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HUMAN SIDE OF CREATING A KNOWLEDGE BASED AGRICULTURAL PUBLIC EDUCATION INSTITUTE

LUDZKA STRONA KREATYWNOŚCI OPARTEJ NA WIEDZY ROLNICZEGO PUBLICZNEGO INSTYTUTU EDUKACYJNEGO

Abstract. The Eastern Hungarian Agricultural Regional Integrated Vocational Training Center's organization and human resource development project has just ended. Its overall, long term aim was to create a 'flexible' institute of which training structure and portfolio fits to all-time actual labor market demands, both in aspects of contents and quality. This paper presents a partial survey of employee attitudes about the project work and the project's aims in which the one of Hungary's most important agricultural vocational training institutes had taken steps towards the knowledge based functioning.

Introduction

Nowadays an important expectation is, that education institutes should map out their training and course portfolio in a flexible way and by the actual, frequently changing demand of labor market. It is clearly apparent, that – to be able to suit the requirements – the schools should change themselves and progress both in the pedagogic-professional and managerial aspects. In 2009, the Ministry of Rural Development of Hungary – as the maintainer of 18 agricultural vocational training schools – had got the possibility to execute such EU sponsored organizational developing projects in the scope of the so-called Social Renewal Operational Programme (SROP), that – first of all – integrated these 18 – formerly distinct – schools in three regional integrated vocational training centers. The significance of these extensive developments can be nicely exposed by related points of the so-called ex-ante evaluation of Operational Programs of the New Hungary Development Plan (i.e. the National Strategic Reference Framework of Hungary) of which referred, relevant problems are: long-term unemployment in Hungary (principally in the specially situated groups of labor market); the vocational training system disregards the training needs of local labor markets; the vocational trainings are not enough practice-oriented, etc.) [Tárki 2007]. Besides this, the Social Renewal Operational Programme (SROP) contains the related general and specific purposes (for example the improving of conformity of supply and demand of labor-markets; equalizing the regional differences in activity; facilitating of the Life Long Learning principle, etc.). Therefore the above mentioned organizational development projects, just as the Eastern Hungarian Agricultural Training Center's discussed here, had to focus on the problems of the kind, and had to generate solutions within the own scope of authority. At the same time – as these projects have basically aimed at the creation of more efficient organizations, their execution was a change management activity, which – through the complex and extensive character – can be defined as secondary, "morphogenetic" change [Mink et al. 1993]. Since both the organizational strategies and training portfolios were altered and new learning and teaching techniques were introduced; the quality management systems, the information systems and above all the organizational configurations, etc. were also changed.

The aim of our present research was to recognize the attitudes and approaches about the development framework of Eastern hungarian agricultural regional integrated vocational training centre's OD project, and to unfold the participants' attitudes about the project's main purposes, using hierarchic cluster analysis.

Circumstances of the development

The efficiency of the development was already influenced at the start of 24 month term project, by the fact that the 'regional integrated vocational training center', as a new organizational form was/is permanently in the crossfire of the professionals and the educational policy. Beyond that, the integration was followed with resistance to a certain degree resulting from the natural fear from novelty and from the fear of partial revoking of previous professional and financial separateness of member institutes. Accordingly, in the first phase, breaking down of these obstacles were significant and it came out both in the management communication and the creation of the organizational configuration. In course of the project, a further challenge was that the development was followed by momentous organization alterations (i.e. separation of member institutes) and personal changes at strategic managerial level, that set back the project's planning and realization. These traits and the relatively large geographical distance between the member institutes of Eastern Hungarian Agricultural Training Center, have determined the basic character of the cooperation: an institute with agricultural main profile should be created, that cannot be described with a bureaucratic management and centralized control, but rather with the mutual collaboration based on the facilitation of knowledge-sharing and flow, the sharing of good practices and the exploitation of possible synergistic benefits. Thus, a complex organizational development was evolved, that focuses on the employees' common thinking and learning, their further training, towards the creation of an institute which is responsive to the all time external conditions.

Operationalization of aims and tasks

After the tender priorities, the designation of main development fields and basic activities were appeared and materialized in the next 6 workgroups (project teams) of specialties: integrated control and educational administration; curriculum development and adult education; training development and modular education; guidance and reintegration of disadvantaged students; marketing and environmental sustainability. These groups' main duties have covered the creation of new procedures, methods, documents, processes, innovations, and common functions. The project – besides the work of the project management and some external education experts – was realized mostly by these, creativity facilitating, empowered workgroups. At the initial formation of development groups, both the former experiences related to the specialties above, and the linking of employees of diverse attitude and dynamics were organizing principles. The main precondition of the project's successful execution was an appropriate attitude and approach of project teams, and incidentally – based on our previous experiences and surveys – it was usually given, except for those disadvantageous and unsteady periods when certain external interventions affected the project [Dúl 2011].

The background and expected values of development

According to Fulmer et al. [1998] the organizations – in the midst of their rapidly and constantly changing surroundings – can only cope with the impacts endangering their success, if can acquire the ability of learning which can be retained in spite of all changes. This ability means, that an organization can learn easier, can adapt faster, and can use up both the internal and external information and knowledge. For all organizations – such as an integrated training institution – the proceeds of knowledge management, and the possible expectations about KM can be presented through the next elements [Tomka 2009]: synergy between the units or departments of organizations, enhancing of customer value, the improvement of quality, the reduction of costs, and speeding up of innovation. The knowledge's required elemental phase, at the same time the root of knowledge management is the turning into learning organization, which is a multistage process. According to Bencsik and Bognár [2003] organizations – in order to be able to learn and progress – should also have such workgroups or employees who are able to learn and develop themselves. If we draw a parallel to the changing activity in change management, than this is a reproductive, imitative kind of change (single loop learning). A higher level is, when organizations are also looking for the reasons of the leeway (of expected and actual results of actions and functioning) that necessitates the alteration of human values, attitudes and the applied norms. In the case of instructional learning, the organization copies the routines of others, and uses that as its own. This means that an adaptation is happening in the course of change, and the adaptation also presents a developing and problem-solving value (double loop learning). The highest level of learning is, when the organization analyzes, studies the learning process itself (deutero learning). But it shouldn't be by-passed that acquiring of knowledge should be retained and applied. This idea mediates to knowledge management, in which the community is a keyword. Of course, the workgroups in our OD project were project teams in the classical sense, but the declared long term aim is, that these groups should be transformed into communities of practice of strong commitment. Namely, these can be the knowledge based education organizations' most effective formations [Warren

2006], but there are some basic differences between project teams and communities of practice, since – in contrary to project teams well determined and controlled scope of authority and tasks – the boundaries within the organizations of communities of practice are fairly fuzzy. The expressed purpose of communities of practice is to create, expand and exchange knowledge and to develop individual and to develop individual capabilities. They contain self-selected professionals by expertise or passion for a topic, and this passion, commitment and identification with the group and its expertise holds them together, and they last as long as there is relevance to the topic and value and interest in learning together [Wenger et al. 2002]. Since our project's main object was the establishing of the appropriate, flexible long-term operation, these formal groups should step into a – from the aspect of knowledge management – higher dimension, McDermott's mechanism (Fig. 1) about the creation of values and effects in communities – also confirms this recognition.

Figure 1. Demonstration of value creating of communities
Rysunek 1. Przedstawienie wartości tworzenia społeczności
Source: own study based on McDermott 2004
Źródło: opracowanie własne na podstawie McDermott 2004

From this point of view – despite of all success – our project was set back by several elements. The obstructive factors of knowledge sharing and cooperation and the related management answers were the following. *Lack of trustfulness*: in order that the individual aims of participants can contribute to the efficiency of the integrated institution and the project in the long run, a common vision and strategy should be created. These are including the possible individual conceptions therefore the groups and members are ready to identify with it (/these). At the same time the projects' developer teams had worked in the framework of empowerment, which gave the employees more independence, decision making authority and responsibility. *Questions and disagreement about control resulting from the misunderstanding of project aims*: person-oriented coordination, change management trainings, creation of obvious organizational structure and configuration. *Knowledge possession of employees:* persuasion and creation of the appreciative and incentive ambience for knowledge-sharing (e.g. workshops, programs organized in a rotary way in the member institutes). *Based on all of the above mentioned elements:* disagreement with project's purposes and not appropriate working through the lack of motivation. Both the initial selection's success and the previously displayed arrangements' efficiency is confirmed by the surveys we made during the project on divers occasions about the participants attitudes.

Materials and methods

Despite of the relatively unfavorable initial premises, the success of the development is traceable through some positive changes in the approach of employee basis. We made three surveys among the project's 45 participants about the project related attitudes, using anonymous queries. In the course of the latest survey (executed after the physical closure of the project), some convincing results came out, especially from the aspect of possibility to create a knowledge based organization that can be followed on the next figure (Fig. 2).

As a part of the further research – in the scope of the cluster analysis – the objective was to categorize the contributors in such distinct groups, that are nearly homogenous by the component features, in order to plan customized interventions and actions for employee groups. The cluster analysis was executed by two question groups. In the first case the aim of hierarchic cluster analysis (using Between groups linkage method) was to recognize the attitude about the OD project's participants approaches about the development framework. The second question group aims at the creation of clusters through the team members' attitude about the project's main purposes. Since we assumed that basically two main judgments can be exist (positive or negative), in this case the only aim was to determine the headcounts of these two created (or rather theoretically de facto existent) groups, so we used non-hierarchic K-means cluster-analysis.
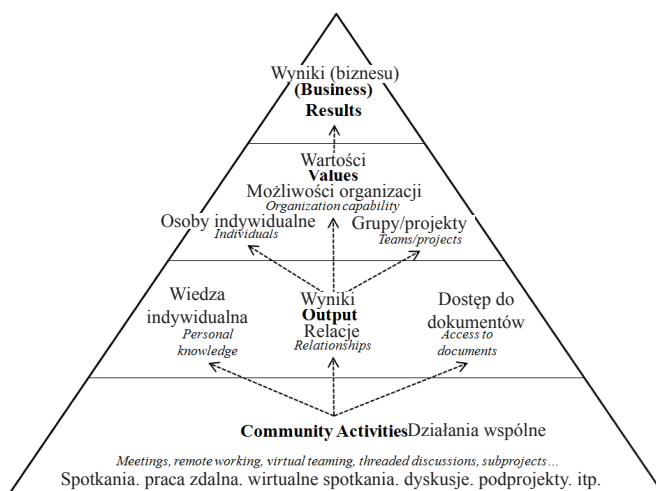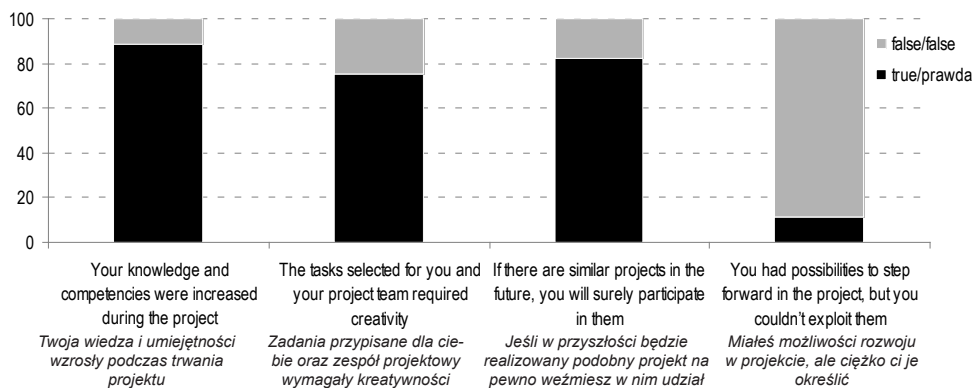
Figure 2. Some attitude factors of the project and project tasks
Rysunek 2. Wybrane czynniki wpływające na postawy oraz zadania w projekcie
Source: own study
Źródło: opracowanie własne

Results

The utilization of first question group was intended to create clusters by the approaches about the project work, which also indicated the readiness for the action to change, by the following questions:
– in your group. another team members (your co-workers) worked instead of you (1-to-5 rating Likert scale, where '1' value means that 'I absolutely disagree, the statement is false, '5'= 'I absolutely agree'),
– in the project and in the work, you only aimed at the obligatory minimum (1-to-5 rating Likert scale, where '1' value means that 'I absolutely disagree, the statement is false, '5'= 'I absolutely agree').
Table 1 presents the summary of calculation results.

In the course of the analysis. we identified three employee groups. First group: absolutely motivated, and ready-to-work approach (31 employees); second group: willing to work with low level motivation, the participants who actually fulfilled only the own duties (9 employees); third group: dismissive approach, the antipodes (employees). The above contents of the three groups also determines the qualitative composition of the body. Namely, according to the opinions of the largest cluster, most of the participants are working with the appropriate attitude and readiness. The headcount of this group is more than two times higher the other two, less positive groups combined headcount. The most problematic cluster (no 3.) contains only five persons.

Table 1. Summary of clustering through the approaches about the teamwork in the project
Tabela 1. Wynki grupowania opini o podejściu do pracy grupowej w projekcie

Average Linkage (Between Groups)/ *Średnie powiazania pomiędzy grupami*		In your group, another team members (your co-workers) worked instead of you/ *W twojej grupie inni współpracowanicy pracowali zamiast ciebie*	In the project and in the work, you only aimed at the obligatory minimum/ *W projekcie i podczas pracy wykonywałeś tylko konieczne minimum*
1	mean/*średnia*	1.26	1.06
	N	31	31
	std. deviation/ *odchylenie standardowe*	0.514	0.250
2	mean/*średnia*	1.56	3.44
	N	9	9
	std. dev./*odch. st.*	0.726	0.726
3	mean/*średnia*	4.20	3.60
	N	5	5
	std. dev./*odch. st.*	0.447	1.140
Total/ *Razem*	mean/*średnia*	1.64	1.82
	N	45	45
	std. dev./*odch. st.*	1.069	1.248

Source: own study
Źródło: opracowanie własne

Table 2. Final Cluster Centers
Tabela 2. Ostateczne centra grup

Final Cluster Centers/*Ostateczne grupowanie centrów*	Cluster 1/ Klaster 1	Cluster 2/ Klaster 2
The project has generated useful things and outcomes/ *W wyniku projektu powstały przydatne rzeczy i opracowano przydatne wyniki*	3	1
The project was successful/*Projekt zakończył się sukcesem*	2	1
There were such tasks in the project that should have been done earlier/ *W projekcie wystąpiły zadania, które powinny być wykonane wcześniej*	2	1
If there are similar projects in the future. you will surely participate in them/ *Jeśli w przyszłości będzie realizowany podobny projekt na pewno weźmiesz w nim udział*	1	1
The integration was aimed in the project doesn't make sense/ *Zakładana w celach projektu integracja nie miała sensu*	1	2

Source: own study
Źródło: opracowanie własne

For measuring the project team members' attitude about project purposes we used the next question group:
– the project has generated useful things and outcomes (nominal variable with true(1)/false(2)/don't know(3) outputs),
– the SROP project was successful (true(1)/false(2)/partly true(3)),
– there were such tasks in the project that should have been done earlier (true(1)/false(2)/don't know(3)),
– if there are similar projects in the future, you will surely participate in them (true(1)/false(2)),
– the integration was aimed in the project doesn't make sense (true(1)/false(2)).

Table 3. Number of cases in each cluster
Tabela 3. Liczba elementów w klastrze

Cluster/ Klaster		
	1	10.000
	2	35.000
Valid/*Występujący*		45.000
Missing/*Brakujący*		0.000

Source: own study
Źródło: opracowanie własne

The following tables (tab. 2, 3) are displaying the details of calculation. In this regard the absolutely positive employee groups' total headcount was 35 at the survey, which number exceeded the previous expectations, thus it can be declared, that the realization of the project was based on a generally apprehensive body. This cluster is the group of fully loyal participants, the "elite", who presented the ideal answers to all of the questions. The first cluster with 10 employees represents the total reverse idea, and without any motivating interventions or personal development, these employees cannot serve as basis for further OD projects. What is in addition interesting in the features of this cluster is that along with the absolute rejection of the project its members would participate in similar projects in the future, which indicates that one or more motivating force operates outside of the projects professional orientation.

Conclusions

Hungary's new agricultural and rural development strategy called 'Darányi Ignác Plan', issued by the Ministry of Rural Development of Hungary in the beginning of 2012 – firmly urges the further renewal of vocational training system and the altering of institutional network of rural development [Darányi …2012]. This intention will obviously affect the functioning of the existing agricultural regional integrated vocational training centers. Due to the relative unpopularity of agricultural professions, the descending number of students resulting from demographic wave and decreasing financing possibilities- the establishing of flexible, knowledge based operation, or at least taking the first steps towards it, can be especially important for them. Though vocational training schools and integrated vocational training centers – according to their basic functions and purposes- are not profit oriented organizations, now even so have to operate like competing companies. This fact means, that the management of vocational training institutes now should have a market-oriented way of thinking and special knowledge mobilizing skills. It is apparent that education institutes should be leading in creativity; should be familiar with the actual labor-market demands and components of competitive pedagogic and management programs. Also educators, trainers should have and share more and more available applied and theoretical knowledge within the organization. The organizations' ability to mobilize the knowledge nowadays is not only a possible strategic option of improving the competitiveness indeed, but one of the crucial factors of the institutes' survival. According to a previous survey made among the Eastern Hungarian Agricultural Regional Integrated Vocational Training Centre's SROP project's employees [Dúl 2011], it can be declared, that evolution

of communities of practice, and their long-term subsistence does not seem to be an impossible attempt. The professional cooperation of the employees of component member institutes of integrated organizations (without regard to organizational frontiers) exerts influence across the spreading of good practices, the collective learning and the human and professional development, but only in the case if this work is followed by strong managerial and the maintainer's commitment, and the OD work won't be decisively affected by any oppressive external interventions.

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Streszczenie

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