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# Proposing Methods of Support by IR for Japanese National Universities on the Mid-Term Plan Related to Globalization

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**A r t i c l e   i n f o**

**A b s t r a c t**

Japanese national universities should promote their globalization plans. However, there are some inappropriate management plans. While institutional research ("IR") is expected to help the executives in developing mid-term plans, there are no methods to contribute it by IR at present. In all Japanese national university corporations, the mid-term plans are developed in order to achieve their mid-term objectives. 56 mid-term plans are related to globalization among the plans developed by all universities adopted in Top Global University Project in Japan. Some mid-term plans don't contain essential elements which are inputs, activities, outputs, and outcomes. As the support of IR, we can show the executives processes based on data in order to develop mid-term plans based on logic model for these plans. On the other hand, the mid-term plans with no or inappropriate numerical targets exist. The other plans with inappropriate numerical targets may be unachievable. Through IR, we should provide the executive with numerical data which can indicate present and future circumstances. In our work, we will not only clarify the problems of the management plans but also study how we can support these plans concretely through IR.

## 1. Introduction

In recent years, internationalization is developing rapidly. Therefore, Japanese national universities must promote their globalization to correspond to the world. The Ministry of Education in Japan conducts the Top Global University project on the principle of competition among Japanese universities (MEXT, 2014).

Considering recent severe situation of management resources, these universities are expected to develop appropriate plans of action and to accomplish them not only efficiently but also effectively. Especially, Japanese national universities have to develop mid-term

objectives and mid-term plans by the law (NIAD-UE, 2011). Here, mid-term means a term of 6 years. Almost all mid-term objectives and mid-term plans contain the components of globalization. In the third mid-term, which means the term from 2016 to 2021, all national universities had to contain concrete activities and numerical targets into these mid-term objectives and mid-term plans to do evaluation easier. However, some inappropriate plans exist among the management plans developed in each Japanese national university. Inappropriateness means that the mid-term plans are not concrete, whether the plans can be achieved or not is unmeasurable, and so on.

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Supporting executives of each university by IR (Saupe, 1990) based on various data is expected when the they make decisions for management of their universities because IR has the function to support the executives to make decisions about university management (Minamoto et al., 2016). For the present, unfortunately, there are no methods established to support executives by IR because there are various roles of IR in each university (Funamori, 2016).

Firstly, we will clarify the problems that occurred when the executives of Japanese national universities developed management plans.. Then we will develop the ways to support the problematic management plans by IR.

## 2. Related Works

Takata (2017) clarified the problems of Japanese mid-term plans and how to support the executives to develop the mid-term plans related to education by using Logic Model. Moreover, Takata and Mori (2014) presents a case study of progress management for Japanese national universities' mid-term plans and Fujii (2016) surveys the status quo of index for mid-term plans.

Sakano (2012) mentions usage of logic model as the flow of the manifestation of plans' effects in accordance with a framework which include resources, activities, outputs, and outcomes. There are some examples using the logic model. Kominato (2016) explains how to develop the mid-term plans based on policy evaluation. Yamamoto (2016) presents the example of developing concrete mid-term plans by using logic model.

## 3. Methodology

The study is conducted by the following methods.
### 3-1. Analysis of Problems of Mid-term Plans
### 3-1-1. Targets
In Japan, there are 11 national universities which were adopted as the Top Global University established by the Ministry of Education of Japan. The targets of our work are 56 mid-term plans (MEXT, 2015) developed by the executives of these 11 universities. All 56 mid-term plans are related to globalization.

The mid-term plans are the plans that Japanese national universities have to develop in order to achieve their mid-term objectives created by them. The mid-term means 6 years. These mid-term objectives have to be achieved in all Japanese national universities. These

objectives are also concerned with business operations. Every 6 years, all Japanese national universities are evaluated whether these mid-term plans are achieved or not. The universities whose mid-term plans are not achieved may suffer a disadvantage. For example, the results of the evaluation are reflected on their budgets.

### 3-1-2. Viewpoints
### 3-1-2-1. Components of Plans
First, we confirm whether there are essential components in all mid-term plans. Establishing components using logic models already exists. This study adopted the method shown in (Sakano, 2012). The mid-term plans are divided into 4 components which are (1) inputs, (2) activities, (3) outputs, and (4) outcomes. It has not been clarified how outputs are different from outcomes. For this study, the researchers follow the definition of Dr. Sakano. His explanation is as follows: "Outcomes mean the goals which are set, for example, what and how the targets will change. Activities provides various services for the targets to occur such changes. There are many cases that outputs are the targets that were provided the services as a result of activities." For example, there is a plan "Improvement of English ability by increasing English classes ". The plan increases English classes as the activity, the number of students attending the English classes is the output, and improvement of student's English ability is the outcome.

### 3-1-2-2. Appropriateness of Contents of Components
Next, confirmation of the appropriateness of each component is given . Especially, the numerical targets that are important to achieve the mid-term plans efficiently and effectively. Therefore, researchers confirm whether the numerical targets in each mid-term plan exists.

**Table 1:** Situation of Each Component Based on Logic Model

| | | value | rate |
|---|---|---|---|
| Number of mid-term plans related to globalization | | 56 | 100.0% (56/56) |
| (1) Inputs | Number of mid-term plans with Inputs | 0 | 0.0% (0/56) |
| | (Including numeric targets) | - | - |
| (2) Activities | Number of mid-term plans with Activities | 54 | 96.4% (54/56) |
| | (Including numeric targets) | 10 | 18.5% (10/54) |
| (3) Outputs | Number of mid-term plans with Outputs | 4 | 7.1% (4/56) |
| | (Including numeric targets) | 4 | 100.0% (4/4) |
| (4) Outcomes | Number of mid-term plans with Outcomes | 22 | 39.3% (22/56) |
| | (Including numeric targets) | 17 | 77.3% (17/22) |

### 3-2. Methods to Support Mid-term Plans by IR

In Section 3-1, we clarified the problems in the mid-term plans. Now we show the way to support planning with institutional research.

## 4. Analysis of Problems of Mid-term Plans

Table 1 shows how the mid-term plans relate to globalization and contain the components based on the logic model. The following shows the analysis of each component.

### 4-1. Inputs
### 4-1-1. Situation

No mid-term plans contain input components. The resources invested for putting the mid-term plans into practice are the inputs. Therefore, IR should conduct an analyze, and allocate the resources for putting these plans into practice effectively and efficiently.

In particular, the mid-term plans related to globalization are influenced not only by the resources of the university but also by domestic and foreign circumstances. It is very important to understand and analyze the data of not only the university but also other domestic or foreign universities, but the data are not available to analyze easily. The fact that no input components are contained in all the mid-term plans means that the data was not understood and analyzed in all universities.

Needless to say, it is not necessary to describe all the inputs in detail in the statement of each mid-term plan. However, the way to allocate university resources are less clear for the people outside the university when the mid-term plans contain no inputs. Moreover, there are no shared knowledge for universities to learn for one another . From the point of view of accountability, it is very problematic because the universities operate for the people in society.

### 4-2. Activities
### 4-2-1. Situation

54 mid-term plans, which are equivalent to 96.4% of 56 mid-term plans, contain activities. The mid-term plan is a plan for action. Therefore, each mid-term plan needs to establish the activities "which provide various services for the targets to occur changes".

There are a few mid-term plans which don't contain activities. Following is an example of such a midterm plan, "we increase the faculty who had schooling and researching history abroad up to x % of all faculty so as to respond to the development of globalization".

As this mid-term plan does not become a specific guide for activities, it is not appropriate as a plan of action.

### 4-2-2. Appropriateness of Numerical Targets

10 mid-term plans, which are equivalent to 18.5% of 54 mid-term plans containing activities, have numerical targets. If the mid-term plans with impossible numerical targets were developed, these plans will be evaluated as "not achieved" and the universities which developed such plans will be at a disadvantaged. Therefore, many mid-term plans seem to have no numerical targets.

For example, there are the mid-term plans with numerical targets for course establishment and overseas bases establishment. The former examples are "we will increase the rate of international courses to 75 %", "we will have 500 classes using foreign languages", and "we will increase the rate of classes using English to 54.0% by 2021". The latter examples are "we will establish more than 7 foreign offices as the bases of our university by 2021", "we will establish more than 5 new global station", and "we will establish more than 20 alumni associations for foreign students". Although these mid-term plans are related to globalization, these plans can be achieved at the Japanese university and not related to foreign countries or foreign universities. Therefore, it is not clear whether these plans will enable each university to achieve final outcomes. The mid-term plans as shown above were selected because of difficulty to analyze the data from the other universities or the other countries.

### 4-3. Outputs
### 4-3-1. Situation

4 mid-term plans, which are equivalent to 7.1% of 56 mid-term plans, contain outputs. Outputs are "the targets who provided the services as a result of activities". As the outputs are the effects of activities, the mid-term plans contain outputs comparatively easily. However, as the process based on the logic model seemed not to recognize the outputs enough, the number of mid-term plans containing outputs were small.

### 4-3-2. Appropriateness of Numerical Targets

All 4 mid-term plans containing outputs have numerical targets. For example, there are the mid-term plans with numerical targets for the conclusion of academic exchange agreement and the number of students attending classes. The former examples are "we will conclude the campus-in-campus agreements with 10 partner universities by 2021", "we will conclude the whole university agreements with more than 80 foreign universities", and "we will conclude up to 120 academ-

ic exchange agreements". The latter example is "we will make 5 students take the course every year".

### 4-4. Outcomes
### 4-4-1. Situation

22 mid-term plans, which are equivalent to 39.3% of 56 mid-term plans, contain outcomes. Outcomes mean "the goals which are set including what and how the targets will change". They are the real purpose of mid-term plans. All universities are expected to include numerical targets into mid-term plans by The Ministry of Education of Japan. Moreover, the application documents must include numerical targets when public offering of Top Global University Project in Japan.

### 4-4-2. Appropriateness of Numerical Targets
### 4-4-2-1. Situation of Appropriateness of Numerical Targets

17 mid-term plans, which are equivalent to 77.3% of 22 mid-term plans containing outcomes, have numerical targets.

For example, there are the mid-term plans with numerical targets for increasing foreign faculty, students from overseas, and students studying abroad. The former examples are "we will increase the foreign faculty up to 400" and "we will increase faculty coming from foreign countries or having schooling and researching history abroad up to 47 %". The latter examples are "we will increase the number of students from overseas to more than 2,200 every year", "we will increase the rate of the students from overseas for graduate students to 22.0% by 2021", and "we will increase the number of students who have studied abroad to more than 1,250". In addition to these mid-term plans, for the abilities of students and staffs, there are "we will increase the rate of the students who can achieve 750 points on the TOEIC exam up to 15%" and "we will add staff corresponding to 30% of the staff who achieve 800 points on the TOEIC exam to the present staff", and for research results, "we will increase the rate of published papers created by international co-authors to 10%".

### 4-4-2-2. Study of Appropriateness of Numerical Targets

Several mid-term plans have the numerical targets as mentioned above. Considering that outcomes are not only important but also influenced by the other countries and universities greatly, it is doubtful whether these numerical targets are appropriate or not. If the numerical targets are incorrect, the mid-term plans with these numerical targets are inappropriate as plans of action. Moreover, if the mid-term plans with unachievable nu-

merical targets are developed, these plans will be evaluated as "not achieved" and will have a disadvantaged.

The researchers confirm the appropriateness of the numerical targets. The study compares 2 mid-term plans which have characteristic numerical targets. The first one is "we will increase the staff corresponding to 30% of the staff who achieve 800 points on the TOEIC exam to the present staff" and the second one is "we will increase the rate of the students from overseas up to more than 16.0%".

The first mid-term plan includes the term "increase the staff corresponding to 30% to the present staff". The mid-term plan will be achieved when the number of staff increases to 130 if the number of "the staff who achieve 800 points on the TOEIC exam" is 100. It will be achieved when the number of staff becomes 260 even if the number is 200. Next, considering the case that this mid-term plan is changed to "we increase the rate of staff who achieves 800 points on the TOEIC exam to 30%". We assume that the number of all staff is 1,000. The mid-term plan is achieved when the number of staffs is over 300 even if "the staffs who achieves 800 points on the TOEIC exam" is 100 or 200 originally. This mid-term plan can be achieved if the university staff makes an effort. In other words, this mid-term plan is an achievable goal with a concrete numerical target.

The second mid-term plan includes the term "increase the rate up to more than 16.0%". If the base number is 1,000, the target number becomes 160. In the same way, if the base number is 10,000, the target number becomes 1,600. In other words, the greater the base number is, the more unachievable the mid-term plan is. Additionally, the number of students who will be admitted should be adjusted in order to achieve this mid-term plan. It means that the mid-term plan will not be achievable even if the present students make an effort. The total number of the overseas students who belong to Japanese national universities which are adopted as Top Global University Project Type A will become 31,977 as of 2023 (JSPS, 2014) while the number was 17,462 on 2013. Moreover, the total number of the whole overseas students who are undergraduates, graduate students, and junior college students was 108,906 on 2013 (JASSO, 2017). It will be difficult to achieve the numerical targets at all universities even if the overseas students increases by the effect of "a plan for 300,000 exchange students" (MEXT, 2008) by the Ministry of Education of Japan. Moreover, we worry about a decline of quality of overseas students even if these numerical targets will be achieved

at all universities.

There are 2 patterns of the mid-term plans which will be achievable after the constituent members make efforts, and the mid-term plans which the base number influences on. Especially, the second pattern of mid-term plan is too difficult to achieve because the number of overseas students are related to other universities.

The mid-term plans were developed with inappropriate numerical targets because the present data were not surveyed or the achievability of the numerical targets were not considered, as prioritizing the adoption of large-scale competitive funding in the universities adopted as Top Global University Project. Competitive funding is very important for each university in the current severe fiscal situation. All universities have to conduct organizational and integrated education and research activities. Although universities' globalization efforts are necessary, its influence on the whole university organizational activities should be fully considered.

## 5. Ways to Support Problems of Mid-term Plans by IR

IR should show the process based on the logic model for putting the plan into practice to achieve the goals by clarifying various data and support executives to import appropriate elements to mid-term plans. In following parts, the study shows the concrete method for each element.

### 5-1. Inputs

Almost all mid-term plans don't contain inputs. IR should show the executives the data related to management assets in order to develop mid-term plans, as understanding, analyzing, and allocation of resources are inadequate.

Especially, the data not only inside each university but also outside is necessary to develop the mid-term plans related to globalization. However, it is difficult to collect the data. IR can analyze inter-university data and support the executives based on the analyzed data if IR can establish an inter-university consortium to collect and share various data.

### 5-2. Activities

A few mid-term plans contained activities and were able to be conducted in each university. IR can show the executives correct achievability by analyzing various data for the mid-term plans containing activities without numerical targets. Moreover, IR should prepare the data which shows the circumstances of other universities and the other countries in order to develop mid-term plans

containing activities based on other universities and the other countries needs or wants.

### 5-3. Outputs

For the mid-term plan containing outputs, IR can show what kind of activities produce what kind of outputs and finally lead to what kind of outcomes by using data. In other words, IR can influence the executives to recognize the process based on the logic model.

### 5-4. Outcomes

For the mid-term plans containing outcomes, IR can provide the executives with the data on feasibility and future prediction. Especially, universities should incorporate the process of checking the basic data, clarifying the outcome, and participating in that process, when the policy decisions are required. Then, IR can support the executives to conduct policy decisions by considering the effect to whole institutional activities about globalization.

## 6. Conclusion

The mid-term plans are the essence of Japanese national universities' management. However, some mid-term plans are developed with inadequate data as evidences, others are developed by taking political priority. In Japan, there are many examples of IR supports for educational activities but there are few examples of IR supports for management activities such as developing mid-term plans. Then, we need to study how IR supports to develop appropriate mid-term plans. This paper surveyed the mid-term plans related to globalization by taking notice of inputs, activities, outputs, and outcomes which are based on the logic model. Moreover, we studied the way to support the executives by IR. IR can help the executives to support developing mid-term plans by using various data. That is to say, the data can clarify the goals of four elements of the logic model and it will be easy to determine if mid-term plans with clear goals will be achieved or not. Providing appropriate data to the executives to develop the mid-term plans is the role of IR. IR should keep appropriateness of "management plan" while considering political priority.

## References

Fujii, T. (2016). Kinds and Characteristics of Index Contained in the Mid-Term Plans of Japanese Third-Mid-Term. Journal of Institutional Research and University Evaluation, 7, 3-10.

Funamori, M. (2016). The Status Quo and Issues of Institutional Research in Japanese Universities—IR Offices at a Crossroads in Universities without Regular University Management. Information Engineering Express, 2(1), 23-32.

JSPS. (2014). The Adoption Universities of Top Global University Project. Retrieved from https://www.jsps.go.jp/j-sgu/h26_kekka_saitaku.html

Kominato, T. (2016). How to Create Logic Model. Report of University Evaluation Beginner Seminar "For Everyone Who is in Charge of Evaluation for the First Time", 56-65

MEXT. (2008). A Plan For 300,000 Exchange Students. Retrieved from http://www.mext.go.jp/b_menu/houdou/20/07/08080109.htm

MEXT. (2014). Top Global University. Retrieved from https://tgu.mext.go.jp/en/

MEXT. (2015). Mid-term objectives and mid-term plans at each national university in 2015. Retrieved from http://www.mext.go.jp/a_menu/koutou/houjin/1356357.htm

Minamoto, T., Nishigori D., & Suetsugu T. (2016). Utilizing Institutional Research to Influence Improvement of University Staff Activities and to Make Plans for the University: A Case Study of Saga University. Information Engineering Express, 2(1), 77-86.

JASSO. (2017). Survey of overseas student. Retrieved from http://www.jasso.go.jp/about/statistics/intl_student_e/

NIAD-UE. (2011). Glossary of Quality Assurance in Japanese Higher Education. Tokyo: National Institution for Academic Degrees and University Evaluation.

Sakano, T. (2012). Viewpoint and method for evaluating plan. In Hattori, Eiji., Kudo, Asahiro., Ninomiya, Shinji. & Ishikawa, Izumi. (Eds.), Handbook for developing up social educational plan (pp.6-23). National Institute for Educational Policy Research, Japan.

Saupe, J. L. (1990). Function of Institutional Research, 2nd Edition. FL: Association for Institutional Research.

Takata, E. (2017). Proposing Methods of Support by IR for Japanese National Universities on the Mid-Term Plan Related to Education. Proceeding of Japan Society of Educational Information, 33, 192-195.

Tataka, E., & Mori, M. (2014). The present condition and the subject of management capability among administrative staff of national universities. Journal of the Liberal and General Education Society of Japan, 36(2), 96-102.

Yamamoto, K. (2016). Classify Internal Quality Assurance and Index for Evaluation by Using Logic Model in Meiji University. Report of University Evaluation Beginner Seminar "For Everyone Who is in Charge of Evaluation for the First Time", 29-42

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