

THE RELATIONSHIP BETWEEN RISK-TAKING, TRAINING EVALUATION AND THE IMPLEMENTATION OF INNOVATION

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Abstract

This paper is about the growing interest in psychological determinants of the implementation of innovation. More precisely, the article deals with relationships between: a) risk-taking tendency (as a personality trait); b) training evaluation; and c) attitudes towards innovation amongst employees who are subjects of change). The results are helpful to build the training system and seeking people to lead change. It can also serve as a starting for a more thorough analyses; allowing better recognition of the factors influencing behaviour in implementing changes. The research was conducted based on the SEKAP computer system.

Introduction

Purpose of the paper is to present research findings that were conducted for the author's master thesis. They concerned relationships between individual risk-taking tendencies (understood as a personality trait), training evaluation and attitudes towards implementation of innovation (in the SEKAP system).

Implementing changes in the organization requires acquiring new skills and knowledge. Employees' learning is often introduced in the form of various trainings activities (Adamiec & Kozusznik, 2000; Łaguna, 2004; Patrick, 2003). Both train-

ing and innovation may cause resistance in their subjects. A growing number of researchers (e.g., Łaguna, 2004; Kirkpatrick, 2001) points out the role of opinions and attitudes towards training, and their influence on the learning process as well as the application of acquired skills and knowledge. Not only psychologists, but also economists (e.g., Brilman, 2002) emphasise the role of attitude towards innovation.

Deciding whether an employee is going to assimilate or a decline change is accompanied by a certain level of uncertainty, which Ratajczak (1980) defines as risk. Individuals differ regarding frequency, magnitude and motivation for risk-taking (Studenski, 2004). Individual risk-taking tendency is, according to Studenski, a measurable variable with a normal distribution in the population. The level of risk-taking is related to the perceived risk magnitude and the motivation for risky behaviours. This study examined relationships between employees individual risk-taking tendencies (understood as a personality trait) in seeking connections with their evaluation of the innovation. The aim was to highlight the importance of attitudes towards innovation, individual risk-taking tendency and employees' attitudes towards the training system that was used to introduce innovation the SEKAP computer system.

The study focused on the particular innovation: the introduction Electronic System of Public Administration Communication (SEKAP). It is being implemented as a part of the Strategy of Development of Informational Society of the Silesian Voivodeship. The project is an innovation dedicated to offices in the Silesian Voivodeship looking place between 2005-2008. The aim of this project was creating and managing a teleinformatic environment to provide public services electronically. Employees went through a system of training (for groups as well as individuals) using the SEKAP system. The study examined: a) the employees' opinions of the training organised by their employer and on the training on the use of the SEKAP system; b) employees' attitudes reading the SEKAP system from when they first heard they were to use it and at the present time; having gone through training and gained experience in working with the system.

Method

Five research questions were put forward looking at whether and how: a) *Individual risk-taking tendency is related to attitude towards the SEKAP system?* b) *Individual risk-taking tendency related to training evaluation?* c) *Training evaluation is related to attitude towards SEKAP?* d) *Training evaluation in related to the training evaluation on SEKAP?;* e) *Initial attitudes towards SEKAP (before its introduction) are related to the same kind of attitudes presented after the introduction of SEKAP and the attitudes presented by participants towards SEKAP system (after implementing changes) and with their opinion on trainings on the SEKAP?*

Variables

The variables included in this study were operationalised using three questionnaires. First one of them, The Risky Be-

haviours Test (Studencki, 2004) was used in order to diagnose individual risk-taking tendency based on the participant's self-assessed frequency of pursuing risky behaviours as well as their satisfaction of following these behaviours. The questionnaire consists of 25 statements with a Likert-type response scale; revealing good psychometric indicators ($r = 0.937$).

The other questionnaire tool, used to measure the starting and final attitude towards the SEKAP, was a measure of resistance to innovation by Kozusznik modified by the Author. It consisted of 10 items with a 5-grade semantic differential scale. The third questionnaire, constructed for the purpose of this study, measured individuals' training evaluation, both in general (A-version) and training on the SEKAP (B-version). It included 22 statements with a Likert-type response scale, concerning four areas: a) the trainer; b) environment and organization; c) content and methods; and d) participant's benefits. The result range was 88 points. Individuals scoring below 56 points were considered as having a negative evaluation, while those scoring above 76 had a positive evaluation of the training.

Sampling in the study was purposive. The sample consisted of employees of the Marshall Office of the Silesian Voivodeship employed for at least one year. The target sample were clerks who were using the SEKAP system and had taken part in training on its use (1,000 people). 180 people working in chosen units received study questionnaires.

Results

From the 180 distributed questionnaires, 118 were received correctly completed (65.5% response). The sample consisted of 73% of women and 27% men. The majority of participants were aged 30 to 40

years old (53%) and 21 to 29 years old (48%). The majority (96%) were using the SEKAP at work at least a few times per week. Analysis revealed no significant influence of the demographic variables on the study variables.

Quantitative analysis methods were applied with all variables revealing a normal response distribution. Correlation was introduced in order to examine relationships between variables; also the analyses included using the t-Student test for independent samples or the Cochran and Cox test.

Preliminary descriptive analysis showed that the majority of participants have positive attitudes to training evaluation (both to specific and general programmes) containing innovative issues. Opinion towards training in SEKAP system was distributed from neutral to positive. Comparing descriptive statistics shows that the majority of participants were more likely to have

positive attitudes concerning vocational training than towards training about the SEKAP system. A majority of participants were likely to display a neutral attitude towards the SEKAP system at the moment when they heard about it. However, the distribution of results was strongly scattered; demonstrating a wide range of negative and positive attitudes.

Following training and using the SEKAP system a majority of participants presented neutral or negative attitudes; with a large group of participants reporting extremely negative evaluations. In the majority participants had average tendencies to risk-taking; with a few participants reporting extremely low or very low tendencies to risk-taking

Pearson's correlation coefficient was used to examine relationships between study variables. The results of these analyses are shown in Table 1 (below).

Table 1: Correlation between tendencies of risk-taking, attitudes towards SEKAP, and training evaluations

<i>Variables</i>	2	3	4	5
1. Individual tendencies of risk-taking	.273**	.051	-.242*	-.250**
2. Initial attitude towards SEKAP	-	.285**	-.142	-.135
3. Currently presented attitude towards SEKAP		-	-.246*	-.379**
4. Evaluation of all training in company			-	.514**
5. SEKAP training evaluation				-

Note: ** Correlation is significant at the .01 level (two tailed)

* Correlation is significant at the .05 level (two tailed)

Training evaluation of general courses containing innovative issues rated positively correlation with training evaluations in SEKAP ($r=.52$; $p< 0.01$).

A weak positive correlation ($r=.27$; $p< 0.01$)

was seen between tendencies of risk-taking and the initial attitude concerning the SEKAP system (with growing negative attitudes accompanying the rise in tendency of risk-taking).

A weak negative correlation was seen between tendencies for risk-taking and training evaluation of general courses containing innovative issues ($r=-.24$; $p < 0.05$) as well as trainings in SEKAP system; ($r=-.25$; $p < 0.01$) (high tendency for risk-taking behaviours was accompanied by worse training evaluation).

The initial attitude concerning SEKAP showed a weak positive correlation with the currently presented attitude towards SEKAP ($r=.29$; $p < 0.01$).

The training evaluation in the SEKAP system showed a negative correlation with the currently presented attitude towards SEKAP ($r=-.38$; $p < 0.01$) (a more positive attitude is accompanied by the better opinion on trainings). Further, a weak negative

correlation was detected between the trainings evaluation containing innovative issues and the current attitude towards SEKAP ($r=-.25$; $p < 0.05$) (a more positive position is accompanied by the better opinion). No further correlations were discovered.

The mean tests of differences revealed (see Table 2) that employees scoring high in risk-taking tendency were more likely to have a neutral initial attitude concerning changes, while participants with low in risk-taking tendency revealed more positive attitudes. Participants with high in risk-taking tendency were more likely to have less positive training evaluations in comparison to those with a low risk-taking tendency.

Table 2: Correlation between tendencies of risking, attitudes towards SEKAP, and training evaluations

Group	2		3		4		5	
	positive	negative	positive	negative	high	low	high	low
<i>1. Individual tendencies of risk-taking</i>								
high		X				X		X
low	X				X		X	
<i>2. Initial attitude towards SEKAP</i>								
positive			X					
negative				X				
<i>3. Currently presented attitude towards SEKAP</i>								
positive								
negative								
<i>4. Evaluation of all training in company</i>								
high							X	
low								X
<i>5. SEKAP training evaluation</i>								
high			X					
low				X				

Note: X- connection revealed using tests differences

Employees scoring low in risk-taking tendency had more positive training evaluations on the SEKAP when compared to those scoring high in this variable. Employees revealing more positive training evaluations on the SEKAP had a more positive attitude concerning SEKAP system than those with less positive training evaluations.

However, employees with lower training evaluations containing innovative solutions were more likely to rate the training on the SEKAP system lower.

Finally, a relationship between the initial attitude towards the SEKAP and the one they revealed upon completion of the training programme was also confirmed.

Discussion

This study was exploratory in nature but demonstrates the need to pay attention to employees' attitudes towards innovative solutions before introducing training programmes as well as after their completion. Those employees with negative attitudes toward innovation also tend to have negative opinions about the newly implemented SEKAP system.

Another aspect deserving proper attention are employees' training evaluations and their assessments of introduced changes. Employees with a negative approach toward training on the new system were likely to have a negative opinion about the whole SEKAP system. Therefore, to enable the new system to be accepted by employees it is essential that the training programme is well conducted and deals with these types of negative opinions.

This study justifies the value of the inclusion of personality traits, such as risk-taking tendency, in studies of innovation

implementation. In particular, it is useful to pay attention to persons with the tendency to risk-taking when you form training groups; as these people are more likely to reveal neutral and negative attitudes towards training programmes and the change implementation. Further, this study suggests that those with a low opinion about training programme are likely to have a negative attitude towards whole innovation (SEKAP).

Introducing attitude measurement in advance of training would allow an appreciation of those with negative attitudes to be identified in advance. Additional time and resources could be given to address the needs of these individuals and opportunities could be created enabling leaders of change to influence those with the negative attitudes toward changes.

Relationships in the situation of introducing changes are extremely complex. This study highlights the need for deeper analysis of the links between attitudes concerning innovation and elements of training situations such as personality traits, attitudes and trainings evaluation. Studies such as this may contribute to a better understanding of factors influencing behaviour in situations of innovation introduction.

The finding of this study and the relationships demonstrated may also be helpful in the design of training programmes before the introduction of new ways of working. Innovations such as this may consequently improve the effectiveness of the learning process, the pace of skill development and the acceptance of the use of new technology in the workplace. These are important considerations for organizations that are trying to adapt and develop in the changing world economy.

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