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## MANAGERS' COMPETENCIES IN THE AREA OF ENTREPRENEURSHIP

Employee competencies are a key resource in modern enterprises. It's impossible to reach ambitious, organizational goals without talented, committed and entrepreneurial managers. In the article the competency profile of the manager of the future is presented. The profile emphasis is the need for a manager's entrepreneurship. Basing on this profile, a tool for the assessment of the level of students' and managers' competencies was created.

In the empirical part of the paper the results of research concerning students' and managers' competency level was presented. The proposed changes, which need to be implemented while competencies develop, were characterized.

**Keywords:** competencies, entrepreneurship, managers' competencies

### 1. INTRODUCTION

Modern companies operate in an unpredictable and variable environment. Processes that take place around the organization affect its operation. Rapidly changing markets, increased competition, higher standards of quality and expansion of new technologies pose new challenges to the organization. The necessity of introducing new products and innovative solutions are factors causing changes in a manager's way of thinking. In order to be competitive, managers realize the need for the improvement of their competencies, especially competencies related to entrepreneurship.

From 2011 until 2013, the authors took part in a project related to competency management. It was entitled „Model of validation of competencies for employees of MSME of Wielkopolska's municipal sector." During the project the competencies of managers from the municipal sector were examined and the profile of the

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manager of the future was created. The only difference between a manager of the municipal enterprise and a manager of any other enterprise is a "greater social sensitivity" or "sensitivity to issues related to the needs of residents."

The future requires thinking and acting based on entrepreneurship. For that reason, the above mentioned profile consists of competencies related to entrepreneurship<sup>1</sup>.

The competencies are defined as "general or specialized knowledge, physical and intellectual abilities, personality traits, motives, and self-images" [13, p. 32]. Managerial competencies are defined as "sets of behaviors that enable individuals to demonstrate the effective performance of tasks within the organization" [23]. Knowing the knowledge, skills and aptitude requirements of the manager of the future (later also named entrepreneurial manager), it is possible to examine whether students of the Faculty of Engineering Management and managers during post-graduate studies of "Modern Enterprise Management" are ready to perform this role. In the period from February to December 2015 their level of managerial competencies was examined.

The research focused on the following questions:

- What is the self-assessment of managerial competencies related to entrepreneurship among students of the Faculty of Engineering Management and managers during post-graduate studies of "Modern Enterprise Management?"
- Is it possible to implement changes at Poznan University of Technology, which would increase the efficiency of competency development required from the managers of the future?

The aim of the article is to present the competence profile of the entrepreneurial manager of the future and the results of research concerning the self-assessment of competencies among students of the Faculty of Engineering Management and managers during post-graduate studies of "Modern Enterprise Management." The paper presents proposed changes which could increase the efficiency of competency development among entrepreneurial managers.

## **2. THE CONCEPT OF ENTREPRENEURSHIP**

The literature on entrepreneurship can be divided into two groups focusing on:

- entrepreneurship as the process - involving organized, deliberate and consciously taken actions, which use innovative ideas that benefit the company [22, p. 12];

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<sup>1</sup> The main implementers of the project were practitioners – executives and managers of municipal sector companies, a specialist in the field of designing competency profiles and a psychologist.

- entrepreneurship as a set of knowledge, skills and attitudes allowing to adapt to change, identify new opportunities of development and their critical evaluation, foresee and create new, innovative solutions, take rational risks as well as implement and realize ideas<sup>2</sup>.

A second way of defining entrepreneurship is related to employee behavior in an organization. Individuals who are active, innovative, creative, and who are ready to take on new challenges can be defined as entrepreneurial.

According to P. F. Drucker, entrepreneurship is associated mainly with the way of acting which is success oriented. According to the author, anyone who is able to face decision-making can learn to be an entrepreneur and behave in an entrepreneurial manner [6, p. 29]. Others see the entrepreneur as the possessor of specific knowledge enabling the recognition of opportunity [1, 9, 11, 18].

Fabiańska adds that an entrepreneur is intelligent, innovative and able to organize economic activity [10, p. 28]. The behavior of entrepreneurs includes:

- exploiting emerging chances and opportunities,
- searching for new and better solutions,
- introducing changes in various aspects of business units and organizations,
- a rational approach to risk,
- flexible adaptation to the changing conditions of the economy [2, 15].

Entrepreneurship is reflected in the behavior of the individual and in certain actions. Entrepreneurship is thus a complex process by which the project is developed. The development of this project depends on internal predispositions and competencies of people involved in the project, as well as the external conditions in which the organization operates.

### **3. ENTREPRENEURIAL MANAGER – MANAGER OF THE FUTURE**

The phenomenon of entrepreneurship is inextricably associated with the entrepreneur – a major causative factor in an enterprise and the engine of economic progress [21, p. 27], [16, p. 207]. Mitchelmore and Rowley [17] point out that individuals who start and transform their businesses possess given entrepreneurial competencies. According to the authors, these entrepreneurs' competencies can be ascribed to a certain group of competencies which is relevant to the successful performance of entrepreneurship.

So is every manager an entrepreneur?

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<sup>2</sup> Defined on the basis of the term entrepreneurship as set out in: <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:52003DC0027> and on Commission Green Paper of 21 January 2003 on Entrepreneurship in Europe.

The manager who takes part in different projects and runs his own business is an entrepreneur. P. A. Wickham, however, clearly distinguishes the manager that acts in a traditional way from the entrepreneurial manager. He presents the main features of entrepreneurial management style, which is different from the traditional style. Those features include: [24, p. 19-20].

- Continuous search for new ideas. Entrepreneurial managers are looking for new ways of doing something better and/or differently. This reflects a creative attitude and continuous search for new opportunities.
- Identification of attractive business ideas. Entrepreneurial managers are able to identify ideas suitable for transformation into a viable business project. They have the ability, known as “entrepreneurial alertness,” which enables them to spot business opportunities missed by others.
- Strong willingness to change ideas into actions. Entrepreneurial managers have a proactive attitude: they implement ideas in a very quick manner. They have the ability to function in an environment of rapid change.
- No fear of change. Entrepreneurial managers are not afraid of changes, they can also function under undefined structures, a lack of established procedures and rules of conduct.
- Responsiveness to changes in order to achieve a competitive advantage. Entrepreneurial managers strive to achieve success through the creation of new entities and structures or making radical changes in existing organizations. They see changes as something normal and even necessary to achieve sustainable competitive advantage.

The analysis of the presented features and attributes of the entrepreneurial manager shows the similarities with the characteristics of the manager of the future. H. Dźwigoł believes that managers of the twenty-first century enterprise are people who are connectors, drivers of creativity and innovation, as well as advocates of learning based on completed projects [8, p. 18]. Managers of the future will mainly manage project teams, whose members will work on increasing fluctuation in the environment. Therefore, managers of the XXI century should accept diversity and uncertainty and manage their employees efficiently in the increasing complexity of the company’s internal and external environment [20].

In 2011-2013 the project “Model of validation of competencies for employees of MSME of Wielkopolska’s municipal sector” was carried out, the aim of which was to create the profile of the manager of the future. An expert team analyzed the tasks that managers in the municipal sector will perform in the future. By analyzing those tasks and by interviewing managers, twelve basic and most important competencies were identified. The main and most important competencies of the manager of the future are the following:

- creativity and innovativeness,
- rational approach to risk taking,
- team management,

- conflict solution,
- time management,
- negotiations,
- internal communication,
- communication with environment,
- strategic thinking,
- information management.

All of the competencies were defined (described) to make sure that they will be understood in the same way by all managers. Each of the competencies of the manager of the 21st century was identified with the use of behavioral indicators. Behavioral indicators are a description of an action or group of actions, which can be expected to occur if a person skillfully uses his competencies to perform his work. Behavioral indicators were used so that respondents know what level of knowledge and skills fit to a particular competency level. The competencies were evaluated in terms of importance for future work at a managerial post. The evaluation consists of 8 levels. Each level was characterized in Table 1.

Table 1. Characteristics of particular levels of professional competencies of municipal sector managers [3, p. 19]

Levels	Characteristics
1	Given competency not absorbed. Lack of behavior indicating its mastering and use in activities.
2	Acquisition of competency on a basic level. It is used irregularly. Required supervision of more experienced people and giving their support.
3	Competency sufficiently absorbed, it can be used by oneself in practice, but there are situations that require supervision of experienced persons.
4	Competency satisfactorily absorbed, it can be used by oneself in practice, in the performance of professional tasks.
5	Competency absorbed at a good level, which allows better fulfillment of tasks in the given field and passing experience onto others.
6	Competency absorbed at a very good level, which allows very good fulfillment of tasks in the given field.
7	Competency absorbed to a great extent. The creative usage and development of knowledge, skills and desired attitudes in the given range of activities.
8	Expert level, the ability to creatively share their knowledge and skills with other managers and employees.

The expert team ranked the requirements for competencies of managers of the future as very high.

For the purpose of this article, a change in the competency profile of the manager of the future was implemented. A manager of the 21st century is creative and innovative, and thus needs to know the techniques of creative thinking on a very good level and be able to use them while performing tasks (competency level 6).

However, an entrepreneurial manager should be at level 7 (competency absorbed to a great extent). For this reason, while making the competency profile of the manager of the future, the requirements towards creativity and innovation were increased.

The expert team involved in the project emphasized that the manager of the future should especially develop soft competencies in the area of management – hence the required level is 7 and 8. The necessary specialist skills must be supported by a broad and well-established knowledge of negotiations, internal information management, and the ability to communicate with employees and other stakeholders (environment), in order to create a sense of public confidence. Managers who will work in the municipal sector in the future are expected to have a wide, interdisciplinary knowledge and intellectual horizon, a professional education, but above all be creative, efficient and be willing to continuously improve their competencies. Therefore, great emphasis should be placed on the manager's adaptability to the conditions in which he will have to work in the future and the ability to acquire new skills and knowledge [3, p. 23].

#### **4. SELF-ASSESSMENT OF STUDENTS' MANAGERIAL COMPETENCIES AND ITS COMPARISON WITH THE COMPETENCY PROFILE OF THE MANAGER OF THE FUTURE**

Research on the managerial competency level of students and participants of post-graduate studies (managers) was carried out at the Faculty of Engineering Management at Poznan University of Technology (PUT) in the period from February to December 2015.

The study included 216 students of Poznan University of Technology – 116 (54%) women and 100 (46 %) men. The students, which took part in a survey were students of management (third and fourth year of Bachelor's degree studies and second year of Master's degree studies). The study was conducted among full-time and part-time students (173 full-time students and 43 part-time students). Deliberately, the students of the first and second year of Bachelor's degree studies weren't examined, because of too short period of study. In the research, participants of post-graduate studies on "Modern Enterprise Management" also took part. In total 21 managers (students) were surveyed (7 women and 14 men) in 2014/2015 and 2015/2016.

The aim of the first part of the study was to examine at what level the students of Faculty of Engineering Management and managers during post-graduate studies on "Modern Enterprise Management" evaluate their managerial competencies related to entrepreneurship. For this purpose, a self-assessment questionnaire was prepared. In the questionnaire, competencies were presented in the form of synthet-

ic measures based on sets of 2-6 questions (in total: 32 indicators to assess the knowledge, skills and attitudes related to a particular competency) [19]. The indicators were described in detail and were judged by students and managers on a scale of 1-8 according to Table 1.

The level of competency was counted as the arithmetic mean of the sets of indicators. The results of the research are shown in Figure 1.

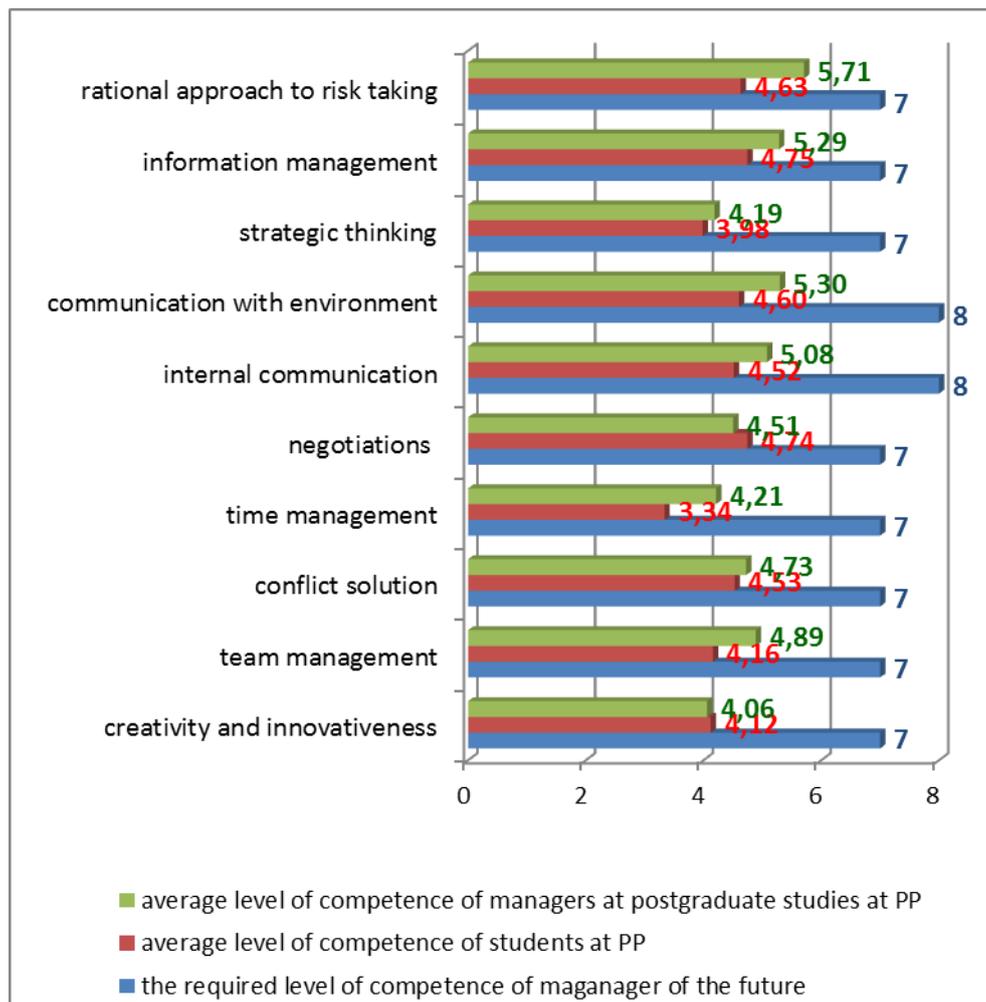


Fig. 1. Self-assessment of competencies of managers and students at Poznan University of Technology (own study based on data from the conducted research)

The results of the research show that students' competency self-assessment ranges from <3,34-4,45>. This result means that the students possess the required

competencies at a level of 3/5, so at a sufficient/good level. The results also indicate, that the surveyed students should be able to properly carry out the tasks, but in the case of lower ratings, the supervision of more experienced employees may be required.

In contrast, the managers' competency self-assessment ranges from <4,06-5,71>. This result means that the managers possess the required competencies at a level of 4/6, so at a satisfactory/very good level. The results indicate that the surveyed managers are able to perform their tasks very well and to pass onto others their own experiences. The results of the managers are even one level higher than the students' results. Only two competencies were rated higher by students than by managers. Those competencies are: negotiations, creativity and innovation. Why did managers of post-graduate studies assess those competencies lower than students? As mentioned, competency is aptitude, skills and knowledge used to effectively perform tasks in particular in working conditions. The indicators of knowledge related to creative thinking and negotiation techniques influenced the results. Managers stated that they do not know negotiation techniques and techniques of creative thinking. If they use any techniques or methods, they use them unconsciously. Students assessed their competencies in this area at a higher level because the study program involves not only negotiation techniques and techniques of creative thinking, but also numerous exercises and projects where those techniques are used. The biggest difference between students' and managers' self-assessment relates to rational risk taking. The difference is 1.8. Each participant of post-graduate studies is a manager, employed in a large company (13 people), in SMEs (7 people) or in a public institute/office (5 people). The average work experience of managers is 12 years, but in the study also managers who work for more than 30 years took part. In contrast, only part-time students (43 persons) have work experience in large corporations or SMEs. Full-time students took part in internships in enterprises, 37 people work (or worked) an average of 15 months. Work experience is a factor which influences the approach to risk taking. Running a business in real conditions helps to improve the level of this competence. Comparing these results with the competency profile of a manager of the future (profile of the entrepreneurial manager), it can be stated that this model puts higher demands on the necessary level of competence. Employees whose level of competence is as close as possible to that specified in the standard should work in managerial positions. Students' and managers' competencies should be developed to the range of <7.8>. This means absorption of competence to a great extent, so the ability to creatively use and develop knowledge, skills and desired attitudes in the given range of activities. Those disparities cause the occurrence of competency gaps among group of students in the range of <2.25; 3.66>. The smallest gap concerns information management (competency gap of 2.25), while the largest deficiency relates to time management (competency gap 3.66).

The competency gap for the surveyed managers is in the range of <1.29; 2.94>. The smallest gap is related to the rational approach to risk taking (competency gap

of 1.29), while the largest deficiency of examined managers' competencies relates to creativity and innovation (competency gap of 3.66). If surveyed managers are not afraid of changes and taking risks, they have a problem with creativeness and the attitude focused on the continuous search for new ideas.

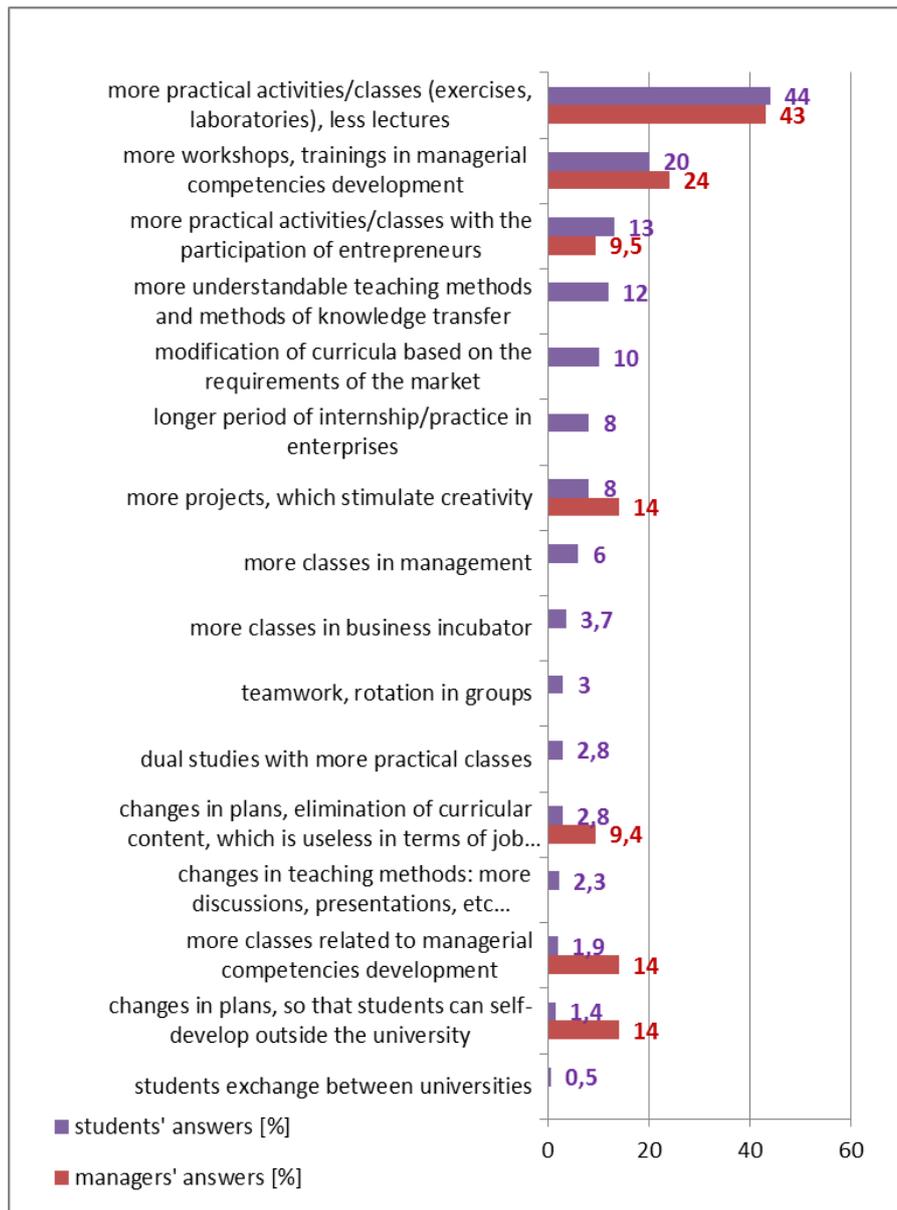


Fig. 2. Proposal of changes related to students' and managers' improvement and development of managerial competencies (own study)

In the last part of the study respondents were asked about changes that should be implemented at Poznan University of Technology. Changes aim at increasing the effectiveness of competency development required from managers of the future. The question was open-ended (descriptive). Basing on the respondent's answers, the categorization of responses was made. The most important are shown in Figure 2.

A proposal of changes was formulated by 145 (67%) respondents within the group of students and 11 (52%) managers of post-graduate studies at PP. Both groups of respondents claim that the most important change is to increase the number of practical classes and to reduce the number of lectures. This proposal is related to changes in the curriculum. Students feel that there is too much theory and too little practice, therefore they propose to introduce classes and laboratories, rather than traditional lectures. Managers also believe, that introducing more classes with practical activities would increase the level of entrepreneurship.

43 students and 5 managers claim, that additional workshops and trainings should be organized. These forms of classes should include various teaching methods, such as simulation games, case studies, role play. During workshops and trainings, students could improve their competencies related to entrepreneurship.

29 surveyed students and 2 managers believe that practical classes with the participation of entrepreneurs should be organized. The university should cooperate with well-known companies and learn from professional managers. Students propose various forms of improvement: trips to companies to observe manager's behaviors, meetings with managers who would give lectures or prepare exercises.

Some of the respondents (17 students, 3 managers) emphasize the need of introducing a larger amount of projects. According to respondents, participation in projects teaches them how to deal with new tasks and how to solve difficult problems, as well as stimulating creativity. Project participation gives an opportunity to improve soft competencies, such as: teamwork, innovativeness, knowledge sharing, solving difficult conflicts and negotiation skills.

Another students' proposal (26 respondents) is to change teaching methods and methods of knowledge transfer. None of the managers propose such a change. The respondents believe that knowledge is passed on in incomprehensible manner, with usage of unclear terminology. Lecturers speak too fast or too slow. All those factors result in that students cannot or do not want to pay attention during lectures and classes.

Students also propose a longer period of internships and practical training (17 people). Taking part in these activities allows them to find out what tasks are being performed at a managerial post.

Part of the respondents (8 people) claim, that dual studies should be introduced. During this kind of studies students have the opportunity to participate in internships and practical training, because they are a significant part of the curriculum.

Managers on the other hand suggest to implement changes in the studies' schedule/plan, so that students of post-graduate studies can self-develop outside the university. They propose to eliminate curricular content, which is useless in terms of job activities and content which is repeated during the studies. Finally they suggest to organize more classes related to the development of managerial competencies.

## 5. SUMMARY

The theoretical and empirical work allowed to achieve the objectives of the article and to formulate answers to the research problems:

- What is the self-assessment of managerial competencies related to entrepreneurship among students of the Faculty of Engineering Management and managers during post-graduate studies on “Modern Enterprise Management?”

The surveyed students and managers assessed their managerial competencies. The respondents declared that they absorbed competencies at a satisfactory and good level (level 4 and 5). The biggest competency gap is related to time management. Out of all of the competencies, information management received the highest score. Quite different results apply to managers – participants of post-graduate studies. All of the competencies were evaluated higher than level 4, some average scores were even at a very good level (level 6). The largest competency gap is related to creativity and innovation. Out of all of the competencies rational risk taking received the highest score.

- Is it possible to implement changes at Poznan University of Technology, which would increase the efficiency of competency development required from the managers of the future?

The surveyed managers and students of management believe that first of all one should "focus not only on the abstract curriculum, but on real life situations" [12, p. 29]. Therefore, changes in the curriculum at the university should be implemented. The changes should include more practical exercises and labs, classes conducted with the participation of entrepreneurs. Students should be involved in different projects, as well as be able to take part in training and workshops that will improve the managerial competence related to entrepreneurship.

In order to increase the objectivity of the presented conclusions, the results of the research should be verified by an additional examination. The examination can be conducted by experts, for instance academic teachers, who could analyze student behavior while performing simulation tasks and by checking their knowledge and skills related to entrepreneurship.

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## KOMPETENCJE MENEDŻERÓW W OBSZARZE PRZEDSIĘBIORCZOŚCI

### Streszczenie

Kompetencje pracowników są kluczowym zasobem w nowoczesnych przedsiębiorstwach. Osiągnięcie ambitnych celów organizacji nie jest możliwe bez zdolnych, zaangażowanych i przedsiębiorczych menedżerów. W artykule przedstawiano profil kompetencyjny menedżera przyszłości. Profil ten obejmuje kompetencje osoby przedsiębiorczej. Na podstawie tego modelu opracowano narzędzie, za pomocą którego zbadano poziom oceny kompetencji menedżerskich studentów oraz uczestników studiów podyplomowych. W części empirycznej artykułu przedstawiono wyniki badań dotyczących poziomów kompetencyjnych studentów i menedżerów. Opisano również propozycje zmian, które są niezbędne podczas doskonalenia kompetencji menedżerów przedsiębiorczych.

**Słowa kluczowe:** kompetencje, przedsiębiorczość, menedżer przedsiębiorczy.

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