

Training and Transferring Knowledge in BMC Group-Vietnam

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Abstract: This study analyzes the training and transferring of knowledge in BMC joint stock company which specializes in producing agricultural machines in Vietnam. Questionnaire survey and in-depth interview methods are used to collect data and information. This study showed that the mechanism how training inputs lead to training transfer outcomes in BMC fits with our conceptual framework basically. Besides, we also obtained some important clues as well as directions concerning potential variables as mediators and moderators in training transfer at both individual and organizational levels which are able to be integrated in future quantitative analysis. Analysis results showed that leader's awareness and commitment in training and transferring of knowledge are rather high. The training design is usually taken place according to company's plan. Some of training contents are successfully applied. However, quantity and quality of trained knowledge application has not been high and effective. BMC is considered as a successful case in the sense of applying new knowledge and skills from training programs to their company, so variety of lessons and implications were drawn for other companies. Finally, suggestions were made for practitioners to improve the effectiveness of training programs and academics to have one more case to understand the conceptual framework.

Key words: Training, knowledge transferring, application, skills, companies

INTRODUCTION

Today's most organizations have considered human resource management as a strategic weapon in the war of competitive advantage. One of the most prominent issues of human resource management which has been received more concern is the effectiveness of training program. Managers and academics are implementing joint efforts to make the learned knowledge and skills of employees to be transferred as much as possible. Along with that, the mechanism how new knowledge and skills can be transferred has still received much consideration from researchers. However, there have not been studies that extend the framework into utilization of knowledge and skills at the organizational level or pay attentions to the case characteristics such as late industrializing countries and production management. Moreover, existing researches, for example, Baldwin and Ford model has too much behavior focused and neither moderator nor mediator between learning and transfer. Noe and Schmitt (1986) tried to modify Baldwin and Ford (1988) Model by integrating motivation to learn, motivation to transfer but they lacked focus on different types of motivation.

The present study plans to analyze, in the case of production management abilities in late industrializing country as Vietnam, learning of related knowledge and skills and its "transfer to workplace". Specifically, we intend to clarify the effect of trainee's individual characteristics, work environment and training design on the abovementioned outcome of training, in terms of training programs concerned in Vietnam. Even though "transfer of training to workplace" at the individual trainee level has been the main issue in the study on Human Resource Development (HRD), this study has great academic significance in undertaking the research topic with employing knowledge from theories of organizational learning and technology transfer. It is also highly significant because cultivation and utilization of production management capabilities are urgent tasks in Vietnam. In the next step of quantitative research, we will try to incorporate the effect of possible mediators, moderators and different types of motivation. This research is as a fundamental foundation for us to investigate those variables through in-depth interview with company's top managers and information obtained from the survey questionnaire.

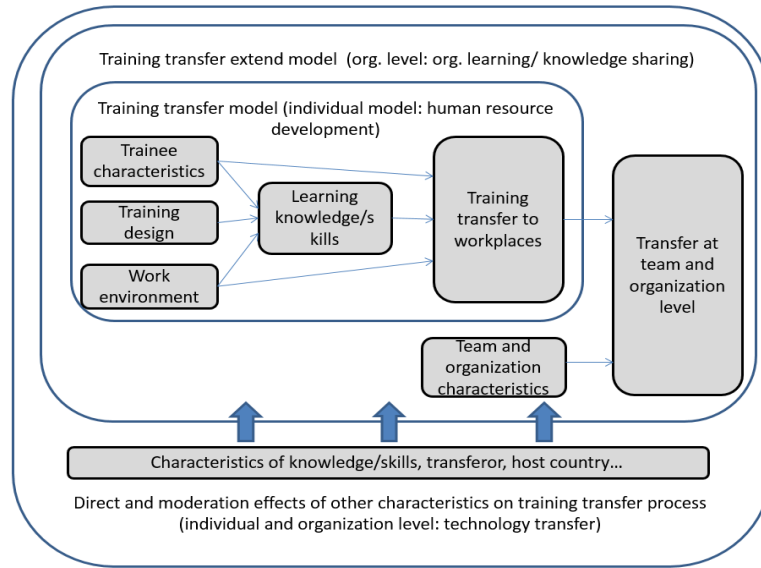


Fig. 1: Conceptual framework

There are three main objectives of this study. Firstly, we would like to assess the current situation of learned knowledge transfer at workplace at BMC group including contents of training course, training methods, trainers, trainees, results of training and transferring in the company. Secondly, we try to evaluate whether the process of learned knowledge transfer of BMC Company fits the conceptual framework proposed from literature review so that giving some suggestions regarding revision or modification if possible. Finally, some implications will be drawn for BMC, other firms in Vietnam.

Literature review: Training transfer has been received a lot of concern from researchers as well as practitioners worldwide because it is traditionally considered as a good indicator of effectiveness of training programs in the organizations. Positive transfer of training is defined as the degree to which trainees effectively apply the knowledge, skills and attitudes gained in a training context to the job (Wexley and Baldwin, 1986). Generally, the transfer process is described in terms of three aspects, namely, training-input factors, training outcomes and conditions of transfer. According to Baldwin and Ford (1988), the conditions of transfer compose of generalization of material learned in training to the job context and maintenance of the learned material over a period of time on the job. Training outcomes are defined as the amount of original learning that occurs during the training program and the retention of that material after the program is completed. Training-input factors include three most common dimensions which are

trainee characteristics, training characteristics and work-environment (Baldwin and Ford, 1988). Trainee characteristics consist of ability or skill, motivation and personality traits. The major training-design factors are the incorporation of learning principles (Bass and Vaughan, 1966), the sequencing of training material and the job relevance of the training content (Ford and Wroten, 1984). Work-environment characteristics include climatic factors such as supervisory or peer support as well as constraints and opportunities to perform learned behaviors on the job.

Relationship between trainee characteristics, training design, working environment and learning retention has found in various empirical studies. Different types of trainee characteristics, training design and work environment will lead to diversified impact on learning knowledge and skills (Gordon and Kleiman, 1976; Robertson and Downs, 1979; Ryman and Biersner, 1975; Tubiana and Shakh, 1982; Baumgartel and Jeanpierre, 1972; Wexley and Thomson, 1972; Baumgartel *et al.* 1984). Besides, Noe and Schmitt (1986) showed the link between learning knowledge and skills and training transfer. Therefore, this research investigates the mediating effect of learning knowledge and skills on the relationship between training inputs and training transfer at individual level.

In additions, in Holton (1996)'s Model, training transfer at individual level can be transferred to team and organizational level. As a result, we also incorporate this aspect to our model to find out necessary conditions to make the process happen. Below is our conceptual framework which is used to guide and give directions for the case analysis (Fig. 1).

MATERIALS AND METHODS

There were four main kinds of methods that were used in our study, namely, in-depth interview, field trip, collecting secondary data and survey questionnaire.

Regarding in-depth interview, we conducted twice in December 2015 and February 2016, respectively: Online group interview and face-to-face interview. The firm’s top manager was our respondent. The common questionnaire survey from this project was redesigned into two smaller categories that are for top manager and trainees of the firm. More specifically, in online group interview, we based on the questionnaire designed for top manager to obtain information. All the questions from three members of research team were clearly clarified by the top manager. For the second time of interview, we went directly to the company which locates around 80 km far from Hanoi. At that time, the CEO gave presentation introducing about his company and issues regarding learning, transfer and application of knowledge from Vietnam Japan Human Resources Cooperation Center (VJCC) to BMC. Questions were also raised during the presentation. After that, the research team had a visit around the company and manufacturing area. During and after this visit, we also asked questions in terms of production process, training transfer to production, how the firm overcomes differences between knowledge that they learned and the reality. Through in-depth interview, not only concerned issues relating to training transfer but information related to the competitiveness, company’s strategy and human resource management strategy also was collected.

We have also got a field trip to the company to look around and take some photos. Moreover, we collected information about the company through its website and documents which were finally analyzed by descriptive analysis.

As mentioned, questionnaire survey was used in this research, as well. Although the sample was very limited, just 4 trainees from VJCC, information captured by those respondents are really important and useful for us to understand the company’s process of training transfer. The 5 point Likert scale was used in this questionnaire ranging from 1 = strongly disagree to 5 = strongly agree. The items to measure all variables were adopted from previous researchers. Then all information was analyzed using SPSS to take mean value and standard deviation.

RESULTS AND DISCUSSION

Introduction about the firm: BMC joint-stock company is a small company in Vietnam, which is to provide qualified agricultural machines and equipment. It has two factories, one in the North and the other one in the South of Vietnam. Despite the fact that two factories belong to the same owner, they operate quite independently, so we

Table 1: Miles of company’s history

Years	Milestone
2002	Established
2002-2005	Trading in agricultural field plant protection products
2006	Investing the factory (Infrastructure)
2007-2009	Marketing promotion, brand development
2010	Starting assembling agricultural machines Implementing 5S and Kaizen
2012-2013	Japanese specialists consulting
2014	Japanese specialists consulting: strategy building, corporate governance based on BSC and KPI
2015	HRM management evaluation

treated BMC the North as an independent unit of company. BMC has a total of 65 employees that initial investment was around 700 thousand USD. There are some remarkable milestones of this company (Table 1).

Figure 2 illustrates sale and profit of the company in 4 previous years. As it can be easily seen, there is an increasing trend of the revenue. However, according to the top manager, the profit rate is just remained, about 6% of total sale. Thanks to successful application of training knowledge, the productivity and the quality of goods have increased, leading to the growth up of sale but the cost management is not good, so they still have only the same rate of profit. The top manager said that they are trying to cut the cost as well.

Figure 3 is about company’s production chain with four steps that are input, assembling, output and distribution. The 85% of the input is bought from domestic companies and other 15% is imported from some countries such as Japan, Korea and India. Even though the company does not directly produce any input, when they order, they can design and control the quality of components they buy. Their main customers are farmers in Vietnam market with 99% of production. Only 1% is exported to Indochina countries. They have 50 distributors all over Vietnam.

In terms of employee issues, organizational commitment of BMC is 3 years on average. The drop-out rate is approximately 10%, mainly from blue-collar workers. The quality of workers in this company is above the average and above the competitors’ at the same field of operation in domestic, according to self-evaluation of the top manager.

They also have R&D team which belongs to production department with 2% of revenue each year. About training program, the company has two kinds of training that are internal and external. For training from external, VJCC, JICA and Japanese consultants are three main sources for the company to obtain new knowledge and receive training. The company receives information

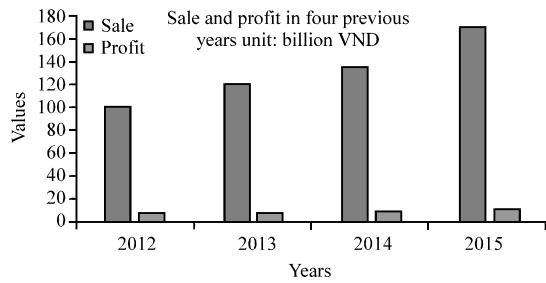


Fig. 2: Company’s sale and profit in last 4 years

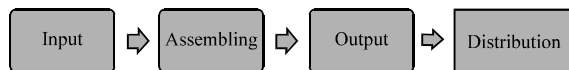


Fig. 3: The production chain

from VJCC at the beginning of every year. According to their strategy for that year, they send employees to VJCC to learn basing on the fitness between employees’ capabilities and the content of VJCC’s courses. Obviously, they have long-term and comprehensive plan for employees training integrated in their strategy and human resource management activities. The order of priority will be from top managers to production managers to potential employees within the company. Besides, the company support 2500/17500 USD of the tuition fee in total and the rest will be supported by Official Development Assistance program (ODA) of Japan. Nevertheless, the company still gives salary to those people as usual since from their perspectives, learning of employees means working for the company. During the training program, trainees will gain soft skills, hard skills and technical skills which are necessary for their job and some other skills in general.

For training from internal, those trainees will become key people in the organization who take initiatives to design and give training programs to other people.

Case analysis: As already mentioned, we used survey questionnaire to get information regarding training characteristics, training design, work environment, learning knowledge and skills and training transfer at individual and organizational level from trainees. All mean value and standard deviation are showed at Appendix.

Generally, all the latent variables in the model got above average scores. The mean scores for training characteristics, training design, work environment, learning knowledge and skills, training transfer at work (individual level) and training transfer at team and organizational level are 3.35; 3.56; 3.75; 3.5; 3.21 and 3.63, respectively.

It can be said from those mean value that trainees in BMC were ready and excited to be trained by VJCC

although they had not known much about what to expect from the training before it began. Trainees highly evaluated teaching methods which were used in the courses even if illustrated situations were neutrally similar to those they encounter on their job. With 3.75 in average of working environment aspects, trainees showed their high evaluation on their working environment where they are encouraged to learn, exchange and have opportunities to express themselves. Learning knowledge and skills variable got 3.5, so trainees were supposed to find learning knowledge and skills from education programs in VJCC to be useful for them.

Observing from the data, “training transfer at work place” variable which got the lowest score in average from 4 trainee’s answers (just around 3.2) put a question mark for this study. It is proved that though trainees enjoyed knowledge and skills from VJCC, training transfer at workplace is different story when they reported of less use. Therefore, from learning knowledge/ skills to training transfer at workplace, there might have something between or some variables needed to enhance this process.

In addition, there tends to be difference in the answers for the same question among job position of trainees. All the answers got from operation manager received the highest scores while for secretary, the grades were the lowest. Both machinist and HR staff got average results. From this finding, job position shows its potential to become a moderator in the conceptual framework.

Although, performance is out of this study’s scope, it shows the effectiveness of training transfer at team and organizational level. It is also good evidence indicating the existence of training transfer at team and organizational level program in this company. They have built small groups of employees, normally from 5-10 people. Each group will spend 1 h/week to collect improvement ideas. After that, awarding will be given to the best one every month. Accordingly, productivity increases by 30%, attitude of employees has been changing positively and defect sharply decreases and so on.

The next table illustrates how the company evaluates itself. Basically, the process of learning knowledge and skills application to the company was divided into four stages. Each period has its own reason of success or failure according to self-evaluation of the company. More details can be found in Appendix.

Though the company finally has success in applying new knowledge to their daily operation, there were several problems when they started doing Balanced Score Card (BSC) and Key Performance Indicators (KPI). Among them, there were five main reasons leading to failure at period 2013-2014. Firstly, they copied all the theories to the reality without or with little revision. Secondly, they had not understood well about the issues that BSC is just

Table 2: Reasons for success/failure of training transfer

Stage	Reasons/Methods
1st: From 2010-2011: Failure	Implementation at managerial level only; the company had not understood well and fully about 5S-Kaizen There was no one in lower level following the way/doing with unwilling attitude
2nd: From 2011-2012: Had some improvements, results	The company understood well about 5S-Kaizen; implemented to the whole got some good organization, at individual level; employees wanted to take those changes However, the company lacked suitable methodology to conduct the program
3rd: From 2012-2013: Beyond	Three same reasons with period 2nd but at this stage, company had successfully expectation developed the right methodology to implement
4th: Remaining achievements and continuous improvement	

a tool for achieving better performance, and cannot have outcomes directly. Thirdly, they were too greedy when they wanted to achieve so many goals at the same time. Fourthly, they did not have action plan (PDCA) which is very important step in application process. Finally, they had to face unwilling attitude from employees. However, in period 2014-2015, the company tried to solve all problems mentioned above and step by step got very good results (Table 2).

This study shows the process how BMC applied successfully learned knowledge/skills from VJCC to their business. The firm by itself can detect the main problems and try to improve them. Every company should adjust the knowledge which and how to be suitable with their real conditions. In this case study, the role of the top manager is extremely important; and also a key contributor to the success of the training. Time lag is also another problem. From the reality, it might take a company 3-5 years to successfully implement knowledge and skills taught by VJCC. The company suggests utilizing experienced consultants as short-cut.

This case study provides important suggestions for practitioners of other companies; Other user firms of VJCC should utilize some lessons drawn by BMC company, such as doing step by step, not being too greedy, using consulting services, not bringing all theories to application, having an action plan, using 5W1H method during implementation, getting all people in the organization understand and being ready to change, and so on. For VJCC, its course should be closer to firm demand of learning. They should be more practical use for firms.

In terms of the basic academic model, this case study is an evidence indicating that trainee characteristics, trainee design, work environment have effect on learning knowledge and skills. The direct path from trainee characteristics and work environment to training transfer are also highly potential. There might be some reasons to support for direct path from trainee characteristics to training transfer. There is a fact that employees who are sent to VJCC are carefully observed by the managers. They will be supposed to be promoted if the company

extends. Consequently, they are main objectives of the human resource development plan of the company in advance. This person should have at least three qualities such as competences, big intrinsic motivation, and being more likely to take initiatives to apply knowledge to their daily works, share knowledge and train others when they come back.

In terms of direct relationship between working environment and training transfer, there might be some possibilities when such environment with support from colleagues and boss, and full of opportunities of using exist. The more favorable working environment will lead to the more level of training transfer which company can enjoy from its employees. Moreover, path from learning knowledge/ skills to training transfer at workplaces may be positive with relatively small coefficient. Therefore, if we want to increase the level of this transfer, some moderators should be included. If so, this will be much meaningful in practice, for example, transfer motivation, job position and relatedness of knowledge to their works, etc.

Nevertheless, according to the top manager, a little learning transfer also makes them satisfied because they understand that this step is very difficult and they expect to have continuous organizational learning and transfer to workplaces. The path from training transfer at workplaces to team and organization level seems to fit with this case study. However, as conceptual framework shows, the characteristics of the team and organization (also including leadership) is also important in this path.

CONCLUSION

The study analyzed the training transfer process in BMC company which specializes in assembling agricultural machines in Vietnam. Using in-depth interview and survey questionnaire as main methods to collect information, this study showed that the mechanism how training inputs lead to training transfer outcomes in BMC fits with our conceptual framework basically. Besides, we also obtained some important clues as well as directions concerning potential variables as mediators and

moderators in training transfer at both individual and organizational levels to be integrated in future quantitative analysis. BMC is considered as a successful case in the sense of applying new knowledge and skills

from training programs to their company, so variety of lessons and implications were drawn for other companies in actual implementation process. Finally, suggestions were made for practitioners and academics.

APPENDIX

Appendix 1: Mean and standard deviation of variable in survey questionnaire

Job position	Production manager	Machinist	Secretary	HR staff	Mean	SD
Trainee characteristics	4	4	1	2	2.75	1.50
Prior to the training, I knew how the program was supposed to affect my performance						
Before the training, I had a good understanding of how it would fit my job-related development	4	3	4	3	3.5	0.58
I knew what to expect from the training before it began	4	3	1	2	2.5	1.30
I am confident in my ability to use newly learned skills at work	5	4	3	4	4	0.82
I am sure I can overcome obstacles on the job that hinder my use of new skills or knowledge	5	4	4	3	4	0.82
					3.35	
Trainee design						
The instructional aids (equipment, illustrations, etc.) used in training are very similar to real things I use on the job	5	4	3	3	3.75	0.96
The methods used in training are very similar to how we do it on the job	4	4	3	3	3.5	0.58
What is taught in training closely matches my job requirements	4	5	4	3	4	0.82
The situations used in training are very similar to those I encounter on my job	3	3	3	3	3	0.00
The activities and exercises the trainers used helped me know how to apply my learning on the job	4	3	3	4	3.5	0.58
It is clear to me that the people conducting the training understand how I will use what I learn	3	3	3	4	3.25	0.50
The trainers used lots of examples that showed me how I could use my learning on the job	4	3	4	4	3.75	0.50
The way of the trainers taught the material made me feel more confident I could apply it	4	3	4	4	3.75	0.50
					3.5625	
Work environment						
My colleagues appreciate my using new skills I have learned in the training	4	3	3	3	3.25	0.50
My colleagues encourage me to use the skills I have learned in training	4	3	4	3	3.5	0.58
My supervisor meets with me to discuss ways to apply training on the job	5	4	4	3	4	0.82
My supervisor shows interest in what I learn in training	5	4	4	3	4	0.82
My supervisor sets goals for me that encourage me to apply my foreign training on the job	4	3	3	3	3.25	0.50
I will be able to try out training on my job	4	5	4	3	4	0.82
The resources I need to use what I learned will be available to me after training	4	5	3	3	3.75	0.96
I will get opportunities to use training on my job	5	5	4	3	4.25	0.96
					3.75	

Table 3: Continue

Job position	Production manager	Machinist	Secretary	HR staff	Mean	SD
Learning knowledge and skills						
What kind of knowledge and skills were acquired?	4	3	4	3	3.5	0.58
My knowledge/skills increased as a result of this course	4	4	3	3	3.5	0.58
I feel that newly learned knowledge/skills can do my current job better	4	4	4	3	3.75	0.50
I remember almost every knowledge covered in the learning	3	3	4	3	3.25	0.50
					3.50	
Training transfer						
I have applied the thing covered into my work	3	3	3	4	3.25	0.50
I used almost everything that was covered in my work	4	3	2	2	2.75	0.96
I used the things covered in this training almost every day	4	3	2	2	2.75	0.96
Using the new knowledge and skills has helped me improve my work	4	4	3	3	3.5	0.58
I can accomplish my job tasks faster than before training	4	4	3	3	3.5	0.58
I can accomplish job tasks better by using new knowledge and skills	4	4	3	3	3.5	0.58
					3.20833	
Transfer to team and organizational level						
Errors and failures are always discussed and analyzed in this firm, on all levels	5	4	4	3	4	0.82
Employees have the chance to talk among themselves about new ideas, programs and activities that might be of use to the firm	5	5	4	3	4.25	0.96
In this firm, teamwork is not the usual way to work	3	4	1	3	2.75	1.26
The firm has instruments (manuals, databases, files, organizational routines, etc.) that allow what has been learnt in past situations to remain valid, although the employees are no longer the same	4	3	4	3	3.5	0.58
					3.625	
Learning motivation						
I was motivated to learn the skills emphasized in this training program	5	3	2	3	3.25	
I think this was a good chance to improve my task ability	4	5	4	3	4	
I will try to learn as much as I can from this training course	5	5	4	4	4.5	
					3.916667	
Transfer motivation						
I get excited when I think about trying to use my new learning in my job	4	5	3	3	3.75	
I will look for opportunities to use the skills which I have learned	4	5	3	3	3.75	
I am highly motivated to apply the knowledge/skills I learned in this training to my daily work	4	4	4	3	3.75	
					3.75	
Managerial commitment						
The managers frequently involve their staff in important decision making processes	5	4	4	3	4	
Employee learning is considered more of an expense than an investment	5	4	5	3	4.25	
The firm's management looks favorably on carrying out changes in any area to adapt to and/or keep ahead of new environmental situations	5	4	4	3	4	
Employee learning capability is considered a key factor in this firm	4	3	3	3	3.25	
In this firm, innovative ideas that work are rewarded	4	4	4	3	3.75	
					3.85	

Table 3: Continue

Job position	Production manager	Machinist	Secretary	HR staff	Mean	SD
Systematic perspectives						
All employees have generalized knowledge regarding this firm's objectives	5	3	4	3	3.75	
All parts that make up this firm (departments, sections, work teams and individuals) are well aware of how they contribute to achieving the overall objectives	5	3	3	3	3.5	
All parts that make up this firm are interconnected, working together in a coordinated fashion	5	4	4	3	4	
					3.75	
Openness						
This firm promotes experimentation and innovation as a way of improving the work processes	4	4	4	3	3.75	
This firm follows up what other firms in the sector are doing, adopting those practices and techniques it believes to be useful and interesting	3	3	2	3	2.75	
Experiences and ideas provided by external sources (advisors, customers, training firms, etc.) are considered a useful instrument for this firm's learning	4	5	4	3	4	
Part of this firm's culture is that employees can express their opinions and make suggestions regarding the procedures and methods in place for carrying out tasks	4	5	4	3	4	
					3.625	

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