

## ***The Use of Crowdfunding in Entrepreneurship Education in Higher Education Institutions***

### **ABSTRACT**

---

**RESEARCH OBJECTIVE:** The goal of the paper is to present the possibilities of using crowdfunding in entrepreneurship education in higher education institutions and investigating the impact of this activity on the development or strengthening of entrepreneurial traits and attitudes of students.

---

**THE RESEARCH PROBLEM AND METHODS:** The research problem concerns the use of crowdfunding in entrepreneurship education. The method applied to solve the research problem was a diagnostic survey. Questionnaires were completed by 314 full-time students and 34 academic teachers.

---

**THE PROCESS OF ARGUMENTATION:** The process of reasoning starts with the presentation of the research method. Next, methods of the entrepreneurship education are described. Afterwards, research results are presented. The paper ends with conclusions and recommendations.

---

**RESEARCH RESULTS:** In the opinion of students and academic teachers developing a crowdfunding projects by students, with the special emphasis on the action plan, might be an important didactic method in entrepreneurial education. It also has significant impact on the development or strengthening students' ability to take advantage of opportunities.

---

**CONCLUSIONS, INNOVATIONS, AND RECOMMENDATIONS:** The conclusions allow for verifying the thesis that crowdfunding might be used in an effective entrepreneurship education in higher education institutions. It is recommended to consider its inclusion in a wide range of methods used in entrepreneurship education.

---

→ **KEYWORDS:** CROWDFUNDING, ENTREPRENEURSHIP EDUCATION, HIGHER EDUCATION

## STRESZCZENIE

---

### *Wykorzystanie crowdfundingu w przedsiębiorczej edukacji w szkołach wyższych*

**CEL NAUKOWY:** Celem artykułu jest przedstawienie możliwości wykorzystania crowdfundingu w przedsiębiorczej edukacji w szkołach wyższych oraz zbadanie jego oddziaływania na kształtowanie lub wzmacnianie cech i postaw przedsiębiorczych studentów.

---

**PROBLEM I METODY BADAWCZE:** Problem badawczy odnosi się do wykorzystania crowdfundingu w przedsiębiorczej edukacji. Zastosowano metodę sondażu diagnostycznego. Ankiety zostały wypełnione przez 314 studentów stacjonarnych i 34 nauczycieli akademickich.

---

**PROCES WYWODU:** Proces wywodu rozpoczyna się od prezentacji metody badawczej. Następnie opisano metody dydaktyczne w przedsiębiorczej edukacji. Kolejno zaprezentowano wyniki badań. Artykuł kończy się wnioskami i rekomendacjami.

---

**WYNIKI ANALIZY NAUKOWEJ:** Zdaniem studentów i nauczycieli akademickich, opracowanie projektu crowdfundingowego przez studentów, ze szczególnym uwzględnieniem planu działania, może być ważną metodą dydaktyczną w edukacji przedsiębiorczej. Oddziałuje ono również na kształtowanie lub wzmacnianie u studentów umiejętności wykorzystywania pojawiających się szans.

---

**WNIOSKI, INNOWACJE, REKOMENDACJE:** Wnioski pozwalają na zweryfikowanie tezy, że crowdfunding może być stosowany w skutecznej edukacji przedsiębiorczej w szkołach wyższych. Zaleca się włączenie go do szerokiej gamy metod stosowanych w edukacji przedsiębiorczej.

---

→ **SŁOWA KLUCZOWE:** **CROWDFUNDING, EDUKACJA PRZEDSIĘBIORCZA, SZKOLNICTWO WYŻSZE**

## Introduction

Entrepreneurship is “an individual's ability to turn ideas into action. It includes creativity, innovation and risk taking, as well as the ability to plan and manage projects in order to achieve objectives” (European Commission, 2006, p. 4). It might be defined both, in a broad sense, as an attitude of a person, and in a narrow perspective, as the ability and willingness to start and run a business. In developing countries, entrepreneurship plays a significant role in accelerating economic growth and generating impulses for structural transformation of economies, whereas in the economically developed countries, it is considered in the context of increasing labor productivity, which underlies competitiveness (Naudé, 2008). For this reason, as Wach notes, there is a need “to promote entrepreneurial attitudes as a response to contemporary socio-economic challenges” (2014, pp. 7-8), because “entrepreneurship is a key competence for growth, employment and personal fulfillment” (European Commission, 2006, p. 4).

Entrepreneurship education, is one of the significant factors stimulating entrepreneurship. Although it can already be included in pre-school curricula, this article is aimed at considerations at higher education level. This approach is part of the recommendations formulated by the European Commission according to which “universities and technical institutes should integrate entrepreneurship as an important part of the curriculum, spread across different subjects, and require or encourage students to take entrepreneurship courses” (European Commission, 2006, p. 9).

The context of 21st-century entrepreneurship has changed as a result of new approaches, including crowdfunding. Especially in recent years, the rapid rise of crowdfunding can be observed. For this reason, it is worth considering the inclusion of crowdfunding into entrepreneurship education.

The above premises allow to define the scientific goal of the paper, which is the presentation of the possibilities of using crowdfunding in entrepreneurship education in higher education institutions and investigating the impact of this activity on development or strengthening entrepreneurial traits and attitudes of students.

The paper is organized into four sections. First, the research method is presented. In the next section, methods of the entrepreneurship education in higher education institutions are described. Afterwards, the following issues are presented in the “Results” section: the importance of developing a crowdfunding project by students as an important didactic method in entrepreneurial education, the most relevant for effective entrepreneurship education elements of the crowdfunding project, and the impact of the preparation of a crowdfunding project on the development or strengthening the entrepreneurial traits and attitudes of students.

In the last section, the conclusions and recommendations are presented.

## Research methods

This article raises the following three research questions:

- is developing a crowdfunding project by students an important didactic method in entrepreneurial education?
- which elements of the crowdfunding project are the most relevant for effective entrepreneurship education?
- to what extent does the preparation of a crowdfunding project develop or strengthen entrepreneurial traits and attitudes of students?

An attempt to verify the hypothesis that crowdfunding might be used in an effective entrepreneurship education in higher education institutions was made.

The main research method used in the study was the diagnostic survey. Knowledge about the use of crowdfunding in entrepreneurship education in higher education institutions was gathered on the basis of selected representative samples characterizing the general statistical population. These samples were full-time students and academic teachers of the Institute of Economics, Finance and Management (IEFM), of the Faculty

of Management and Social Communication, at the Jagiellonian University in Krakow, Poland.

To answer the research questions asked in the paper, the questionnaire technique was selected. The questionnaire included questions concerning the use of crowdfunding in entrepreneurship education in higher education institutions. It was also comprised of the respondent's particulars, with questions regarding the field and the degree of study in relation to students, and degree or academic title in the case of academic teachers.

The first question of the survey questionnaire: "Which of the following didactic methods are important in teaching entrepreneurship?" gave the opportunity to mark ten closed responses using a five-point Likert scale. The second question "To what extent preparation by students of each of the elements of a crowdfunding project will contribute to effective entrepreneurship education?" allowed eight closed answers. The third question "To what extent the preparation of a crowdfunding project will develop, or strengthen, in students, the following entrepreneurial traits and attitudes?" gave the opportunity to mark sixteen closed responses. To measure the degree of impact in both, the second and the third questions, a four-point Likert scale was used. Additionally, there was a filtering question included in the questionnaire, which was "Did you know the term crowdfunding before receiving this survey?"

There are 59 academic teachers employed in the IEFM and 1 317 full-time first- and second-cycle students studying Economics and Management. Details regarding students are presented in the Table 1.

Table 1  
*The number of full-time students in the IEFM*

	Number of first-cycle students	Number of second-cycle students	Total
Field of study: Economics	228	316	544
Field of study: Management	300	473	773
Total	528	789	1 317

Source: own elaboration based on information from the secretariat of the IEFM received on 12.03.2018.

In the case of students, an auditorium survey, completed during lectures, was carried out, which allowed to capture a large group of respondents. 314 students properly completed questionnaires, which is 23.8% of all full-time students at IEFM. A questionnaire was also given to all academic teachers at IEFM. 34 properly completed questionnaires were received, which is 57.6%. The application of the filtering question allowed to reject 61 questionnaires, because respondents indicated that they did not know the term crowdfunding. Finally, 260 questionnaires filled out by students, and 27 completed by academic teachers were analyzed.

The diagnostic survey was conducted in the first quarter of the year 2018. This in-depth study was preceded by a pilot study, carried out in 2017.

## Methods of the entrepreneurship education in higher education institutions

Contemporary trends related to the construction of a knowledge-based economy require modern entrepreneurship education. Wach (2014) notes that it should be understood not only as economic or business education, but above all, in the wide meaning, as shaping entrepreneurial attitudes among students. Entrepreneurship education has a positive impact on the entrepreneurship key competence of individuals as it gives them the skills enabling to run a business. Furthermore it stimulates the intentions of individuals to become an entrepreneur and has a constructive influence on the entrepreneurial mindset of students, their intentions towards entrepreneurship and employability (*Effects*, 2012).

This article adopts a general understanding of entrepreneurship education, according to which it equips students with the knowledge, attributes and capabilities required in the process of setting up a new business and “focuses on the development and application of an enterprising mindset and skills in the specific contexts of setting up a new venture, developing and expanding an existing business, or designing an entrepreneurial organization” (*Enterprise*, 2012, p. 8).

For entrepreneurial education to be effective, it should raise the level of understanding of the economic reality and take into account the multifaceted nature of entrepreneurship. This effectiveness can be also increased by proposing attractive language and examples that are close to the students' experiences. It is postulated that entrepreneurial education should be based on a problem-based learning approach, and include “learning-by-doing” elements (Tan & Ng, 2006). Certainly, teaching entrepreneurial skills cannot be reduced to traditional in-class lectures.

Most authors categorize teaching methods into two groups, which are termed “traditional methods” and “innovative methods.” Among them, the most used are: lectures, case studies, and group discussions. Other methods applied, include: business simulations, films, role models or guest speakers, business plan creation, project works, games and competitions, setting up of a small business, workshops, presentations and study visits (Arasti, Falavarjani, & Imanipour, 2012). Also Wach (2014) claims that entrepreneurship education should be based on the use of interactive forms of teaching, especially active problem-solving methods, including case studies, educational games or role-playing projects. According to the author of this work, it is also worth including to this group of methods development of a crowdfunding project, learning by doing projects, and methods that generate ideas for business.

Gawel and Wach-Kąkolewicz (2016) emphasize the importance of the constructivist learning theory and its implications for the teaching process in higher education. In their opinion, teaching entrepreneurship requires learning through action, what allows acquisition of not only knowledge, but also the skills necessary in the field of running a business, as well as shaping appropriate characteristics and attitudes of students.

Developing a crowdfunding project by students, can be considered as a didactic method in entrepreneurial education, and also fits into the constructivist learning theory.

This theory focuses on activities and environments rather than on learning objectives (Wangpipatwong & Papasratorn, 2008). In this approach, knowledge is constructed by students and it is not transmitted by an academic teacher. Through developing a crowdfunding project, students make decisions and analyze their effects on the basis of their knowledge, they are engaging emotionally in the project, and learning from each other.

Larralde and Schwienbacher define crowdfunding as the “financing of a project or a venture by a group of individuals instead of professional parties” (Larralde & Schwienbacher, 2012, p. 3) usually taking place online, through dedicated platforms, for the provision of financial resources in order to support initiatives for specific purposes. Forbes and Schaefer note that crowdfunding exists in many forms and consequently its definition must be generalized to describe only the fundamentals of the phenomenon. Hence they define crowdfunding as “the process of taking a project or business, in need of investment, and asking a large group of people, which is usually the public, to supply this investment” (Forbes & Schaefer, 2017, p. 399). This broad definition has been adopted in this work.

Crowdfunding contains three different methods of raising funds: the donations model, the lending model and the investment model. The subject of research in this study is the donations model, in which funders provide money for a project either for no return or in return for some form of non-financial reward (UKIE, 2012).

The aim of developing a crowdfunding project is to obtain sponsors (a large group of people, crowd) that will enable its implementation, through the financial support. In order to achieve this goal, the crowdfunding project should contain the following parts:

- Project title, that will encourage people to get acquainted with the project.
- Financial goal and budget of the project, which should not be too high, because a lower funding goal increases the chance of success by attracting more potential backers (Forbes & Schaefer, 2017).
- Information about the project (purpose, motivation), which indicates it's attractiveness and innovation as well as possibility of funders' participation in the project.
- Action plan, that should convince sponsors that the project is feasible and realistic.
- Information about prizes for financial support, for example: t-shirts, books, thematically related to the project, wherein backers are most likely to fund project in exchange for the main outcome i.e. the product (Forbes & Schaefer, 2017).
- Visual presentation (graphics, photos, videos), wherein the most important is the video, with the front-loaded key information, and motivation for the project emphasized at the end (Forbes & Schaefer, 2017).
- Creating dedicated accounts in social media, which allows a wide audience to be reached.
- Project website, which allows funders to get detailed information about the project.

## Research results

To answer the research questions, and to confirm the hypothesis of this study, opinions of students and academic teachers of IEFM were collected and analyzed. The first chart presents students' opinions on the topic of the didactic methods used in teaching entrepreneurship.

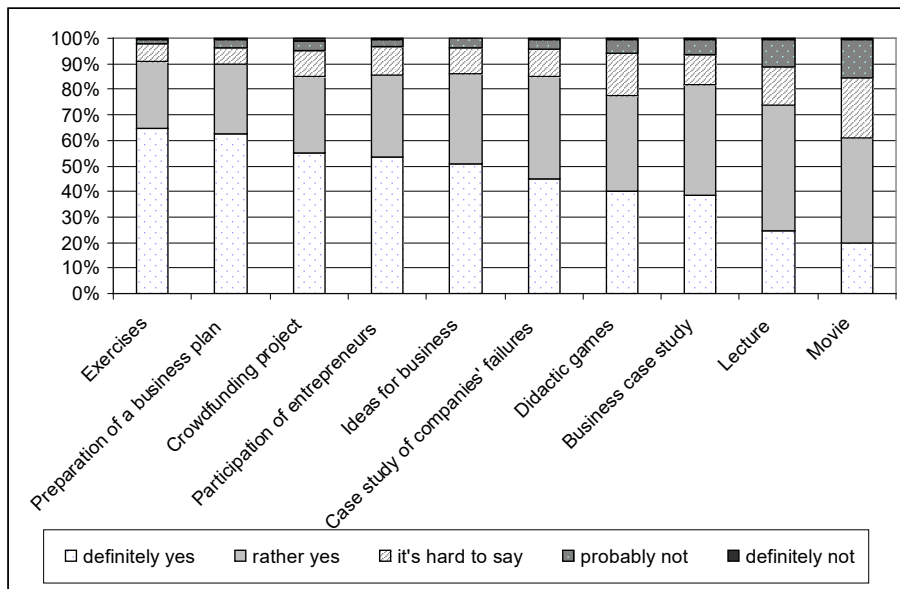


Chart 1. Didactic methods used in teaching entrepreneurship – students' opinions.  
Source: own elaboration.

In the students' opinion the most important methods used in teaching entrepreneurship are the practical ones: exercises and preparation of a business plan, what was confirmed by about 90% positive answers of respondents. The development of a crowdfunding project is right behind them. Methods that have the least importance are: lectures and movies. The academic teachers' opinions are presented on the Chart 2.

In contrast to students, the surveyed teachers believe that preparation of a business plan and exercises are the least important methods. In their view, participation of entrepreneurs in didactic activities, didactic games, business case study, methods that generate ideas for business and case study of companies' failures are the most important in teaching entrepreneurship. It was endorsed by more than 90% of positive responses. The significance of the development of a crowdfunding project was confirmed by over 80% of positive respondents' answers.

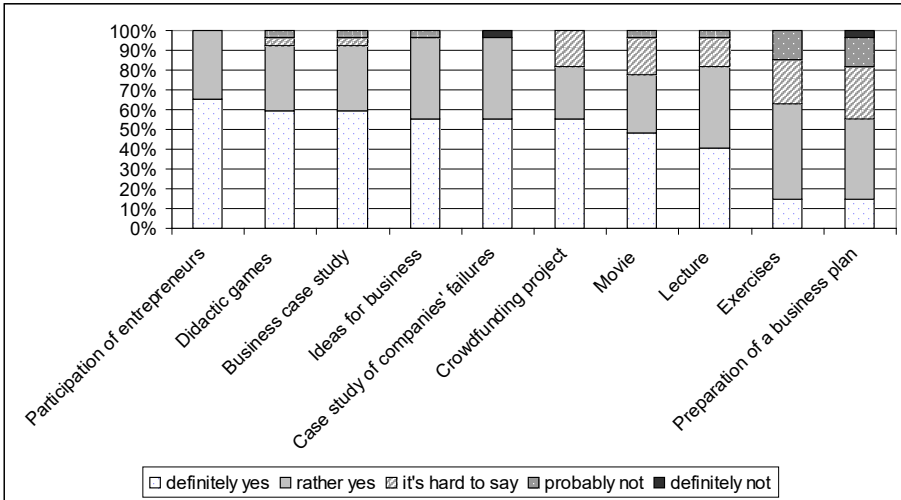


Chart 2. Didactic methods used in teaching entrepreneurship – academic teachers' opinions. Source: own elaboration.

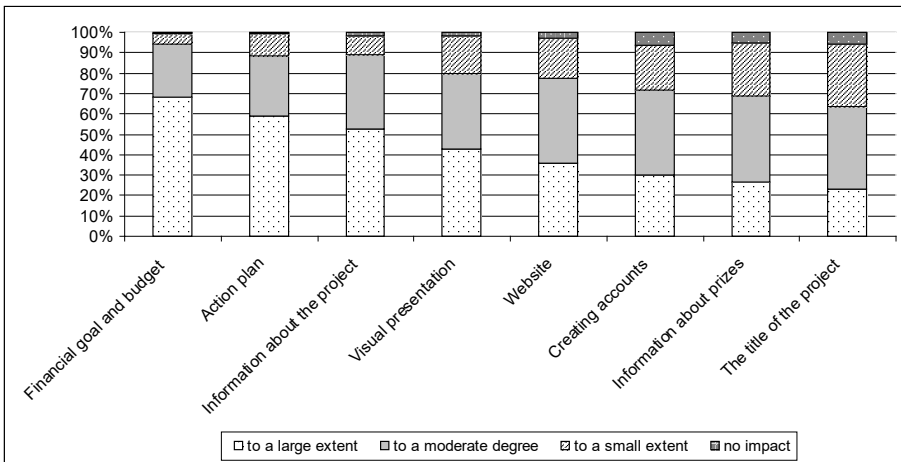


Chart 3. The extent to which each element of a crowdfunding project can contribute to effective entrepreneurship education – students' opinions. Source: own elaboration.

In the next question respondents were asked to indicate which elements of the crowdfunding project are the most relevant for effective entrepreneurship education. Students' responses are displayed on the Chart 3, and academic teachers' on Chart 4.



Students of IEFM think, that the most relevant elements of the crowdfunding project in the effective entrepreneurial education are the determination of the financial goal and budget of the project, development of the action plan and information about the project (it's goal and motivation). Creating dedicated accounts on social media, information about prizes and the title of the project have the least impact.

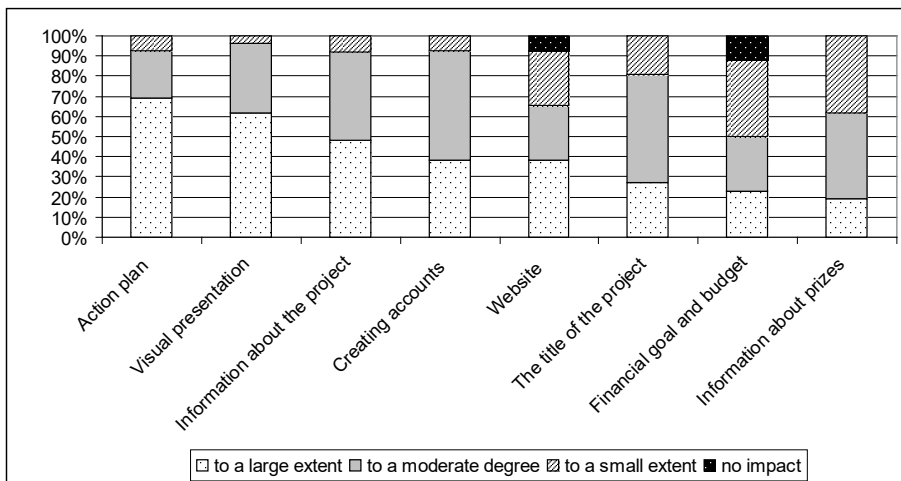
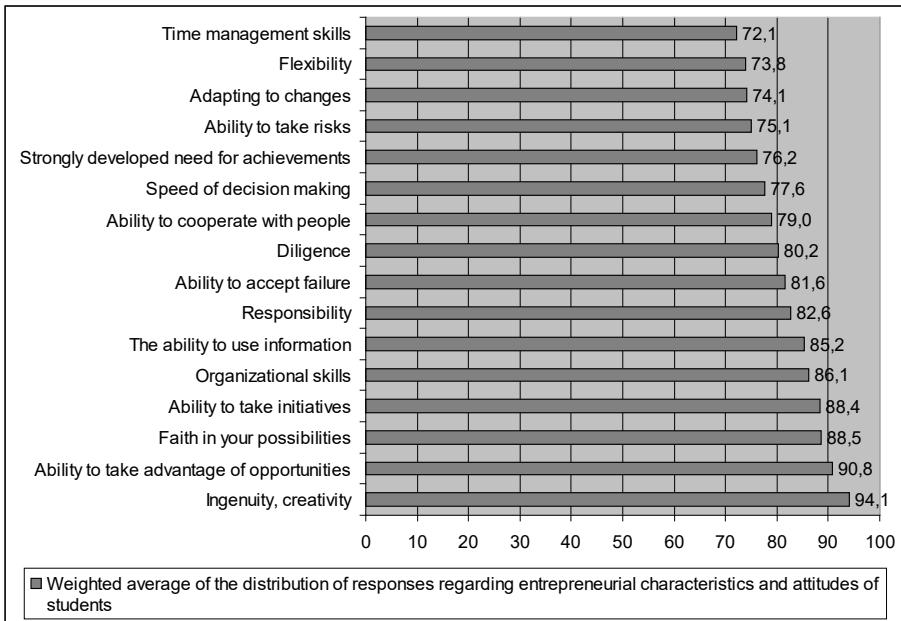


Chart 4. The extent to which each element of a crowdfunding project can contribute to effective entrepreneurship education – academic teachers' opinions.

Source: own elaboration.

Although there is a similar opinion in both groups, as to the fact that the action plan is one of the most important elements, the opinions differ in relation to the financial goal and budget of the project. Teachers do not see the importance of this element in effective entrepreneurial education, unlike students. In their opinion visual presentation of the project is more crucial.

The third examined issue concerned the extent to which the preparation of a crowdfunding project can develop or strengthen entrepreneurial traits and attitudes of students. To analyze that impact, weighted average was calculated. Respondents' answers are shown on Charts 5 and 6.



*Chart 5.* The impact of the preparation of a crowdfunding project on the development or strengthening the entrepreneurial traits and attitudes of students – students' opinions.  
Source: own elaboration.

Students claim that the preparation of a crowdfunding project primarily contributes to the development or strengthening ingenuity and creativity, ability to take advantage of opportunities, and faith in own abilities. It causes the least flexibility and time management skills.

The teachers most often indicated the answers confirming that ability to take advantage of opportunities, speed of decision making and flexibility, are mostly caused by the preparation of a crowdfunding project. In this case, both groups' answers are largely divergent, and as a common feature they pointed together ability to take advantage of opportunities. On the other hand, the answers provided by the teachers indicate the weakest impact on ability to take risks and initiatives, and responsibility.

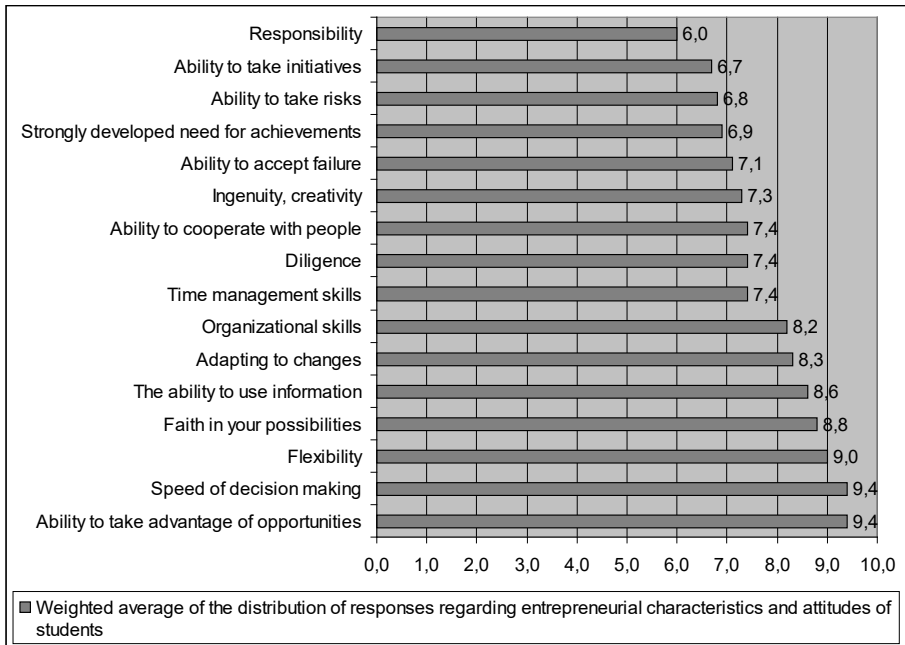


Chart 6. The impact of the preparation of a crowdfunding project on the development or strengthening the entrepreneurial traits and attitudes of students – academic teachers' opinions.

Source: own elaboration.

## Conclusions and recommendations

The opinions of students and academic teachers of IEFM confirm that developing a crowdfunding project by students might be an important didactic method in entrepreneurial education. Teachers and students think, that the most relevant for effective entrepreneurship education element of the crowdfunding project is the development of the action plan. According to the both groups of respondents, the preparation of a crowdfunding project has the most significant impact on the development or strengthening students' ability to take advantage of opportunities. The above conclusions allow to confirm the hypothesis of this study, that crowdfunding might be used in an effective entrepreneurship education in higher education institutions.

Entrepreneurship education should not only shape students' knowledge, but also develop new abilities, traits and attitudes, and guarantee student engagement. The results of the conducted study proved, that developing a crowdfunding project by students, can be recognized as one of the didactic methods. This method guarantees students' involvement in the didactic process, and the more engaging the didactic

method is, the greater is the level of acquisition of entrepreneurial skills by students. For this reason it is recommended to consider its inclusion in a wide range of methods used in entrepreneurship education. The second recommendation applies to the academic teachers, who should take under consideration to move away from an emphasis on written communication and embrace an internet communication and multimedia approach, and, at the same time, use crowdfunding in the entrepreneurship education.

Entrepreneurship education matters, and those who have benefited from it “display more entrepreneurial attitudes and intentions, get a job earlier after finishing their studies, can innovate more even as employees in a firm, and start more companies” (Effects, 2012, p. 3). Of this, and many other reasons, it is important to deal with these issues.

#### BIBLIOGRAPHY

- Arasti, Z., Falavarjani, M.K., & Imanipour N. (2012). A Study of Teaching Methods in Entrepreneurship Education for Graduate Students. *Higher Education Studies*, 2(1), 2-10.
- Effects and impact of entrepreneurship programmes in higher education. (2012). Directorate-General for Enterprise and Industry, European Commission, Brussels. Retrieved from: [http://supporthere.org/sites/default/files/effects\\_impact\\_high\\_edu\\_final\\_report\\_en\\_74284.pdf](http://supporthere.org/sites/default/files/effects_impact_high_edu_final_report_en_74284.pdf) (access: 15.03.2018).
- Enterprise and entrepreneurship education: Guidance for UK higher education providers. (2012). The Quality Assurance Agency for Higher Education Gloucester. Retrieved from: <http://www.qaa.ac.uk/en/Publications/Documents/enterprise-entrepreneurship-guidance.pdf> (access: 15.03.2018).
- European Commission. (2006). Implementing the Community Lisbon Programme: Fostering entrepreneurial mindsets through education and learning. Communication from the Commission to the Council, the European Parliament, the European Economic and Social committee and the Committee of the Regions. Brussels, COM (2006)33 final.
- Forbes, H. & Schaefer, D. (2017). *Guidelines for Successful Crowdfunding*. Procedia CIRP 60. 27th CIRP Design 2017, 398-403. Retrieved from: <https://www.sciencedirect.com/science/article/pii/S2212827117301178> (access: 15.03.2018).
- Gawel, A. & Wach-Kąkolewicz, A. (2016). Konstruktywizm edukacyjny w nauczaniu przedsiębiorczości metodą gier elektronicznych. *Horyzonty Wychowania*, 15(34), 87-102. Retrieved from: <https://horyzonty.ignatianum.edu.pl/index.php/HW/article/view/616/586> (access: 15.03.2018).
- Larralde, B. & Schwienbacher, A. (2012). Alternative Types Of Entrepreneurial Finance. In: D. Cumming (ed.), *The Oxford Handbook of Entrepreneurial Finance*. Oxford: Oxford University Press, 369-391.
- Naudé, W. (2008). *Entrepreneurship in Economic Development*. Research Paper No. 2008/20, Word Institute for Development Economics Research, 1-47.
- Tan, S.S. & Ng, C.K.F. (2006). A problem-based learning approach to entrepreneurship education. *Education and Training*, 48(6), 416-428.
- UKIE. Crowd Funding Report: A Proposal to Facilitate Crowd Funding in the UK. (2012). The Association for UK Interactive Entertainment, London.
- Wach, K. (2014). Editorial. Entrepreneurship education. *Horyzonty Wychowania*, 13(26), 7-8.

Wangpipatwong, T. & Papasratorn, B. (2008) The Influence of Constructivist E-Learning System on Student Learning Outcomes. In: C. Van Slyke (ed.), *Information Communication Technologies: Concepts, Methodologies, Tools, and Applications*. Hershey – New York: IGI Global, Information Science Reference, 1109-1121.

#### Copyright and License



This article is published under the terms of the Creative Commons Attribution – NoDerivs (CC BY- ND 4.0) License  
<http://creativecommons.org/licenses/by-nd/4.0/>