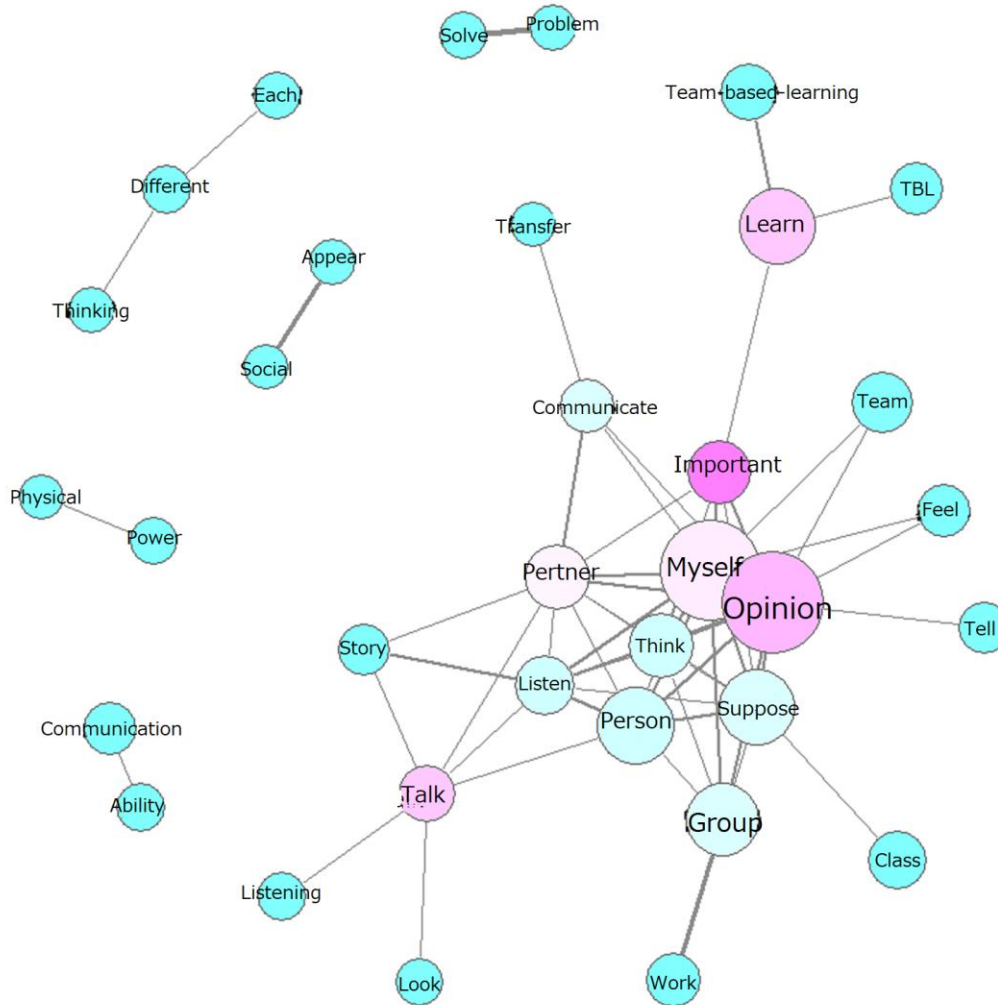
Figure 3: *Co-Occurrence Network in 2018*

There are many visualization methods by the text-mining method to analyze open-ended responses of course evaluation by students. In this article, we only shew a visualization by network method. This is a limitation of this study. Although network method is easy to understand, for example, visualization of multiple dimensional scaling (MDS) methods is better to understand relationship or distance between words than network methods (Takamatsu, Murakami, Kirimura, et al., 2017). In the future, we will analyze using other methods by text-mining.

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