DEVELOPMENT OF A CLUSTER MANAGER'S COMPETENCIES TOWARDS COMPETITIVENESS

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Abstract

Cluster managers have less authority compared to managers in companies, with the work of cluster managers based rather on negotiation than on issuing instructions. Nevertheless, dynamic changes regarding environment and customer needs in general have taken place, and ensuring that employees have adequate knowledge and skills has become necessary for companies to gain a competitive advantage. Thus, the development of competencies in cluster management is more relevant in terms of the changing nature of competencies in order to enhance competitiveness. A research gap, however, has emerged in terms of studies analyzing developmental activities to increase the skills and knowledge of cluster managers, including their abilities to support cluster development and related competitiveness issues. The main objective of the present paper is to identify possible methods of developing cluster managers competencies in order to increase the competitiveness of cluster organizations. To accomplish these research goals, the paper employs semi-structured interviews with Czech cluster managers, with primary data analyzed via coding based on thematic analysis and codes subsequently grouped into categories for conceptualization. The findings indicate that development of cluster managers lags behind in terms of lack of motivation enhancement and time, lack of finance, idleness, negative experiences, administrative tasks as well as personal traits. The main criteria for developing competencies in cluster organizations are reflected in activities focused on the ability to innovate, lead and protect in terms of trust building, all skills essential for enhancing the competitiveness of cluster organizations. Cluster managers select development activities based on topics and references to educational activities which they estimate mainly from practical experience based on recommendations by experienced practitioners. Finally, the study puts forth practical guidelines regarding self-development methods recommended by the respondents for developing competencies in cluster development and competitiveness.

1. INTRODUCTION

Much recent research has increasingly focused on the role of individuals and their personal development, with numerous studies indicating that each individual should manage their own learning and development processes (Boyce et al., 2010; Day, 2000; Day & Zaccaro, 2004; London & Smither, 1999; Tomassini & Zanazzi, 2014). In this context, Garavan et al. (2002) have recommended the self-development of managers who understand the need for further professional development and who will assume responsibility for managing their own career paths. Not only would this allow organizations to keep up with the dynamically changing environment (Antonacopoulou, 2000), but it would also lead to the more cost-effective development of human resources (Temporal, 1984). For a successful future organization, it will become important that the manager understands himself/herself and becomes responsible for his/her development (Cunningham, 2004; Jaseviciute-Ufartiene et al., 2014).

In small organizations and organizations, which often need to adapt quickly to changing circumstances, management development plans and programs are costly and impractical (London & Smither, 1999). As London & Smither (1999) add, organizations can provide resources that enable individual learning, but individuals are becoming increasingly responsible for their own development. Self-development is perceived as decisive to individuals in today's financially constrained and rapidly changing organizations (London & Smither, 1999). Cluster organization (CO) can definitely be included in these types of organizations. Generally, CO can be defined as "organized efforts toward cluster development which can take various forms, ranging from non-profit associations, through public agencies to companies" (Schretlen et al., 2011). The main reason for the greater application of the self-development method in the cluster environment is the fact that generally no staff development departments (e.g. personnel departments) are available for this population as is the case with more traditional business organizations. In order to retain or even increase the competitiveness of COs, the use of the self-development approach in terms of its management seems to be crucial. Nevertheless, at present there is no methodological support in relation to the self-development of cluster managers.

To address this lack in the literature, this paper focuses on the self-development method and its application in cluster conditions as a current trend in managerial development in order to tackle the research gap concerning the competencies of cluster managers in terms of enhancing competitiveness and viability (Boyce et al., 2010; Day, 2000; Day & Zaccaro, 2004). Nine key roles required for the effective performance of cluster managers along these lines were formulated as follows: communicator, strategist, innovator, motivator, protector, cluster expert, analyst, networker and manager (Horák et al., 2019). Self-development methods for each set of competencies associated with each role are identified below.

The paper is structured into four sections. The first defines the position of a cluster manager, including his/her work agenda and the area of management development; the second section introduces our methodology; the third focuses on the results and discussion; and our conclusions are presented in the last section.

2. LITERATURE REVIEW

The paper is primarily focused on the manager position in cluster organizations, structures which are typical for their organized efforts toward cluster development (Schretlen et al. 2011) and also have legal entity. The term cluster is generally defined as a geographic concentration of companies, institutions and entities operating in related industries which both cooperate and compete with each other (Porter, 1990). The individual responsible for managing the cluster organization is called the cluster manager. According to Günther & Meissner (2017), cluster management is defined as "all organizational and managerial work within a cluster that contributes to interconnectedness between cluster members (internal relations) and between the cluster and surrounding actors (external relations)." Nevertheless, the position of a cluster manager must be considered in terms of the differences as compared to a manager in company. Zagorsek et al. (2008) point out four main differences, ranging from lack of formal authority (legitimate power), the often high diversity among cluster members, the typically low level of trust among members, as well as the relative lack of engagement among the entities. From our experience, we can also point out the lack of an overriding Personnel Department and hierarchy (superiority and submission) within the Czech cluster environment. In terms of responsibility and work agenda, a cluster manager in cooperation with cluster members formulates strategies and governs as well as coordinates cluster activities towards cooperation (Zastempowski & Przybylska, 2016). As CLOE (2006) indicates, these activities range from networking, human resources (including staff training via, e.g., seminars), research and innovation (sharing information and ideas, joint research projects), commercial cooperation and promotion (joint purchasing, logistics management), to financing investment projects. In order to succeed at these tasks, the person in charge needs to possess and demonstrate the appropriate properties, skills and abilities (Sölvell et al., 2003; Zagorsek et al., 2008; Jungwirth & Ruckdäschel, 2013), qualities which can be assembled as competencies. In our previous research, we identified nine key cluster manager competencies needed for effective performance, although this is only the first step towards the professionalization of managers in the cluster environment. It has been shown that more emphasis must be placed on the self-development of cluster managers to ensure that they can help both the clusters and their individual organizations remain competitive and viable.

Ren et al. (2014) perceive self-development as the deliberate enhancement of skills in processes initiated, guided and managed by a manager for a long period of time. According to Folwarczná (2010), self-development is described as an approach that emphasizes the importance of lifelong learning. The self-development philosophy is fundamentally different from the traditional approach, i.e. a process that focuses on teachers as having the strongest influence on learning. Self-development transfers the primary responsibility for the learning process to the learner-manager. In this case, it is the manager who is expected to maintain an active approach to his/her own education as well as personal and professional development in terms of the choice and composition of activities (Reichard & Johnson, 2011; Pedler et al., 2013). The key element is that the individual takes responsibility for identifying and managing why, what, where, when and how to develop (Boyce et al., 2010). Billett & Pavlova (2003) add that individuals must feel independent in their choice of work and learning to maintain their own identity. This process does not take place ad hoc, but it is purposeful – it means that people influence their own actions by analyz-

ing and responding to the context (Ren et al., 2014). The form of self-development can then be formal or informal, take place in the workplace or outside working hours (Ren et al., 2014).

Boyce et al. (2010) identified five areas of individual characteristics that are a prerequisite for self-development, such as general intelligence, the effort to be successful, the desire for mastery, career growth, and the desire to improve and develop in a given job. Cortina et al. (2004) and Nesbit (2012) complement this list with adaptability, self-regulation and self-awareness. According to Reichard & Johnson (2011), self-development is the most effective if the concerned person has appropriate facilities in the form of social support from colleagues, friends or family members. For example, finding the right mentor can make a significant contribution to the self-development of the individual (London & Smither, 1999). In the context of tools that can be used in self-development, Folwarczná (2010) mentions the following: diagnostic methods (e.g learning styles, personality typology, coaching, mentoring), feedback (from colleagues, superiors, or self-assessment), learning group, learning by action or traineeships at other organizations. Pedler et al. (2013) complete this list with a personal diary, learning from events, or active reading. Another current self-development tool is definitely listening to audio and podcasts. As Cebeci & Tekdal (2006) and Ormond (2008) added, listening can be more attractive and less tiring than reading for many people. Its main benefits are especially in simplicity, convenience, time-saving, and flexibility (Hew, 2009; Evans, 2008).

Regarding the examined issues, an important question (RQ1) has not been discussed in the literature: What are criteria that are essential for cluster managers if they choose a development activity? And a related research question (RQ2) is: Considering cluster organization context, which self-development methods are recommended by experienced cluster managers?

Generally, development of competencies leads to achieving higher results of performance (Longenecker, 2010) and it has been positively associated with organizational performance (Eikebrokk & Olsen, 2009). However, in practice, it is not an easy task. Managers face numerous barriers in professional life that affect their successful development (Reichard et al., 2017). These barriers might affect in any case - whether a given manager is involved in educational and development activities or not. The literature covering either factors or barriers related to management development is wide (Doyle et al., 2008; Doyle & Young, 2003; Ellinger, 2005; Longenecker, 2010; Sambrook & Stewart, 2000; McCracken, 2004). For example, Kegan (1995) emphasizes the fact that managers' time pressure limits their participation in formal learning programs, while budget constraints reduce the ability to use expensive coaches or various software. In this context, Prokopenko & Kubr (1996) distinguish 5 categories of key factors affecting managerial development, such as learning objectives of the activity, human factors (lecturer, composition of participants and environment), subject and content of the activity, time and material aspect (financial side), used principles of learning (e.g active involvement, portability to practice or individual approach to participants and providing feedback). McCracken (2004) divided factors into two groups: intrinsic (perceptual, emotional, motivational and cognitive) and extrinsic (organizational culture, management development culture and physical resource). According to a research by Longenecker (2010) conducted on a sample of 230 managers, 10 factors have been identified with regard to development barriers during the period of a rapid change in organizations. These were "time pressures, unaware of the need/don't know what they don't know, little

or no performance feedback or coaching, lack of self-reflection and assessment, ego and over-confidence, unmotivated to learn and/or unwillingness to address skill gaps, no accountability or support to learn and improve, bad/ineffective boss, no development plan, lack of resources" (Longenecker, 2010).

Based on the above mentioned studies, it can be stated that barriers in managerial development are mainly associated with time, personality, motivation, organizational-cultural environment and to the content and quality of the given course. Regarding the specifics in cluster environment (no Personnel Department, absence of power and hierarchy), we might encounter possible differences. Hence, we identified the research question (RQ3): Are barriers of cluster manager's development similar to general managerial barriers?

3. METHODOLOGY AND DATA

The method of semi-structured interviews was chosen to find out the required facts. According to Miovský (2006), the key advantage of its use can be seen in a deeper understanding of the examined phenomenon and the acquisition of unknown information. The use of this method was intended primarily to identify appropriate self-development tools and activities for developing cluster managers' competencies, such as communicator, strategist, innovator, motivator, protector, cluster expert, analyst, networker, manager. Partial objectives were to explore the specifics of the cluster manager's position including barriers affecting participation in the development activities and the key criteria for their selection.

3.1 Participants

The target group of realized semi-structured interviews consisted of managers representing active cluster organizations in the Czech Republic. A total of 12 cluster managers were approached with a request for an interview, 7 of whom finally agreed to be involved in research. 5 of them were men and 2 were women. The average age of the respondents was 49 years and the average time spent on the cluster manager position was less than 6 years (5.8). Regarding the specialization of involved cluster managers and their organizations, they came from different areas of industries, such as nanotechnology, furniture and woodworking industry, technical textiles, creative industry, optic industry, aviation industry, automotive industry. Let us add that cluster managers who participated in this study can be considered as highly experienced and successful considering the criterions as awards of a cluster organization, activities (high number of finished and on-going projects), numbers of involved cluster members and their diversity.

3.2 Procedure

The respondents were selected on the basis of the following criteria: time spent on the cluster manager position (at least 2 years), the place of work (cluster organization in the Czech Republic). The recommendations of National Cluster Association were also considered when targeting a suitable group of cluster managers. Each interview was structured into two parts – 1) an introduction to the interview (the way to the cluster manager position, the beginnings and specifics of this position), 2) the development of the cluster manager (factors and development criteria, gen-

eral development tools, self-development methods regarding each of competencies). Especially open questions were asked to respondents, supplemental questions were asked in some cases to obtain the necessary information in the research areas. The interviews were conducted between September 2018 and February 2019. In terms of environment, in 5 cases, the location of the cluster organization concerned was the place of an interview, and two more were conducted through Skype application. The duration of the interviews ranged from 40 to 90 minutes.

3.3 Data analysis

The interviews were recorded (with the interviewee's consent), then rewritten. The respondents were ensured that their answers will be anonymized and used only for research purpose. The primary data were analyzed via coding based on thematic analysis, grouping code into categories, and finding a relationship between categories. Also, the Cmap Tools software was used to process the data in order to create conceptual maps reflecting fundamental findings. The validity of the formulated categories was verified on the basis of a discussion with the research team and also through the time gap (the research results were analyzed again after 14 days).

4. RESULTS AND DISCUSSION

This section presents results gathered from the interviews. The results were structured into four main areas, such as: specifics of the cluster manager position, barriers influencing development of cluster managers, criteria for selection of development activities, recommended methods for cluster manager development.

4.1 Specifics of the cluster manager position

Firstly, we asked the respondents for their opinions regarding differences between cluster managers and managers in companies. The analysis of the answers shows that most of the addressed managers perceive the differences between these two professions especially in the absence of hierarchy and power. These findings can be documented through selected statements below:

"A manager in a company has some state of superiority and subordination, working differently than a cluster manager" (R2).

"If I should compare it as a piece - so when you are a manager in a company, you can give people orders. Meanwhile, this is not possible in the cluster." (R3)

"The fundamental difference is that if you manage one company, you have a position there, and the rest is subordinate to you. So, whatever you plan, it should be fulfilled." (R6)

The other two respondents (R5, R7) agreed on the absence of measurable indicators (key performance indicators - KPIs) compared to the business manager. Last but not least, R2 also pointed to the facilitation aspect in the cluster management. He said that:

"The cluster manager must mainly facilitate people and persuade them differently because of missing strength. So, the cluster manager acts as a conductor, influencer, facilitator." (R2)

To summarize, the respondents see the main specifics of the cluster manager position in hierarchy and power absence, absence of KPIs, putting more emphasis on facilitation and negotia-

tions with others. These opinions of Czech cluster managers confirm the findings of Slovenian researchers Zagorsek et al. (2008), who also mentioned the lack of formal authority, legitimate power over others and the importance of facilitation due to low engagement of cluster members. In our research, the absence of KPIs emerged compared to study from Zagorsek et al. (2008).

4.2 Barriers influencing development of cluster managers

Initially, respondents' opinions on barriers that complicate or completely prevent from participation in development activities were obtained (see Figure 1). With regard to McCracken (2004) typology, the topics mentioned in the relation to barriers could be divided into intrinsic factors (lack of motivation, laziness, bad experiences, manager personality) and extrinsic factors (lack of time, finance, administrative tasks). Most of participants claimed that the main barrier is related to their lack of time due to their extensive work agenda. In this respect, two managers emphasize a large number of administrative tasks that they need to address operatively. This is confirmed by one of the managers who says:

"I'd love to go somewhere else, get to know something new, but then I'll stay at home because there will be some payment request for the project or some other administrative matter." (R4)

Another identified barrier is connected to the personality of a manager, respectively his/her willingness to participate in development activities. The following answers illustrate these facts:

"Even the cluster manager must be open to his/her development, or at least I think so." (R3)

"I think that everything that can help you is good. But you must want to take something from these activities by yourself." (R4)

One of the respondents further noted that he is not taking part in development courses because of bad experiences. He mentioned:

"If I take the price/performance ratio or the time spent on training that I have done, it is detrimental." (R3)

Following the financial side of the cluster, the last development barrier identified by one manager can be defined as the lack of finance.
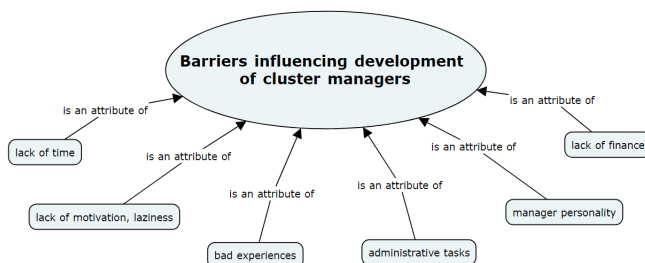

Fig. 1 - Barriers influencing development of cluster managers. Source: own research

The gathered results are similar to the other findings in that area. Specifically, the barriers related to lack of time (Doyle et al., 2008; Doyle & Young, 2003; Ellinger, 2005; Longenecker,

2010), lack of motivation (Sambrook & Stewart, 2000; McCracken, 2004; Longenecker, 2010), bad experiences (Doyle & Young, 2003; McCracken, 2004), manager personality including his/her positive attitude to learning (McCracken, 2004; Sambrook & Stewart, 2000; Doyle et al., 2008) and lack of finance (Doyle et al., 2008; Hicks et al., 2007; Lohman, 2005).

4.3 Criteria for selection of development activities

In the next part of the interviews, criteria determining the choice of development programs and activities were examined. In this context, four key areas have been identified from the data analysis, which are shown together with the cluster managers' statements in Table 1 below.

Tab. 1 – The main criteria for selection of development activities. Source: own research

Criterion	Respondents' statements
Topic and content	"Thematically focused so that it brings something to me." (R7)
	"It is always a focus of the course." (R3)
	"I am definitely most interested in the field specialization, and then if there are any hard skills developed during the course." (R5)
	"Certainly, it is related to the needs of the cluster members. Respectively, how to improve cluster services/activities to your members. I would say that this is even more important than the personal needs of a manager." (R1)
	"I think that the cluster manager has to look on what is needed by the cluster members, to be in accordance with their needs." (R6)
Lector	"The quality of the lector is definitely important." (R1)
	"It is important that the lecturer is not just a theorist, but a person with real experience and practice." (R3)
	"From my point of view, the lector's experience is crucial there." (R4)
	"I look at what is behind the names of the given lecturers. I just want to know that the man (lector) has some experience and he speaks about it, not about what he/she reads somewhere in the book." (R5)
Reference	"Mostly I search somewhere on the Internet or I ask for oral recommendations." (R3)
	"For me, recommendations from experienced managers are the most valuable." (R6)
	"If it is about general educational development, then I follow recommendations from others." (R2)

With respect to described criteria, we can also see similarities to other studies. For example, the importance of a topic and content of given course is mentioned by Billett (1995), Doyle & Young (2003) and Hicks et al. (2007). On the other hand, the criterion related to the importance of either a lector or a trainer is said by Doyle & Young (2003) and Lohman (2005). Lastly, being able to listen to recommendations from other people when selecting the right development activity is accented in the work by Doyle & Young (2003). The first criterion identified (topic, content of

activity) is, to some extent, specific in cluster conditions. As can be seen from the respondents' views, the cluster manager should not focus solely on his/her development (e.g. which topic is attractive to him/her) when choosing development activities. Either he or she should also take into account how to develop services and activities for cluster members, i.e. their needs and interests. Additionally, in the second defined criterion (lector), two important aspects emerged as his/her quality (first statement in Table 1) and experiences (other three statements in Table 1).

To the facts above, it is necessary to mention a certain uniqueness in the choice of development activities for cluster managers. Since there is no Personnel Department in the cluster environment compared to companies, much greater emphasis is put on the cluster manager's own initiative.

4.4 Recommended methods for the cluster manager development

The following part of the interviews was focused on suitable methods leading to managerial development. Based on the gathered data, we claim that among possible ways of development which cluster managers use belong the following: reading books and documents, attending courses and conferences, learning by practice, listening to podcasts, cooperation with experienced managers and institutions.

Considering general development methods for cluster managers, the experience aspect has often been emphasized. This can be characterized as the action learning method. These statements of respondents can be used as an illustration:

"Practice, practice, practice. I think that the most of the cluster manager skills is best to learn by practice." (R1)

"I think that the school of life is the best in terms of developing cluster managers. Sit down here, and here are the files - that's how I started. This will teach you everything. Then you have a project of 60 mil., and either you succeed or not." (R6)

According to the respondents, cooperation with experienced managers and experts is also appreciated within managerial development. One of the managers points out that:

"It is important to have a senior manager who will always have time for you and share his/her experience with you. At least that's how it works in our cluster, and I think this is good. In my opinion, this is better than a lot of books." (R1)

As an example of the use of this cooperation, the respondent stated that it helped him in creating the cluster's strategy and goals. To some extent, this development method can be perceived as a kind of mentoring for the cluster manager. Three of the managers indicated that they found working with other institutions or membership in other organizations and councils very helpful. One of them placed emphasis on the importance of membership in an international network:

"We managed to become a member of one international network in which we pay for membership. It pushes us into things we want and should do. So this is helping us quite a bit, and I have seen the benefit immediately." (R5)

The respondent (R2) praised membership in the National Cluster Association as an organization offering various conferences and seminars for cluster managers. On the other hand, another manager stressed the importance of participation in the research council, saying:

"If you are in the Research Council, for example, you share new impulses, I do not have time to study much myself, but I share what others say there and then I transfer it into the cluster. In my case, it's ad hoc." (R4)

Let us note that R3 also recommended listening to podcasts for development (such as Blue Blood, On Business Wave, Upstream, Freelance). To sum up this section, the general recommended ways of development that were identified are noted in Figure 2.

Comparing our results with those in other works, the methods of actively reading books, learning by practice/action and mentoring (in our study, indicated by cooperation with other experienced managers) is also featured prominently by Folwarczná (2010) and Pedler et al. (2013). The use of podcasts and their positive effect on individual development is also reported in other research (Cebeci & Tekdal, 2006; Ormond, 2008; Evans, 2008; Hew, 2009). London and Smither (1999) as well as Pedler et al. (2013) portray the decisive moment as finding the right mentor who will provide appropriate guidance toward self-development.
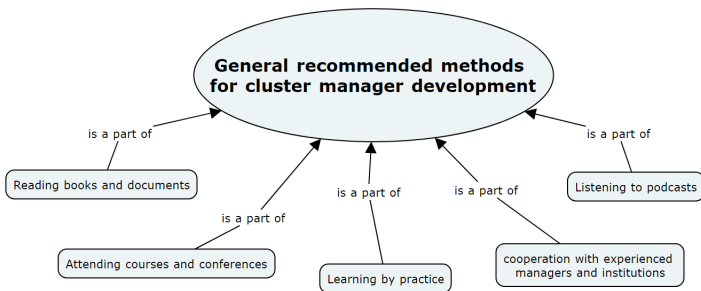

Fig. 2 - General recommended methods for cluster manager development. Source: own research

In the last section of our study, the respondents were asked for specific development activities which they found inspiring and would recommend to other managers. The first category consists of 9 specific books and documents (the titles of which along with the authors are described in Figure 3). These materials are generally used by the cluster managers to develop the role of strategist (Understanding Michael Porter), innovator (Not Invented Here, Innovation and Entrepreneurship), protector (The Speed of Trust), cluster expert (A Little Book About EU), networker (Managing for Results), and manager (Managing People, The 7 Habits of Highly Effective People).
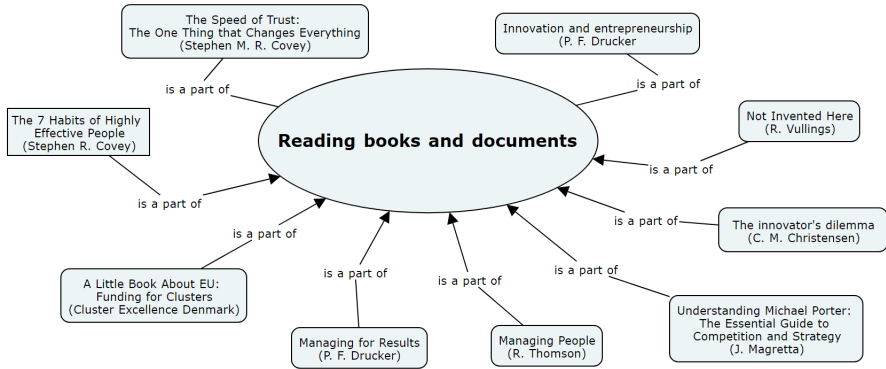
Fig. 3 – Specific self-development tools, part I. Source: own research

The second category lists 11 courses which were recommended by the respondents (with the title of the course along with the lecturer/organisation presented in Figure 4). The defined courses lead to develop roles such as communicator and motivator (Training Session - Social Media, Educational Training Module, Presentation Advantage, How to Become a Star Presenter, Leading and Motivating People in Companies and Organizations), strategist (Strategic Planning), protector (Building Trust), cluster expert (The Essence of Cluster Excellence Management) and manager (Leadership and Management, Managerial Impulses, Project Management: PRINCE2).
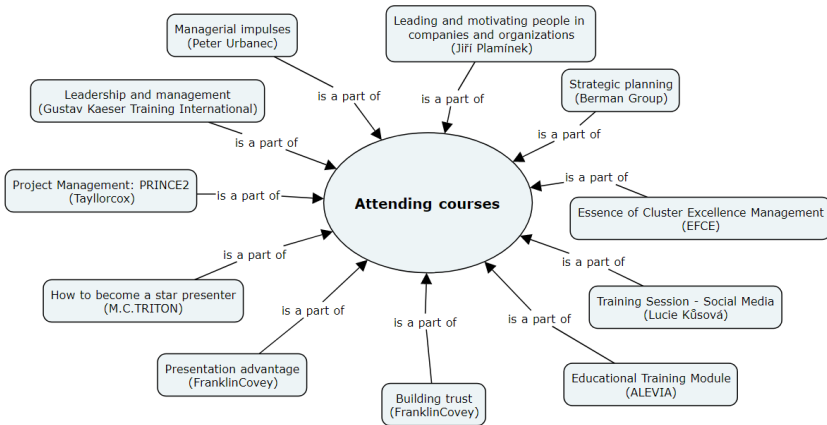

Fig. 4 – Specific self-development tools, part II. Source: own research

The third and last category describes 6 online courses (with the title along with the lecturer/organization presented in Figure 5). These online courses are suitable for developing the roles of communicator (Conversations That Inspire), motivator (Business Impulses, Job Success), analyst (The Language and Tools of Financial Analysis), networker (Learning How to Learn), and manager (Inspiring Leadership through Emotional Intelligence).
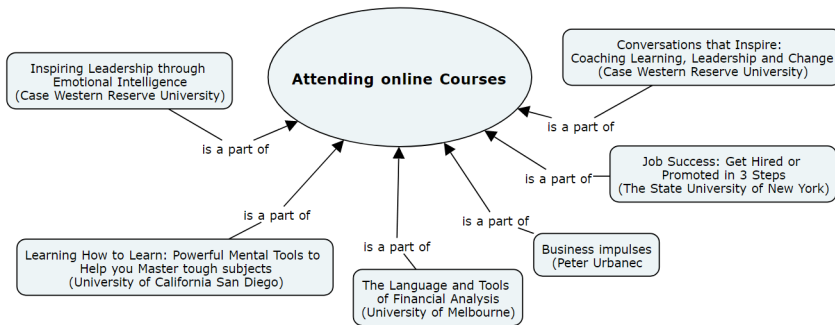
Fig. 5– Specific self-development tools, part III. Source: own research

5. CONCLUSION

As Jaseviciute-Ufartiene et al. (2014) claim, organizations can only develop if they have self-evolving people who function in a social environment and who are constantly striving to realize their inner natural potential as the skilled workers needed to meet the current and future needs of an organization. Therefore, it is necessary to continually design appropriate tools aimed at supporting their development, which is also the subject of our research.

In our case, we used the semi-structured interviews with seven cluster managers in the Czech Republic that have been working in their job position for at least two years. Regarding the first research question, we determined that the main criteria for the selection of development activities took place mainly in three areas: topic and content of development activity, lector (his/her quality and experiences), and references from others. Afterwards, we identified suitable self-development methods and tools for cluster managers, including reading books and other publications, attending courses and conferences, learning by practice, listening to podcasts, and cooperation with experienced managers and institutions all aimed toward the enhancement of the competitiveness within cluster organizations. We also divided specific development activities into three categories: books and documents, traditional training courses, and online courses. Additionally, we connected each tool to the relevant competency targeted for development. Finally, we conclude that each cluster manager competency can be developed by self-study based on findings investigated in the second research question in this paper. Considering the third research question, we claim that key factors influencing development of cluster managers consist of the following: lack of motivation, laziness, bad experiences, the overburden of administrative tasks, lack of time, lack of finance, and manager personality.

The results of our study have several implications for practice, especially for cluster managers and educators, who should be motivated to increase their knowledge sharing and innovativeness as well as increase and develop common channels within cluster organizations (see Tvaronavičienė & Razminienė, 2017). Through specific recommended methods for the development of desirable competencies, cluster managers should be provided with instructions on how to proceed and what tools to select when developing their competencies for enhancing competitiveness. These

outputs present a clear categorization of recommended development methods which in practice will lead to the development of effective management techniques within their organizations. As Zagorsek et al. (2008) point out, managing cluster organization entails specific and unique aspects that need to be taken into consideration (such as the lack of formal authority and legitimate power over others, the low level of engagement, and the lack of trust among cluster members). Coping with these factors is an essential step in maintaining the competitiveness within cluster organizations. By applying the presented methods (e.g. reading recommended books, attending courses), cluster managers can enhance their skills, knowledge and experience and thus more readily develop, e.g. by enriching their people managing skills as well as their techniques of inspiring others to follow a common path. The increase in cooperation, effectiveness and productivity should motivate companies and other organizations to become more greatly involved with the cluster environment or even in the capacity to attract new potential members to the cluster. Furthermore, the more effective development of cluster managers who function within a proactive network of cluster members can boost the number of research and innovation projects submitted, as well as facilitate a larger number of joint and networking activities (e.g. workshops, seminars and work groups for sharing information and ideas, commercial cooperation and promotion). All of these improvements and enhancements will make cluster organizations more competitive in today's rapidly changing environment. As Stata (1984) adds, an organization can achieve a competitive advantage only if it has motivated and effective employees with appropriate knowledge, skills and abilities who function in a continuous learning mode.

Moreover, the identified ways of development could be used as an educational tool for the development of students and teachers, especially in subjects thematically focused on human resources management and on management in general. Additionally, the results of this paper might prove inspirational for educational organizations developing cluster managers in order to enhance their current curriculum. A description of the characteristics of these organizations is mentioned in Horák & Matošková (2018).

Nevertheless, certain limitations can be identified in our study. Regarding the proposed methods of developing competencies of cluster managers, some restrictions might be perceived in terms of the composition of the recommended activities. The selection was made on the basis of the previous positive experiences of cluster managers that were part of the research sample. Our sample was composed of cluster managers with at least two or more years of experience in the field. Both genders were sufficiently represented in the sample in order to alleviate potential bias. Obviously results could vary in other circumstances (e.g. external factors) and within different time frames.

References

1. Antonacopoulou, E. P. (2000). Employee development through self-development in three retail banks. *Personnel Review*, 29, 491−509. https://doi.org/10.1108/00483480010296294.

2. Billett, S. 1995. Workplace learning: Its potential and limitations. *Education & Training* 37(5), 20–7. https://doi.org/10.1108/00400919510089103

3. Billett, S., & Pavlova, M. (2005). Learning through working life: Self and individuals' agentic action. *International Journal of Lifelong Education,* 24 (3), 195–211. https://doi.org/10.1080/02601370500134891

4. Boyce, L. A., Zaccaro, S. J., & Wisecarver, M. Z. (2010). Propensity for Self-Development of Leadership Attributes: Understanding, Predicting, and Supporting Performance of Leader Self-Development. *The Leadership Quarterly*, 21 (1), 159–178. https://doi.org/10.1016/j.leaqua.2009.10.012

5. Cebeci, Z., & Tekdal, M. (2006). Using podcasts as audio learning objects. *Interdisciplinary Journal of E-Learning and Learning Objects,* 2 (1), 47–57. https://doi.org/10.28945/400.

6. Cortina, J., et al. (2004). Promoting Realistic Self-Assessment as the Basis for Effective Leader Self-Development. *ARI Research Leader Development Research Unit*, 1–69. Retrieved from: http://www.au.af.mil/au/awc/awcgate/army/rn_2004-05.pdf.

7. Cunningham, P. (2004). The transformation of Work and Self-development. *Problems and Perspectives in Management,* 3, 170–180. Retrieved from: https://www.researchgate.net/publication/265231450_The_Transformation_of_Work_and_Self-development

8. Day, D. V. (2000). Leadership development: A review in context. *The Leadership Quarterly,* 11, 581–613. https://doi.org/10.1016/S1048-9843(00)00061-8.

9. Day, D. V., & Zaccaro, S. J. (2004). Toward a science of leader development. Leader development for transforming organizations: Growing leaders for tomorrow, 383-399. Retrieved from: https://www.researchgate.net/publication/309563126_Toward_a_science_of_leader_development

10. Doyle, W., & Young, J. D. (2003). Small business owners: Barriers to and facilitators of their workplace learning. Proceedings of the Canadian Council of Small Business and Entrepreneurship, Victoria, Canada.

11. Doyle, W., Reid, J. G., & Young, J. D. (2008). Barriers to and facilitators of managers' workplace learning in small and large knowledge-based firms. Proceedings of the Small Business Institute Conference, San Diego, USA.

12. Eikebrokk, T. R., & Olsen, D. H. (2009). Training, competence, and business performance: Evidence from E-business in European small and medium-sized enterprises. *International Journal of E-Business Research*, 5 (1), 92–116. https://doi.org/10.4018/jebr.2009010105

13. Ellinger, A. (2005). Contextual factors influencing informal learning in a workplace setting: The case of "Reinventing Itself Company". *Human Resource Development Quarterly,* 16 (3), 389–415. https://doi.org/10.1002/hrdq.1145

14. Evans, C. (2008). The effectiveness of m-learning in the form of podcast revision lectures in higher education. *Computers & education*, 50 (2), 491–498. https://doi.org/10.1016/j.compedu.2007.09.016

15. Folwarczná, I. (2010). *Rozvoj a vzdělávání manažerů.* Praha: Grada.

16. Garavan, N.T., Mortley, M., Gunnigle, P., & McGuire, D. (2002). Human resource development and work place learning: Emerging theoretical perspectives and organizational practices. *Journal of European Industrial Training,* 26, 60–71. https://doi.org/10.1108/03090590210428133

17. Günther, J., & Meissner, D. (2017). Clusters as Innovative Melting Pots?—the Meaning of Cluster Management for Knowledge Diffusion in Clusters. *Journal of the Knowledge Economy,* 8 (1), 1–14. https://doi.org/10.1007/s13132-017-0467-z

18. Hicks, E., Bagg, R., Doyle, W., & Young, J. D. (2007). Canadian accountants: Examining workplace learning. *Journal of Workplace Learning*, 19 (2), 61–77. https://doi.org/10.1108/13665620710728457

19. Hew, K. F. (2009). Use of audio podcast in K-12 and higher education: A review of research topics and methodologies. *Educational Technology Research and Development,* 57 (3), 333–357. https://doi.org/10.1007/s11423-008-9108-3

20. Horák, M., & Matošková, J. (2018). Comparison of Training Programmes and Activities for Cluster Managers in Europe with Respect to Their Focus on Skills Development. *International Journal of Entrepreneurial Knowledge*, 1 (6). https://doi.org/10.2478/ijek-2018-0002

21. Horák, M., Slováková, M., Danko, L., & Matošková, J. (2019). Using a Delphi Approach to Identify Key Competencies of Cluster Manager in Czech Republic. Working paper in the pre-publication stage. *International Journal of Entrepreneurship and Innovation Management* (IJEIM).

22. Jaseviciute-Ufartiene, L., Mejeryte-Narkeviciene, K., & Widelska, U. (2014). Organizational development based on leader's self-development theory and practice. *Transformations in Business & Economics,* 13 (2), 506–524.

23. Jungwirth, C., & Ruckdäschel, S. (2013), Influence of culture and governance structure on leadership behaviour of cluster managers and implications for cluster management effectiveness. *International Journal of Entrepreneurship and Small Business,* 18 (4). 470–492. https://doi.org/10.1504/IJESB.2013.053482

24. Kegan, R. (1995). I*n over our heads: The mental demands of modern life.* Cambridge, MA: Harvard University Press.

25. Lohman, M. C. (2005). A survey of factors influencing the engagement of two professional groups in informal workplace learning activities. H*uman Resource Development Quarterly,* 16 (4), 501–27. https://doi.org/10.1002/hrdq.1153

26. London, M., & Smither, J. W. (1999). Empowered self-development and continuous learning. Human Resource Management: Published in Cooperation with the School of Business Administration, The University of Michigan and in alliance with the Society of Human Resources Management, 38 (1), 3–15.

27. Longenecker, C. O. (2010). Barriers to managerial learning: lessons for rapidly changing organizations. *Development and Learning in Organizations: An International Journal,* 24 (5), 8–11. https://doi.org/10.1108/14777281011069763

28. McCracken, M. (2005). Towards a typology of managerial barriers to learning. *Journal of Management Development,* 24 (6), 559–575. https://doi.org/10.1108/02621710510601008

29. Miovský, M. (2006). *Kvalitativní přístup a metody v psychologickém výzkumu*. Praha: Grada Publishing.

30. Nesbit, P. L. (2012). The role of self-reflection, emotional management of feedback, and self-regulation processes in self-directed leadership development. *Human Resource Development Review,* 11 (2), 203–226. https://doi.org/10.1177/1534484312439196

31. Ormond, P. R. (2008). Podcasting enhances learning. *Journal of computing sciences in colleges,* 24 (1), 232–238. Retrieved from: https://dl.acm.org/doi/abs/10.5555/1409763.1409817.

32. Pedler, M., Burgoyne, J., & Boydell, T. (2013). *A Manager's Guide to Self-development*. McGraw-Hill Education.

33. Porter, M. (1990). *The competitive advantage of nations*. New York: The Free Press.

34. Prokopenko, J., & Kubr, M. (1996). *Vzdělávání a rozvoj manažerů*. Praha: Grada.

35. Reichard, R. J., & Johnson, S. K. (2011). Leader Self-Development as Organizational Strategy. *The leadership quarterly,* 22 (1), 33–42. https://doi.org/10.1016/j.leaqua.2010.12.005

36. Reichard, R. J., Walker, D. O., Putter, S. E., Middleton, E., & Johnson, S. K. (2017). Believing is becoming: The role of leader developmental efficacy in leader self-development. J*ournal of Leadership & Organizational Studies,* 24(2), 137-156. https://doi.org/10.1177/1548051816657981

37. Ren, S., Collins, N., & Zhu, Y. (2014). Leadership self-development in China and Vietnam. *Asia Pacific Journal of Human Resources,* 52 (1), 42–59. http://dx.doi.org/10.1111/1744-7941.12022

38. Sambrook, S., & J. Stewart. (2000). Factors influencing learning in European learning oriented organisations: Issues for management. *Journal of European Industrial Training,* 24(2), 209–19. https://doi.org/10.1108/03090590010321179

39. Schretlen, J. H., Dervojeda, K., Jansen, W., & Schaffmeister, B. (2011). Uncovering Excellence in Cluster Management. Price waterhouse Coopers Accountants N.V. Retrieved from: http://www.pwc.com/en_GX/gx/psrc/pdf/cluster_management.pdf

40. Sölvell, Ö., Lindqvist, G., & Ketels, C. (2003). The Cluster Initiative Greenbook. Stockholm: Ivory Tower Publishers. Retrieved from: https://www.hhs.se/contentassets/f51b706e1d644e9fa6c4d232abd09e63/greenbooksep03.pdf

41. Stata, R. (1989). Organizational learning-the key to management innovation. *MIT Sloan Management Review,* 30 (3), 63–74.

42. Temporal, P. (1984). Helping self-development to happen. In C. Cox, & J. Beck (Eds.), *Management development: Advances in practice and theory*. Manchester: Wiley.

43. Tomassini, M., & Zanazzi, S. (2014). Reflexivity and self-development of competencies as key drivers in individuals' learning and career paths: cases from Italy. *Research in Comparative and International Education,* 9 (3), 301–312. https://doi.org/10.2304/rcie.2014.9.3.301

44. Tvaronavičienė, M., & Razminienė, K. (2017). Towards competitive regional development through clusters: approaches to their performance evaluation. *Journal of Competitiveness,* 9 (4), 133–147. https://doi.org/10.7441/joc.2017.04.09

45. Zagorsek, H., Svetina, A. C., & Jaklič, M. (2008). Leadership in clusters: attributes of effective cluster leader in Slovenia. *Transformation in Business & Economics,* 7 (2). Retrieved from: https://www.researchgate.net/publication/288271921_Leadership_in_clusters_Attributes_of_effective_cluster_leader_in_Slovenia

46. Zastempowski, M., & Przybylska, N. (2016). Cooperation in Creating Innovation in Polish Small and Medium-Sized Enterprises in the Light of Empirical Studies. *Journal of Competitiveness*, 8 (2), 42−58. https://doi.org/10.7441/joc.2016.02.04

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