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What is the Essential Curriculum for IR in Japan?

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Abstract

A survey was held from July to August 2021 to ascertain the actual requirements of Japanese Institutional Research (IR) curriculum. The results of the survey revealed the course desired by the people who have been engaged in IR. They can be divided into two groups: those who have participated in a course at least once and those who have never participated in any course. Afterward, the detailed analysis revealed that the requirements for the above groups were different. In this paper, the author describes the facts in detail.

Keywords: Institutional Research, Curriculum, Questionnaire Survey, Analysis

1 Introduction

In recent years, the managers of Japanese universities are finding ways of surviving competition from other universities. They must themselves know from the data accumulated in each university. Consequently, Institutional Research (IR) became a popular tool and IR units were established in nearly all the universities [1].

The required outcomes to the workers of IR units tend to be high although they are not certain about what they should do because there are no fixed duties in IR. There are few seminars on IR in which workers participate to obtain the skills, techniques, and so on. The author held a survey to examine the requirements for the IR curriculum [2]. Moreover, certain results revealed different trends between the respondents who had participated in a course at least once and those who had never participated in any course.

In this paper, the author illustrates the outline of the web survey held from July to August 2021 on IR, its results, a comparison of the results obtained from the two types of respondents, and finally summarizes this paper.

2 Web Questionnaire Survey and Results

The web survey had three question groups and the results are illustrated below. The number of respondents was 189.

2.1 What Courses Have You Participated in?

In this question group, the author listed few courses or events which were held in Japan and the respondents could select the courses they had participated in. Moreover, they could write about any other course not featured in the prepared list. The number of respondents who had participated in a course at least once was 131 and those who had never participated in any course were 58. The author names the above as Group A and Group B respectively.

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Table 1: The number of answers which are “Willing to participate” and “Somewhat willing to participate” on each course duration

		Days per course					
		1	2	4	6	16	32
Class	1	137	102	84	72	56	46
per	2	162	133	90	79	55	44
day	4	109	94	63	48	34	30

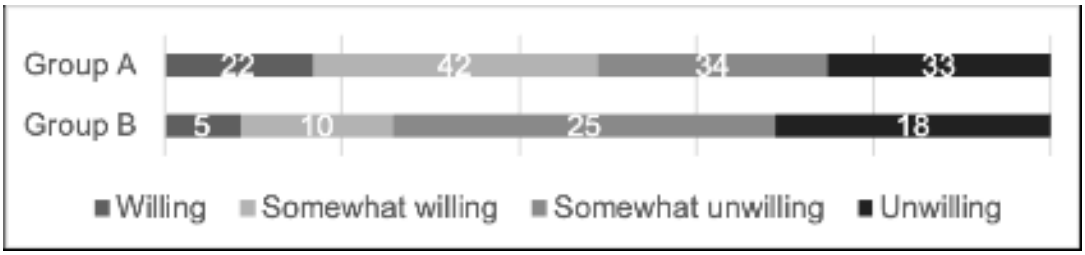

Figure 1: The number of answers on the pattern having twenty-four hours which was equivalent to eight days and two classes

2.2 What Duration of Course Would You Like to Participate in?

This question group had to assume that one class lasted for one hour and thirty minutes and the respondents could decide the duration and the number of classes they would like to participate in. They could select one answer from the following four options “Willing to participate, ” “Somewhat willing to participate, ” “Somewhat unwilling to participate, ” and “Unwilling to participate. ” The number of answers for “Willing to participate” and “Somewhat willing to participate” on each course duration is illustrated in Table 1 and the top three patterns are listed as follows:

1) Three hours: one day and two classes
2) One hour and thirty minutes: one day and one class
3) Six hours: two days and two classes

The other patterns demonstrated a trend as: the longer the course term, the more unwilling to participate in the course.
Almost all the patterns had similar trend between Group A and B however, only one pattern had different trend in Figure 1. It was the pattern having twenty-four hours which was equivalent to eight days and two classes. In this pattern, the respondents included in Group A were willing to participate while, others were not. Thus, the respondents who had participated in a course at least once must have considered it important to learn IR systematically in long term.

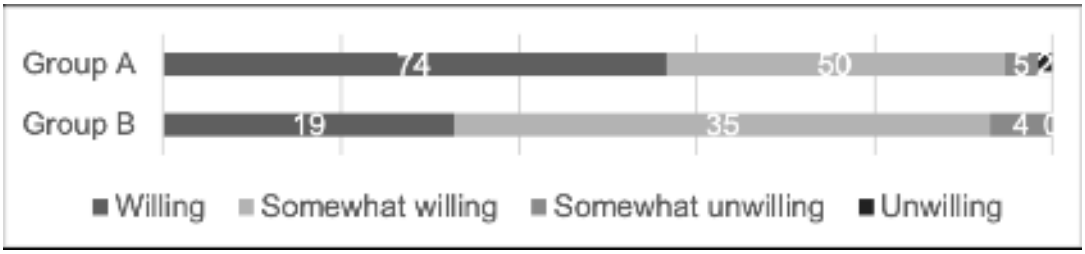

Figure 2: The number of answers on the topic "Data reporting"

2.3 What Duration of Course Would You Like to Participate in?

In this question group, we listed certain topics and allowed the respondents to decide if they would like to participate in classes of each topic. The options are same as the previous section. The prepared topics are as follows:

1) Information Support Cycle [3] including 1-1) * Identification of issues and needs, 1-2) * Data collection and accumulation, 1-3) * Data reconstruction and analysis, *1-4) * Data reporting*, and 1-5) * Decision making.

2) IR Intelligence [4] including 2-1) * Analytical and Technical intelligence, 2-2) * Problem solving intelligence, and *2-3) * Contextual intelligence*.

3) Data science [5] including 3-1) * Higher education, 3-2) * Statistics, and 3-3) * Information technology.

4) Theoretical subjects including 4-1) * Student Survey, 4-2) * Dropout prevention, 4-3) * University evaluation, 4-4) * University management, 4-5) * IR organization, 4-6) * Human resource development, 4-7) * Research question, 4-8) * Business improvement, 4-9) Project management, 4-10) Software development, and 4-11) Digital transformation.

5) Technical subjects including 5-1) * Database, *5-2) Data warehouse*, *5-3) * Education data analysis*, 5-4) Research data analysis, *5-5) financial data analysis*, 5-6) Data security, 5-7) Network security, 5-8) * Visualization, 5-9) Excel, 5-10) R, *5-11) Python*, *5-12) Tableau*, *5-13) ETL Tool*, *5-14) Reporting technique*, and *5-15) Communication skill*.

The symbol "*" denotes the topics more than 80% respondents were willing or somewhat willing to participate in and the italic style topics denote that there were different trends between Group A and B. The different trends signify that both groups have statistically significant differences with the other. The general topics indicated in 1), 2), and 3) were more popular than both the theoretical topics indicated in 4) and the technical topics indicated in 5). In the following parts, the author selects two topics of which one was popular, the other was relatively not, and both revealed different trends between Group A and B.

The first topic is "1-4) Data reporting" which is popular. The number of answers is illustrated in Figure 2. Most respondents in Group A were willing to participate in this topic and the ones in Group B were somewhat willing. The respondents in Group A must have considered "Data reporting" as an important topic and the ones in Group B considered it less important.

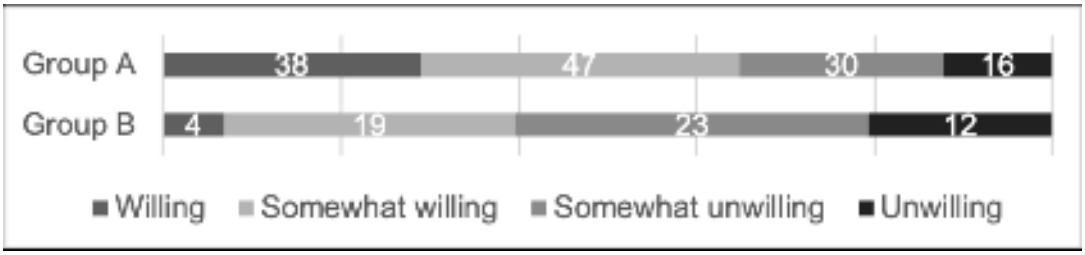

Figure 3: The number of answers on the topic “ETL Tool”

The second topic is “5-13) ETL Tool” which is unpopular. The number of answers is illustrated in Figure 3. Most of the respondents in Group A were somewhat willing to participate in this topic and the ones in group B were somewhat unwilling. ETL is the acronym for Extract, Transform, and Load. In general, IR workers must cleanse the data before “Data reporting. ” Therefore, the respondents in Group A must have considered “ETL tool” as an important topic. Alternatively, the respondents in Group B may be unaware of the importance of the “ETL tool” because they had not gained adequate experience in IR.

3 Summary and Future Work

In this paper, the author explained the survey on IR curriculum and analyzed its results. The respondents were divided into two groups: having participated in a course at least once or not. The respondents in the former group had known some necessary skills for IR and were willing to participate in the course to learn these skills. It is possible that those in the latter group had not known necessary skills for IR hence, they could not select the appropriate course. The provider of IR curriculum may need to prepare the first course for IR beginners.
The author inferred that participating in a course at least once or never, influenced the courses that the IR workers were willing to participate in. In future research, an individual survey will be held, which will include an interview. The author expects that the IR curriculum desired by IR workers will be clarified through the individual survey.

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