

Effect on Planned On-the-Job Training (OJT) to Performance: Verification of Effect by Covariance Structure Analysis

Masaaki Murakami^[1]

Yoshikatsu Fujita^[2]

Kazuhiko Tsuda^[3]

Abstract:

It is necessary to carry out planned On-the-Job Training (OJT) effectively in order to develop human resources to address problems such as lack of personnel and time. Approaches to enhancing the effectiveness of planned OJT have been proposed for the personnel training of teachers. The purpose of this study is to clarify the effects of planned OJT and the factors that influence it by comparing the OJT target person and the person in charge of planned OJT. This study includes a hypothesis model and research questionnaire for OJT target persons (novice faculty members with one year of teaching experience) and persons in charge of planned OJT. Confirmatory factor analysis is applied to the questionnaire data in order to clarify the construct. The hypothesis model is verified by covariance structure analysis. The conclusion consists of two points. Firstly, planned OJT has direct and indirect effects by mediating the subordinate training attitude for OJT target persons and persons in charge of the OJT. Secondly, differences are observed in context.

Keywords: Planned OJT Type, Task Performance, Contextual Performance, Subordinates training attitude, OJT Target Person, Person in charge of OJT

I. INTRODUCTION

According to the results of Basic research on capacity development (Ministry of Health, Labour and Welfare, 2014), 62.2% of establishments carry out planned On-the-Job Training (OJT). Here planned OJT is defined as phased, continuous education and training through the creation of plans for education and training and specific determination of the content, person in charge of the OJT, target person and duration of training. In comparison to the last time it was measured, this percentage has increased slightly, from 59.4%, as the need for planned OJT is rising. On the other hand, the proportion of establishments that report 'there is a problem' with respect to capacity building and human resource development is 75.9%. This value has increased as compared with the previous year (70.7%).

To address the issue of human resource development, it is considered necessary to implement planned OJT. It seems that there is a reason, in that 'it is difficult to grasp the actual conditions of the fundamental aspects of growing and teaching in human resource development'. Therefore, it is possible, through OJT, for faculty members who are skilled in professional development and in teaching to grasp the actual conditions and some improvements in order to enhance the effect of the training. In the faculty members' organisation, human resource development is urgently needed due to the human resource shortage resulting from the mass retirement of baby boomers. In the planned OJT of faculty members, we consider that there are various valid approaches, attitudes and effects on training subordinates as teaching professionals.

II. THEORETICAL FRAMEWORK

Developments in OJT of Research

OJT is to be a pillar of human resource development in Japanese companies. Empirical research on the effectiveness of OJT, research regarding the type and impact factor of OJT is present. However, there are many opinions that the actual conditions is unknown. In Koike (2005), it is pointed out that the demonstrated accumulation of OJT is poor, from the background that it is difficult to distinguish of training and work. In Sato (2010), it pointed out that it's difficult to accurately grasp the implementation status of OJT by companies and establishments survey. However, there are some studies on Effectiveness of OJT. Sakakibara (2004) pointed out that local government officials' delegation of authority in OJT showed that a significant value was placed on capacity building. Yonezawa (2011) demonstrated that the presence of a supervisor had a positive effect on the development of novice elementary school teachers' competence.

Research on Types of OJT

De Jong et al. (2001) identified four OJT types according to the roles of the subject, the person in charge and the leader of the training courses. Guidance regarding duties is used for systematic technical guidance. Information from self-assessment feedback allows researchers to interpret the effects of self-directed learning. According to the definition given by Knowles (1975), self-directed learning involves a process of personal initiative in diagnosing one's own learning needs, setting goals, identifying resources and

^[1]University of Tsukuba, Tokyo, Japan, Corresponding author E-mail: s1345016@u.tsukuba.ac.jp

^[2]Teikyo University, Tokyo, Japan

^[3]University of Tsukuba, Tokyo, Japan

evaluating results. Nakahara (2010) described the contents of OJT, such as workplace learning. Takahashi (1993) defined organisational socialisation as the process by which entrants to an organisation adopt the necessary organisational skills to perform their duties and accept behavioural norms and values. In previous studies, the content of the OJT to be implemented was represented by the model, contents and design. In this study, planned OJT implies the contents of the planned OJT to be implemented.

Research on the Effectiveness of Influential Factors on OJT

Moro (2010) mentioned the high correlation between mentoring behaviours as subordinate training by the boss and career function. Subordinate training behaviour is described as follows: 'Experienced people are to provide assistance to continue for a period of time to the career development and psychological and social aspects of immature people' (Kumura 1999). Matsuo (2011) showed that it is necessary to adjust teaching methods according to younger employees' stage of development.

Research Directed to both the OJT Target Person and the Person in Charge of OJT

Inuzuka (2009) showed the establishment of OJT to be dependent on the state of the relationship between the person in charge of OJT and the target person, using sociometric data. Other prior studies focused on one of these, but not both.

Measure of the effect on OJT

Previous research involves various items that can be measured for their effect on OJT. Rothwell and Kazanas (2004) examined performance of duties and training. Yonezawa (2011) also examined Competency. Sakakibara (2004) analysed attitude and two abilities. In this study, we use the measure of the effect of previous studies to advance the research. Specifically, we use the concept of performance as a measure. Takahashi (2010) defined performance as the behaviour adopted when performing specific tasks in a certain period and the results achieved. Borman and Motowidlo (1993) classified performance as task performance and contextual performance. It can be regarded as an aggregate classification of major dimensions (Campbell, 1999). Task performance is defined as the job behaviour adopted when conducting business and a role that is expected by an organisation; contextual performance is defined as the behaviour that supports a wide range of organisational, social and psychological environments to help the organisation to function better (Motowidlo & Van Scotter, 1994). It is necessary to set a scale for measuring the effects of OJT on performance.

III. RESEARCH QUESTIONS

In the overview of previous research, although the effect of OJT is seen, there is a gap in the impact factors of the effect of OJT that has not been investigated. Furthermore, research has focused on either the person in charge of OJT or the target person. The practice of OJT is considered to influence factors such as subordinate training behaviour (Moro, 2010). In this study, we set the subordinate training attitude as this influence factor. Then, through a comparison of the person in

charge and the target person, we reveal the effect of planned OJT and the influence factor. This is then verified using a suitable scale to measure the effect. In other words, the purpose of this study is to set the following working hypothesis and confirm the validity of FIGURE 1 of the model representing the effects of planned OJT by covariance structure analysis.

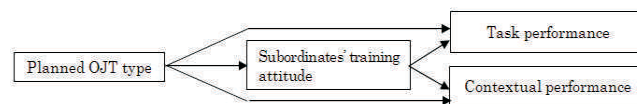


Figure 1 The Model of Planned OJT Effect

Hypothesis 1: The difference of planned OJT type, task performance, contextual performance and subordinate training attitude are considered to recognize the person in charge of OJT and the OJT target person.

Hypothesis 2: Differences exist in the effect on performance depending on the type of planned OJT.

Hypothesis 3: Subordinate training attitude has the ability to mediate planned OJT type and performance.

Hypothesis 4: In hypotheses 1 and 2 on the effect and function of subordinate training attitude, there is difference between the OJT target person and the person in charge of OJT.

IV. METHODS

Experimental Design

According to the Labour Policy and Research Organisation (2010), planned human resource development is required, because of the increase in young professionals in professional occupations. This study was conducted with elementary school teachers. In recent years, the number of young teachers has increased owing to the mass retirement of baby boomers from elementary school teacher organisations. Local governments are promoting intentional, planned and ongoing human resource development in OJT through duties by formulating OJT guidelines for teachers. The job description and scale within elementary school teacher organisations is relatively homogeneous and this sample is a statistically verifiable job. Hence, by targeting this occupation, we can expect to contribute to quantitative and practical analysis. Using the data, we consider the implementation of planned OJT and its effects. To build our data, we surveyed teachers carrying out OJT (persons in charge of OJT) and teachers receiving OJT (OJT target persons) to locate those in their first year of employment in a public elementary school chosen at random from Prefecture A. Using the same questionnaire, the survey was conducted three times: in each of the periods August–September 2012, August–September 2013 and July–August 2014. The surveys were designed to emphasise the implementation of the OJT programme by providing secured data. The questionnaires had to be posted to the person in charge of OJT. A total of 388 copies were distributed (110 copies the first time, 158 copies the second time and 120 copies the third time). Simultaneously, 572 copies were distributed to the OJT target persons (140 copies the first time, 272 copies the second time and 160 copies the third time). The participants returned the questionnaires using pre-addressed envelopes enclosed with the survey.

Measures

We established three measurement scales of planned OJT types, performance and subordinate training attitudes to investigate the hypothesis model. The planned OJT types were configured by 19 measurement scales based on Knowles (1975), De Jong et al. (2001), OJT guidelines (Tokyo Metropolitan Board of Education, 2010), Sakakibara (2004) and Yonezawa (2011). For each item, we asked the respondent for an evaluation ranging from strongly disagree (1) to strongly agree (5). To construct the measurement scale of the effect, we used the concepts of task performance and contextual performance. Task performance was found in Sakakibara (2004), OJT guidelines and Nakahara (2010). Furthermore, we constructed 14 measurement scales. Among them, we constructed 13 measurement scales for contextual performance based on two concepts, found in Ikeda (2008). Concerning subordinate training attitude, we constructed 22 measurement scales established in Moro (2010) and Matsuo (2011). Although previous studies have focused on 'Behaviour', this study uses 'Attitude' in the broader sense, which has been defined by Ueda (2003).

V. RESULTS

In this section, we analyse data from the person in charge of OJT group and the OJT target person group. First, we show the respondents' attributes from the questionnaire survey and clarify the characteristics of the data. Next, we show the interpretation of the effects of planned OJT on the basis of factor analysis (maximum likelihood method, varimax rotation) for the data of a measure that has been set. We extracted factors based on factor loadings of .470 or more in the person in charge group and .570 or more in the OJT target person group. Then, we determined the factor until reaching a factor contribution rate greater than or equal to approximately 50%. Finally, we present the results of the covariance structure analysis for the relationship of each factor.

Sample

Attributes of the respondents from the person in charge of OJT group and OJT target person group are shown in Table 1

Table No. 1: Respondent Attributes

Attributes	Person in charge of OJT/N=45 (%)	OJT subject teacher N=75 (%)
Gender		
male	14(31)	25(33)
Female	31(69)	50(67)
Age		
20s	—	59 (79)
30s	15(33)	12(16)
40s	14(31)	4(5)
50s more	16(36)	—
Designation		
teacher	7(16)	16(21)
Senior teacher	27(60)	44(59)
Chief teacher	11(24)	15(20)
Organizational size		
6-11 classrooms	11(24)	18(24)
12-17 classrooms	14(31)	24(32)
18 classrooms more	20(45)	33(36)

Planned OJT Type

Factor analysis was performed by scoring 19 items related to the planned OJT type in the person in charge of the OJT group. Consequently, three factors were extracted. After eight items that did not contribute to any factor were eliminated, the factor analysis was repeated with 11 items. These results

are shown in TABLE 2. Three factors were extracted, and the factor contribution rate was 59.7%.

Cronbach's alpha coefficient (α) from the first to the third factor was calculated using reliability analysis. The first factor was interpreted as *Guidance on self-directed learning* ($\alpha = .71$), the second factor as *Guidance for socialisation* ($\alpha = .75$) and the third factor as *Direct guidance on knowledge and skills* ($\alpha = .67$).

Table No. 2: Results of Factor Analysis on Scale of Planned OJT Type (Person in Charge of OJT)

Item	I	II	III
I was carried out guidance on how to plan at work to grow.	.920	.285	—
I was carried out guidance on how to set goals on the job to grow.	.904	.240	—
I was carried out guidance on how to evaluate the self on the job to grow.	.882	—	—
I had advice about life and work attitudes.	.587	.101	.322
I was shared with members of the workplace for guidance situation on the target teachers of OJT	.218	.740	.123
I was carried out the guidance of point to observe the state of work and lesson.	.310	.617	.247
I was carried out guidance for the role and allocation in cooperation with colleagues.	.304	.590	.217
I have considered to receive guidance from colleagues and senior workers.	—	.514	.106
I was carried out direct guidance for knowledge and skills related to teaching.	—	.132	.702
I was carried out direct instruction for knowledge and technique about the lifestyle guidance to children.	—	.457	.696
I was carried out direct guidance for knowledge and skills related to school affairs.	.253	.126	.552
Square sum of the load amount	3.091	1.937	1.538
Proportion Var	.281	.176	.140
Cumulative contribution ratio	.281	.457	.597

Similarly, factor analysis was performed by scoring 19 items related to the planned OJT type in the first-year OJT participant group. Consequently, three factors were extracted. After five items that did not contribute to any factor were eliminated, the factor analysis was repeated with 14 items. These results are shown in TABLE 3. Three factors were extracted, and the factor contribution rate was 74.7%. Cronbach's alpha coefficient (α) from the first to the third factor was calculated using reliability analysis. The first factor was interpreted as *Guidance on self-directed learning* ($\alpha = .94$), the second factor as *Guidance for socialisation* ($\alpha = .92$) and the third factor as *Duties guidance by participant observation* ($\alpha = .88$).

Table No. 3: Results of the Factor Analysis on the Scale of Planned OJT Type (OJT Target Person)

Item	I	II	III
I received guidance on planning work for personal growth.	.882	.308	.296
I received guidance on self-evaluation for professional and personal growth.	.846	.389	.223
I received guidance on setting professional and personal goals.	.831	.324	.321
I received guidance on problem solving.	.627	.469	.313
I received instructions on devising the improvement plan at work.	.582	.172	.471
I received instructions on knowledge and skills related to school affairs.	.312	.810	.365
I received advice on attitudes regarding life and work.	.360	.731	.220
I received instructions on knowledge and techniques related to external negotiations.	.391	.689	.338
I was explained the meaning and significance of work.	.559	.574	.311
I received instructions on the knowledge and skills related to teaching.	.158	.449	.721
I received guidance on collecting information required to progress the work.	.434	.122	.681
I received instructions on the knowledge and skills related to lifestyle guidance of children.	.166	.535	.680
I was given the opportunity to observe the nature of the job and classes by my OJT supervisor.	.247	.206	.642
I received guidance when observing the state of work and classes.	.390	.290	.594
Square sum of the load amount	4.062	3.226	3.164
Proportion Var	.290	.230	.226
Cumulative contribution ratio	.290	.521	.747

Task Performance

Factor analysis was performed by scoring the 14 items related to task performance in the person in charge group. Consequently, two factors were extracted. After five items that did not contribute to any factor were eliminated, the factor analysis was repeated with nine items. These results are shown in TABLE 4. Two factors were extracted, and the factor contribution rate was 59.7%. The first factor was interpreted as *Situational awareness* ($\alpha = .92$) and the second factor as *Efforts in class and school affairs* ($\alpha = .65$).

Table No. 4: Results of the Factor Analysis on the Scale of Task Performance (Person in Charge of OJT)

Item	I	II
Target person can now grasp the progress of work.	.936	—
Target person is more able to tackle the job by understanding the situation.	.883	.197
Target person can extract the problem by considering the contents of the work.	.774	.185
Target person can support parents, community and outside agencies better than before.	.703	.372
Target person can extract the problem by considering the contents of the work.	.684	.351
Target person can now consider concrete methods for achieving an objective.	.572	.417
Target person is now better at planning and implementation of teaching.	.376	.839
Target person got to work on an ad hoc basis to duties ※ reversal item.	—	.614
Target person can now participate in school affairs.	.437	.472
Square sum of the load amount	3.877	1.820
Proportion Var	.431	.202
Cumulative contribution ratio	.431	.633

Similarly, factor analysis was performed by scoring the 14 items related to task performance in the OJT target person group. Consequently, two factors were extracted. After five items that did not contribute to any factor were eliminated, the factor analysis was repeated with nine items. These results are shown in TABLE 5. Two factors were extracted, and the factor contribution rate was 64.1%. The first factor was interpreted as *Goal setting* ($\alpha = .9$) and the second factor as *Correspondence* ($\alpha = .86$).

Table No. 5: Results of the Factor Analysis on the Scale of Task Performance (OJT Target Person)

Item	I	II
I can now consider concrete methods for achieving an objective.	.925	.246
I can find the goal at work.	.870	.236
I am now better at planning and implementation of teaching.	.604	.353
I can now achieve a target independently.	.745	.310
I can now tackle the job by understanding the situation.	.192	.835
I can now determine the severity or urgency of problems.	.226	.720
I can overcome the problem by considering the contents of the work.	.242	.681
I can now grasp the progress of work.	.250	.677
I can collect and analyze information necessary to work	.396	.632
Square sum of the load amount	2.897	2.871
Proportion Var	.322	.319
Cumulative contribution ratio	.322	.641

Contextual Performance

Factor analysis was performed by scoring the 13 items related to contextual performance in the person in charge group. Consequently, two factors were extracted. After five items that did not contribute to any factor were eliminated, the factor analysis was repeated with eight items. These results are shown in TABLE 6. Two factors were extracted, and the factor contribution rate was 55.0%. The first factor was interpreted as *Challenges overcome* ($\alpha = .86$) and the second

factor as *Dedication* ($\alpha = .789$).

Table No. 6: Results of the Factor Analysis on the Scale of Contextual Performance(Person in Charge of OJT)

Item	I	II
Target person began to undertake self-development at all times.	.835	.369
Target person began to be able to enthusiastically tackle the improvement of difficult business.	.807	.333
Target person began to continue to overcome the obstacles to achieve the object.	.725	.305
Target person became able to complete my duties responsibly without supervision and instruction.	.616	.334
Target person has begun practice self-management and self-discipline.	.268	.961
Target person was able to cooperate with colleagues and seniors.	.324	.546
Target person began to work harder than expected.	.275	.521
Target person came to ask to be assigned to rewarding duties.	.434	.518
Square sum of the load amount	2.759	2.372
Proportion Var	.345	.296
Cumulative contribution ratio	.345	.641

Similarly, factor analysis was performed by scoring 13 items related to contextual performance in the OJT target person group. Consequently, two factors were extracted. After six items that did not contribute to any factor were eliminated, the factor analysis was repeated with 11 items. These results are shown in TABLE 7. Two factors were extracted, and the factor contribution rate was 49%. The first factor was interpreted as *Commitment* ($\alpha = .86$) and the second factor was rejected because it contributed to only one item.

Table No. 7: Results of the Factor Analysis on the Scale of Contextual Performance (OJT Target Person)

Item	I	II
I am able to enthusiastically tackle the improvement of business and difficult business.	.784	.316
I can tackle difficult work positively.	.718	.212
I can solve work problems proactively.	.708	.209
I can overcome the obstacles to achieve the objective.	.689	.317
I am able to share information about duties in the workplace.	.590	.467
I am able to complete my duties responsibly without supervision and instruction.	.579	—
I am able to cooperate with colleagues and seniors.	.142	.987
Square sum of the load amount	2.914	1.492
Proportion Var	.416	.213
Cumulative contribution ratio	.416	.629

Subordinate Training Attitude

Factor analysis was performed by scoring the 22 items related to subordinate training attitude in the person in charge group. Consequently, three factors were extracted. After seven items that did not contribute were eliminated, the factor analysis was repeated with 15 items. These results are shown in TABLE 8. Three factors were extracted, and the factor contribution rate was 59.7%. The first factor was interpreted as *Facilitative Reflection* ($\alpha = .89$), the second factor as *Positive involvement* ($\alpha = .78$) and the third factor as *Delegation* ($\alpha = .74$).

Table No. 8: Results of the Factor Analysis on the Scale of Subordinate Training Attitude(Person in Charge of OJT)

Item	I	II	III
I taught how current work could help in the future.	.930	.134	—
I gave the image of growth.	.783	.155	.159
I have to think a better way.	.717	.150	—
I was recognized in the OJT target teachers the pattern of success or failure.	.708	—	.212
I explained the vision of the workplace.	.641	.149	.271
I showed the figure to challenge for the job.	.542	.410	.353
I was told in their own words the cause of success or failure.	.495	.193	.187
I was encouraged by the attitude and words.	—	.953	—
I encouraged the growth point and good point.	.199	.690	.218
I was teaching in response to the strengths and weaknesses	.305	.632	.111
I reacted positively to questions.	.187	.567	—
I rewarded the OJT target teacher, regardless of the success or failure.	—	.559	.161
I gave the task of difficulty to be moderate stress	.144	—	.804
I waited until the completion of the work.	.301	.149	.623
I have delegated duties after instructing once.	—	.142	.568
Square sum of the load amount	3.733	2.762	1.750
Proportion Var	.249	.184	.117
Cumulative contribution ratio	.249	.433	.55

Table No. 9: Results of the Factor Analysis on the Scale of Subordinate Training Attitude (OJT Target Person)

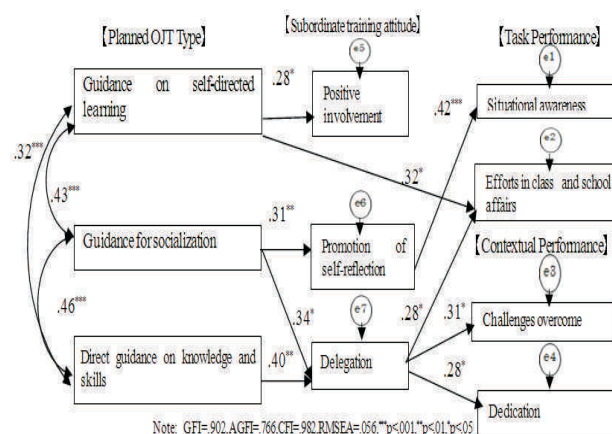
Item	I	II	III
I was encouraged by the attitude and words.	.847	.295	.241
I was encouraged the growth point and good point.	.811	.340	.173
I was rewarded, regardless of the success or failure.	.803	.165	.169
Standing in this position, I was asked to consult.	.758	.329	.326
I was reacted positively to questions.	.756	.230	.316
Anytime I got in response to the consultation.	.669	.206	.414
I got in contact so as to ease the tension.	.663	.316	.357
I was conveyed the expectations for growth.	.625	.427	—
I was taught in response to the strengths and weaknesses	.615	.488	—
I was gave the image of growth.	.383	.797	.283
I was taught how current work could help in the future.	.394	.770	.216
I was explained the vision of the workplace.	.242	.746	.301
I was gave the image of growth.	.285	.662	.394
I was waited until the completion of the work.	.215	.305	.707
I was delegated duties after instructing once.	.131	—	.688
I was given the task of difficulty to be moderate stress	.253	.315	.626
Square sum of the load amount	5.391	3.378	2.363
Proportion Var	.337	.211	.148
Cumulative contribution ratio	.337	.548	.696

Similarly, factor analysis was performed by scoring the 22 items related to task performance in the OJT target person group. Consequently, three factors were extracted. After six items that did not contribute to any factor were eliminated, the factor analysis was repeated with the remaining 16 items. These results are shown in TABLE 9. Three factors were extracted, and the factor contribution rate was 69.6%. The first factor was interpreted as *Positive involvement* ($\alpha = .94$), the second factor as *Suggestion of outlook* ($\alpha = .92$) and the third factor as *Delegation* ($\alpha = .80$).

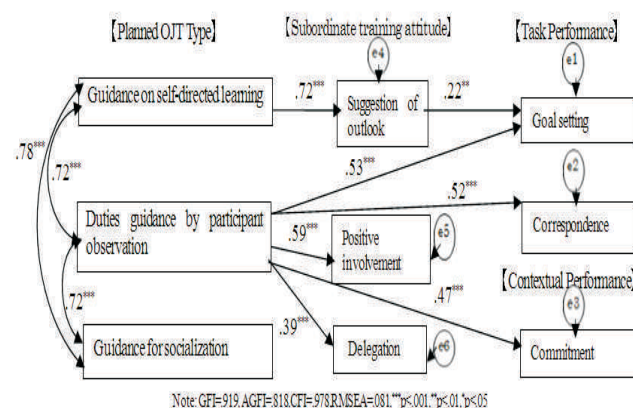
Influence Relationships of Factors in the Planned OJT

Covariance structure analysis was carried out to examine the effect model of planned OJT. The results of the person in charge group and target person group are shown in FIGURES 2 and 3. In both of the results, the values of the fitness index was the best. Therefore, we perform analysis of the models. In both figures, only significant paths are displayed.

In the person in charge group, one planned OJT type showed a direct effect. Task performance 'Efforts in class and school affairs' is defined positively as the type of planned OJT 'Guidance on self-directed learning'. On the other hand, two planned OJT types show indirect effects on performance by mediating subordinate training attitude. 'Guidance for socialization' positively defines 'Efforts in class and school affairs' as well as 'Dedication' of contextual performance by mediating the 'Delegation' of subordinate training attitude. In addition, 'Guidance for socialization' defines 'Situational awareness' by mediating 'Facilitative Reflection'. Meanwhile, 'Positive involvement' is not a significant path for performance.

**Figure 2** Results of the Covariance Structure Analysis on the OJT Effect Model (Person in Charge of OJT)

In the OJT target group, one planned OJT type shows a direct effect. The 'Goal setting' and 'Correspondence' of task performance and 'Commitment' of contextual performance have been prescribed positively by participant observation of planned OJT type. 'Guidance on self-directed learning' showed an indirect effect on the 'Goal setting' of task performance by mediating the 'Positive involvement' of subordinate training attitude. 'Duties guidance by participant observation' positively defines 'Suggestion of outlook' and 'Delegation', but no significant indirect effect on performance was seen.

**Figure 3** Results of the Covariance Structure Analysis on the OJT Effect Model (OJT Target Person)

VI. DISCUSSION

The Difference between the Person in Charge and the Target Person in Factor Analysis

In the results of the factor analysis of the person in charge group and the OJT target person group, differences were observed in the planned OJT type, performance and subordinate training attitude.

Two factors in the planned OJT type have similar interpretations in the two groups. However, the interpretation of one factor is different. Interpretations were made of 'Direct guidance on knowledge and skills' in the person in charge of OJT group, and of 'Duties guidance by participant observation' in the OJT target group. In the target group, there is the feature of receiving guidance while observing the duties of the person in charge.

The two factors of task performance in the person in charge group were interpreted as 'Situational awareness' and 'Efforts in class and school affairs', and in the OJT target person group, they were 'Goal setting' and 'Correspondence'. The contents of the measure, including the factor of the person in charge of OJT, compared with the person in charge of OJT, were clear. On the other hand, 'Correspondence' in the OJT target group includes a measure of the various elements and their comprehensive contents. Contextual performance in the person in charge of OJT group was interpreted as 'Challenges overcome' and 'Dedication', and as 'Devotion' in the OJT target group. In the person in charge group, as well as the task performance, the contents of measures including factors were clear. In addition, the 'commitment' of the OJT target person included the measure of the various elements.

In subordinate training attitude, the two factors were similar in content, but one content of factor is different. 'Positive involvement' and 'Delegation' were extracted for both. For the one remaining factor, 'Facilitative Reflection' in the person in charge group, 'Suggestion of outlook' in the OJT target group was extracted. The former is intended to promote reflection, and the latter has recognised the contents that are shown to be prospects.

The difference of planned OJT type, task performance, contextual performance and subordinate training attitude is considered partly in recognition of the person in charge and the OJT target person. Thus, hypothesis 1 is partially supported.

Verification of the Impact of Planned OJT on Performance

The following four points were revealed about how planned OJT affects performance. First, the type of planned OJT shows a direct effect on performance. In the person in charge group, 'Guidance on self-directed learning' of the planned OJT type showed a direct effect on 'Efforts in class and school affairs' in task performance. It is recognised that providing guidance related to the evaluation and goal making by themselves are effective for school affairs and class implementation as task performance. In the target group, 'Duties guidance by participant observation' showed a direct effect on 'Goal setting' and 'Correspondence' in task performance and 'Commitment' in contextual performance.

Guidance provided through the observation of seniors can be interpreted that there are effects on affective performance that focus on duties and performance on various correspondence and goal setting in duties. From the above, hypothesis 2 is supported.

Secondly, planned OJT types show indirect effects on performance by mediating subordinate development attitude. In the person in charge group, 'Guidance for socialisation' showed an indirect effect on 'Efforts in class and school affairs', 'Challenges overcome' and 'Dedication' by the mediation of 'Delegation'. In addition, 'Guidance for socialisation' and 'Direct guidance on knowledge and skills' indicated an indirect effect on 'Positive involvement' by the mediation of 'Facilitative Reflection'. In the OJT target group, only 'Guidance on self-directed learning' showed an indirect effect on 'Goal setting' by the mediation of 'Suggestion of outlook'. The type of planned OJT that did not show a direct effect showed an indirect effect by the mediation of subordinate training attitude. From the above, hypothesis 3 is supported.

Third, the difference is observed in the direct effect or an indirect effect of both recognised. There was only one significant path of direct effect in the person in charge group. In contrast, significant paths to all of the performances were shown in the OJT target group. With regard to the indirect effect, two subordinate training attitudes showed an indirect effect on the four performances of person in charge of OJT. Only one subordinate training attitude showed an indirect effect in the OJT target group. This can be interpreted so as to enhance the effect by taking a deliberately subordinate training attitude when the person in charge of OJT implements the planned OJT. From the above, hypothesis 4 is supported.

Fourth, planned OJT type and subordinate training attitude which do not show an effect on the performance were present. 'Guidance for socialisation', 'Positive involvement' and 'Delegation' in the person in charge of OJT group and 'Positive involvement' in the OJT target person group had no effect. We considered the presence of other factors.

Suggestions for the Findings of Previous Studies

In the results for the OJT person in charge group in the covariance structure analysis, it was revealed that planned OJT types show an indirect effect by the mediation of 'Delegation' in subordinate training attitude. Delegation was a planned OJT type that enhanced the effect in Sakakibara (2004). However, in the present study, Delegation worked through subordinate training attitude to enhance the effect. In addition, in the present study, the effect appeared in newly contextual performance.

VII. CONCLUSION

Factor analysis revealed differences between the persons in charge of OJT and OJT target persons. For planned OJT to show the effect is to consider the results of covariance structure analysis, we compared these findings with those of previous studies. As a result, the effect of the planned OJT was shown quantitatively. To enhance the effect of the planned OJT in practice, it is effective to focus on the efficacy of subordinate training attitude. Rather than simply

implementing the planned OJT, it is possible to enhance the performance by consciously considering the subordinate training attitude.

VIII. LIMITATIONS

Finally, the present study has some limitations and reveals some issues for future research. The first limitation concerns the survey sample, which is not sufficient because it consists of only 45 participants in the charge of OJT group and 75 participants in the target person group. It is necessary to obtain the cooperation of the school and Board of Education to expand the sample size in a study of usefulness. The second limitation has to do with the measurement scale. The factors of subordinate training attitude and the OJT type were present, which made it impossible to establish a path in covariance structure analysis. Thus, there is a need to study factors that were not investigated in this study.

IX. REFERENCES

- Borman, W. C., & Motowidlo, S. J. 1993. Expanding the criterion domain to include elements of contextual performance, In N. Schmit & W. C. Borman (Eds.). *Personnel selection in organizations*. San Francisco: Jossey-Bass.
- Campbell, J. P. 1999. The definition and measurement of performance in the new age. In D. R. Ilgen & E. D. Pulakos (Eds.). *The changing nature of performance*. San Francisco: Jossey-Bass.
- De Jong A., Thijissen, J. G. L., & Versloot, B. M. 2001. Planned training on the job: a typology advances. *Developing Human Resources*, 3: 408-414.
- Ikeda, H., & Furukawa, H. 2008. The development of the contextual performance scale in Japanese organizations. *Japanese Association of Industrial/Organizational Psychology Journal*, 22: 15-26.
- Inuzuka, A. 2009. Conditions of forming on-the-job training: an empirical analysis using sociometric data. *Japanese Association of Industrial/Organizational Psychology Journal*, 22(2): 115-126.
- Knowles, M. 1975. *Self-directed learning*. Englewood Cliffs: Prentice Hall/Cambridge.
- Koike, K. 2005. *Economics of work* (3rd ed.). Tokyo: Toyo Keizai Inc.
- Kumura, K. 1999. The Study of Career- and Psychosocial-Support in Organizations: Through An Investigation of Causal Factors to Mentoring Behaviour. *Japanese Journal of Administrative Science*, 13: 43-52.
- Labor policy *Research Organization*. 2010. *Research on revision of the classification -categories of revision-*. <http://www.mhlw.go.jp/wp/hakusyo/roudou/14/dl/14-2-2.pdf>. (accessed December 14, 2014).
- Ministry of Health, Labour and Welfare. 2014. 2013 *capacity development basic research*. <http://www.mhlw.go.jp/toukei/list/dl/104-25b.pdf>. (accessed December 7, 2014).
- Matsuo, M. 2011. *Learning from experience an introduction*. Tokyo: DIAMONDO, Inc.
- Moro, J., 2010. Structures and factors active in human resources development of subordinates by supervisors. *Japanese Association of Industrial/Organizational Psychology Journal*, 23 (2): 103-115.
- Motowidlo, S. J., & Van Scotter, J. R. 1994. Evidence that task performance should be distinguished from contextual performance. *Journal of Applied Psychology*, 79: 475-480.
- Nakahara, J. 2010. *The workplace learning theory*. Tokyo: University of Tokyo Press.
- Sakakibara, K. 2004. Effects of on-the-job training upon self-evaluated job performance skills: on the local government employees. *Japanese Association of Industrial/organizational Psychology Journal*, 18:23-31.
- Sato, H. 2010. *Working and learning -human resources and capacity development*. Kyoto: Mineruba Shobo Publishing Company.
- Takahashi, K. 1993. Research on organizational socialization: A review, *The Japanese Association of Administrative Science*, 1-22.
- Takahashi, K. 2010. *Scientific integration of performance appraisal practices: evaluation of effort, ability, and behaviour*. Tokyo: Hakuto Shobo Publishing Company.
- Tokyo Metropolitan Board of Education. 2010. *The OJT guidelines*, <http://www.metro.tokyo.jp/INET/OSHIRASE/2008/10/DATA/20ian603.pdf>. (accessed December 14, 2014).
- Ueda, Y. 2003. *Organizational Behavior*. Hakuto Shobo Publishing Company.
- Yonezawa, T. 2011. Effect by guidance and support of instruction teachers on the formation of the novice's ability. *The Japanese Society for the Study on Teacher Education Journal*, 20: 89-97.