

AN APPROACH TO MANAGEMENT EDUCATION: INTERDISCIPLINARY MODEL

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Abstract. *In business practice the paradigm has changed from global business to hybrid business. This shift requires a new quality of management education in order to bring out next-generation managers and leaders. The aim of the research is to shape an approach to management education through interdisciplinary research underpinning elaboration of a hypothesis on an innovative approach to preparing next-generation managers and leaders within management education. The meaning of the key concepts of “approach” and “principles” is studied. Moreover, the study demonstrates how the key concepts are related to the idea of “management education”. The study shows how the steps of the process are related following a logical chain: analysis of the terms “approach”, “principles” and “conditions” → approach to management education → conclusions. The novel contribution of this paper is the hypothesis on an innovative approach to preparing next-generation managers and leaders within management education.*

Keywords: *Approach, conditions, interdisciplinary research, management education, principles.*

Introduction

Business activity has shaped and been shaped by various social and political forces within the couple of past decades. Table 1 provides a historical perspective on business development during the past decades (Zaščerinska et al., 2016). The present paper shortly characterizes global business and hybrid business in order to form an approach to preparing next-generation managers and leaders in management education. It should be noted that the terms *leaders* and *managers* are used synonymously in the present contribution. Global business is described by a churning global marketplace (Haertle, 2007). This kind of global market

reveals that understanding the fundamental connections between business, the environment, and society is significant (Haertle, 2007). The roles and responsibilities of business as a global force become more urgent and complex, and concepts related to societal responsibility and sustainability gain recognition as essential elements in business management (Haertle, 2007). By hybrid business, a combination of traditional business methods such as warehouses and order fulfillment services as well as use of modern technologies is initially meant (Zaščerinska et al., 2016). By use of modern technologies, application of Information and Communication Technology, web technologies, mobile technologies, etc for business purposes is defined (Zaščerinska et al., 2016).

Table 1 **Business in different historical periods of the past decades**

Phase	Historical period	Business approach
1.	1980s	De-Industrialization (a process of social and economic change caused by the removal or reduction of industrial capacity or activity in a country or region, especially heavy industry or manufacturing industry)
2.	1980s	Deregulation (the process of removing or reducing state regulations)
3.	1990s	Global Business (international trade or a company doing business across the world)
4.	2000s	Hybrid business (enterprise which does not only make use of traditional methods of distribution, but also makes use of Internet)

It should be noted that the term *hybrid business* has been developing that influences a combination of elements overviewed in Table 2 (Zaščerinska et al., 2016).

Table 2 **Different elements of the different terms of hybrid business**

Number	Different elements of the different terms of hybrid business
1.	- traditional business methods such as warehouses and order fulfillment services - modern technologies
2.	- operation of the company as well as - related companies that serve different sectors of the marketplace
3.	a company that chose to operate concurrent operations geared toward meeting the needs of two or more consumer markets
4.	- business capacities and - social goals
5.	- for-profit business and - non-profit business (Hoffman et al., 2012)

Analysis of the different terms of hybrid business presented in Table 2 leads to such a new definition of *hybrid business* as a business strategy that blends traditional business methods, alternative business methods as well as use of modern technologies (Zaščerinska et al., 2016). By alternative business methods, delivery a significantly higher value for end customers in a way that de-links revenue growth from full time equivalent (FTE) growth is determined. Social entrepreneurship can serve as an example. Hence, this new definition of the term *hybrid business* has complemented a number of combinations of elements delivered in Table 2. This newly defined term *hybrid business* allows proposing that business in general and hybrid business in particular are becoming more complex. Thus, new quality of administration, management and deep leadership is needed (Haregreaves, 2006). Increasing complexity and interdependence require new approaches (Haertle, 2007). Companies need integrative management tools that help embed different participants' concerns into their strategic thinking and daily operations (Haertle, 2007). They need support as they internalize and integrate the issues into the core of hybrid businesses, engage in dialogue with stakeholders, and report their conduct (Haertle, 2007). They require talented and ethical leaders who cannot only advance organizational goals and fulfill legal and fiduciary obligations to shareholders, but who are also prepared to deal with the broader impact and potential of hybrid business as a positive force in society (Haertle, 2007). Any meaningful and lasting change in the conduct of corporations must involve the institutions that most directly act as drivers of business behavior, especially academia (Haertle, 2007). Academic institutions help shape the attitudes and behavior of leaders through business education, management education, research, management development programs, training, and other pervasive, but less tangible, activities, such as the spread and advocacy of new values and ideas (Haertle, 2007). Through these means, academic institutions have the potential to generate a wave of positive change, thereby helping to ensure a world where both enterprises and societies can flourish. For higher education institutions, finding appropriate answers and making decisions on tertiary curricula aimed at shaping the attitudes and behavior of leaders needs to come to a common understanding and implementation of the following (Žogla, 2014):

- The nature, definition and process of the New Generation learning and its characteristic features, achievements at each level of tertiary education. Learning should not be considered the target in itself – the learners' optimal developmental success should be achieved in learning.
- Didactic models appropriate for the New Generation learning to strike the targets of the learners' generic knowledge and practical skills, as well as achieve intellectual, emotional, social qualities of an autonomous learner ready for non-stop, life-long self-fulfillment.

- Educators' professional education should be focused on the development of reflective practitioners able to conduct inquiry-based didactic process with a special attention to dialogues, manage the transition of tertiary teaching curriculum to a learning curriculum.
- The New Generation learning supported and personalized at higher education institutions leads to the learners' individual meaningful achievements and development of their abilities of doing, communicating, cooperating, reflecting and responsible decision-making.

It should be noted that leaders could be formed and educated from the perspective of the next generation, too. Within the present contribution, a perspective from the next generation means engagement and inclusion of the next generation in development of academic institutions. Thus, next-generation leaders play such a two-fold role in management education: on the one hand, next-generation leaders are prepared within management education for enabling today's and tomorrow's business participants to play a more active role in the innovation process, to make informed choices and to engage in a democratic, knowledge-based society in order to boost creativity and competitiveness (Horizon, 2020, 2013) in the context of the contemporary situation in the world described by a number of crises such as social, economic, financial, political, etc., on the other hand, next-generation leaders are the co-contributors to the advancement of management education. As managers are involved in everyday human interaction, management education puts the emphasis on managers' social cognition. For managers, social cognition plays the key role as social cognition implies understanding the behavioural motives and stable dispositions of themselves and other persons and groups (Van Overwalle, 2009). Social cognition is supported by mirror neurons that may be important for understanding the actions of other people, and for learning new skills by imitation. Hence, a shift to an innovative and effective approach based on the use of mirror neurons for preparing next-generation leaders is necessary in management education. The aim of the research is to shape an approach to management education for bringing out next-generation leaders underpinning elaboration of a hypothesis on an innovative approach to preparing next-generation leaders within management education. The meaning of the key concepts of *approach* and *principles* is studied. Moreover, the study demonstrates how the key concepts are related to the idea of *management education*. Interdisciplinary research is carried out within the present investigation as interdisciplinary research assists in synthesizing, connecting and blending ideas, data and information, methods, tools, concepts, and/or theories from two or more disciplines in order "to make whole" (Repko, 2012). The present interdisciplinary research is based on a number of scientific disciplines such as management, management education, pedagogy, psychology, neuroscience, etc.

The process of interdisciplinary research proceeds from an issue separately explored by two or more scientific disciplines in Phase 1 through the same issue examined by the synergetic point of view of more scientific disciplines in Phase 2 to results of the analysis interpreted in Phase 3.

Theoretical Framework

The term *model* is a pattern of individual's or individuals' interpretation of a phenomenon (Ahrens, Purvinis, Zaščerinska, & Andreeva, 2015). It should be noted that, in the present contribution, the term *phenomenon* is defined as regularities that are unexpected and unexplainable against the background of existing knowledge, including extant theory and that are relevant for the scientific discourse (Von Krogh, Rossi-Lamastra, & Haefliger, 2012). Models can be presented in a variety of forms such as verbal, graphic, computer, etc. (Ahrens, Purvinis, Zaščerinska, & Andreeva, 2015).

Approach is a set of theoretical principles (Karapetjana, 2008). For the purposes of further theoretical analysis, it should be noted that, in the present contribution, education is part of pedagogy. Application of interdisciplinary research to the term *principle* allows defining it from two perspectives: from the external perspective, principle is a shared combination of beliefs and assumptions that determine researchers' attitude to the world, their behaviours' norms and activities, from the internal perspective, principle is an individual combination of beliefs and assumptions that determine researcher's attitude to the world, his/her behaviour's norms and actions (Ahrens & Zaščerinska, 2015). New principles of education have been identified (Špona, 2014): 1. Collaboration between peers and generations. 2. Basing education on the achievements of youths including next-generation leaders in the development of a personality. 3. The principle of free choice in union with responsibility and autonomy. However, these principles refer to all kind of education. For responsible management education, six principles have been specified (Haertle, 2007): Principle 1 *Purpose* means to develop the capabilities of students to be future generators of sustainable value for business and society at large and to work for an inclusive and sustainable global economy. Principle 2 *Values* intends to incorporate into academic activities and curricula the values of global social responsibility as portrayed in international initiatives. Principle 3 *Method* proposes to create educational frameworks, materials, processes and environments that enable effective learning experiences for responsible leadership. Principle 4 *Research* emphasizes to engage in conceptual and empirical research that advances understanding about the role, dynamics, and impact of corporations in the creation of sustainable social, environmental and economic value. Principle 5 *Partnership* highlights to interact with managers of business corporations to extend knowledge of their challenges in meeting social

and environmental responsibilities and to explore jointly effective approaches to meeting these challenges. Principle 6 *Dialogue* points out to facilitate and support dialogue and debate among educators, business, government, consumers, media, civil society organizations and other interested groups and stakeholders on critical issues related to global social responsibility and sustainability. Analysis of the six principles for responsible management education reveals that these principles refer to the model of global business. Along with the paradigm shift from global business to hybrid business, elaboration of new principles or, in other words, approach, for management education is required.

Research Results

In order to determine new principles for management education, use of principles has to be outlined. Thereby, principle is a condition of activity (Beļickis et al., 2000) or management education in the present paper. A condition means a circumstance from which the implementation of a process, process or activity depends (Beļickis et al., 2000). Management education as part of pedagogy traditionally depends on research within psychological science as psychological research provides the basis for pedagogical and, consequently, educational developments in terms of organization of educational environment, curriculum, institution activities, and etc. (Ahrens & Zašcerinska, 2014). Against this background, in the last decades educational neuroscience plays an important role in solving practical as well as theoretical problems of pedagogy (Praulīte et al., 2014). Educational neuroscience is a branch of cognitive neuroscience connected with problems of education which on the basis of neurological mechanisms gives ability to solve different topical pedagogical problems (Praulīte et al., 2014). Using instrumental research methods educational neuroscience gives ability to explain neural processes of such phenomena as perception, comprehension, memory and thinking (Praulīte et al., 2014). There are different opinions about use of neuroscience in pedagogy. Some pedagogues point out that there is no necessity for the knowledge about brain structures in order to criticize outdated teaching methods (Bruer, 1997; Qansari & Coch, 2006). In turn, other pedagogues highly evaluate the role of neuroscience in pedagogy (Praulīte et al., 2014). The usage of educational neuroscience in solving pedagogical problems is promoted if such issues are clarified (Geake, 2009; Ott, 2012) as What is the role of neuroscience in pedagogy? How and when will educators be connected with pedagogical neuroscience? What are the positive sides of pedagogical neuroscience? What are the weaknesses of pedagogical neuroscience? Thus, management education as part of pedagogy is also formed by neuroscience. It should be noted that, in its turn, pedagogy facilitates the promotion of neuroscientists' professional knowledge, competences and behavior aimed at

ensuring new discoveries, innovations, etc. Neuroscience has emerged as a new paradigm. Neuroscience identifies the various functional parts of various psychological features of the human mind (Hariharan et al., 2014). In other words, neuroscientists analyse which structures in the brain support the mental processes involved in social cognition (Hariharan et al., 2015). This complements the inter-relationships between pedagogy and neuroscience with psychology. Therein, in the present research, conditions are regarded as the inter-relationships between pedagogy, neuroscience and psychology (Ahrens & Zašcerinska, 2014). The inter-relationship between pedagogy and psychology reveals that psychology serves as the basis of pedagogical developments. The inter-relationship between pedagogy and neuroscience assists to explain neural processes of such phenomena as perception, comprehension, memory and thinking (Praulite et al., 2014) or, in other words, cognition. As managers are involved in everyday human interaction, more emphasis is put on managers' social cognition. This capacity is known as theory of mind (ToM) or mentalizing. Social cognition includes the cognitive processes used to understand and store information about other persons including the self, interpersonal norms and scripts (or procedures) to navigate efficiently in the social world. The social cognition has been studied from various theoretical and methodological perspectives, most notably social psychology and social neuroscience. Social psychologists investigate how we perceive and interpret our social environment including other persons, groups, and the self, how we build social knowledge structures that reflect the norms and values of society, and how this is influenced through conscious and unconscious processing mechanisms, which sometimes lead to biased judgments (Gilbert & Malone, 1995; Trope & Gaunt, 2000; Van Rooy et al., 2003). In turn, among neuroscientists it is commonly assumed that the capacity to mentalize depends on cognitive brain mechanisms that are potentially dedicated specifically to social reasoning. Neurological evidence from studies of brain lesions (Apperly et al., 2004; Wood et al., 2005) supports this hypothesis. However, there exist diverse social inferences. This diversity in social inferences is consistent with neuroscientists' modular view on the brain where social cognition is seen as a neural circuit with a set of related and highly intertwined, but separate processes that are each specialized in some aspect of the social mentalizing system. Social cognition is supported by mirror neurons that may be important for understanding the actions of other people, and for learning new skills by imitation. Many researchers in cognitive neuroscience and cognitive psychology consider that mirror neurons provide the physiological mechanism for the perception/action coupling. The relationship between psychology and neuroscience facilitates identification of various functional parts of various psychological features of the human mind (Hariharan et al., 2015) or, in other words, functions of individual cultural development. The findings of the present research on the inter-relationships

between pedagogy, neuroscience and psychology serve as a source of principles of management education. As mirror neurons play the central role for managers in understanding the actions of other people within human interaction, the list of circumstances from which management education depends contains the scientists' finding on the physiological mechanism provided by mirror neurons for the perception/action coupling as pointed in Table 3 (Zašcerinska et al., 2016).

Table 3 **Principles of management education**

Circumstances	Principle of management education
The inter-relationship between pedagogy and psychology reveals that psychology serves as the basis of pedagogical developments.	<i>Principle of feasibility</i>
The inter-relationship between pedagogy and neuroscience assists to explain neural processes of such phenomena as perception, comprehension, memory and thinking (Praulite et al., 2014) or, in other words, cognition.	<i>Principle of reasonableness</i>
The relationship between psychology and neuroscience facilitates identification of various functional parts of various psychological features of the human mind (Hariharan et al., 2014) or, in other words, functions of individual cultural development.	<i>Principle of functionality</i>
Many researchers in cognitive neuroscience and cognitive psychology consider that mirror neurons provide the physiological mechanism for the perception/action coupling.	<i>Principle of mirroriness</i>

As principle is a condition of activity (Belickis et al., 2000), the principle of feasibility is a condition of shaping an opportunity for managers in management education as opportunity means gaining individual experience in a certain social-cultural environment (Tilla, 2006). The principle of reasonableness serves as a condition of use of appropriate management education for managers. The principle of functionality is a condition of delivering qualitative management education to serve the purpose for which management education is designed. The principle of mirroriness is a condition of understanding of managers' learning outcomes and achievements.

Conclusions and Recommendations

The findings of the interdisciplinary analysis allow formulating such a hypothesis as management education is effective if the principle of feasibility is applied to shaping an opportunity for managers in management education, the principle of reasonableness serves as a condition of use of appropriate management education for managers, the principle of functionality is used to

deliver qualitative management education in order to serve the purpose for which management education is designed, the principle of mirrorness is implemented for analysis of managers' learning outcomes and achievements in management education. The present research has *limitations*. The inter-connections between hybrid business, pedagogy, management education, organisational management, psychology, neuroscience, social cognition, mirror neurons have been set. Further research tends to focus on empirical studies in management education. And a comparative research of different countries could be carried out, too.

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