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Efficiency of Teaching and Learning Methods for Development of Learner Entrepreneurship

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Abstract. Following the analysis of scholarly literature, the article analyses teaching-learning methods, which are applied for entrepreneurship education. The questionnaire survey of teachers from Lithuanian gymnasiums, where learners are trained according to *the Programme of Economics and Entrepreneurship*, and the participants in *the 22nd Olympiad of Economics and Business of Lithuanian School Learners* was conducted seeking to evaluate the efficiency of teaching-learning methods for development of school learner entrepreneurship in a quantitative manner. Applying the method of indirect assessment (ranking), the evaluation of significance of teaching-learning methods was conducted and their efficiency for learner entrepreneurship development was identified.

Keywords: *teaching method, teaching-learning method, passive (traditional) methods, active teaching-learning (innovative) methods, efficiency, entrepreneurship education.*

Introduction

Relevance. Entrepreneurship education is a complex process, where methods based on various teaching-learning theories are applied. As it can be seen from the analysis of scholarly sources, the discussions among scholars, practitioners and experts about the most efficient methods for entrepreneurship education are active. Undoubtedly, they depend on the level of education, the goals of teaching programme, the teacher approach and other aspects.

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A unified and commonly acknowledged classification of teaching-learning methods is not available in the scientific works of Lithuanian educational scholars (Jucevičienė, Simonaitienė, Bankauskienė, & Šiaučiukėnienė, 2005; Galkienė & Cijūnaitienė, 2007; Jovaiša, 2011; Bitinas, 2011, 2013; Župerka & Župerkienė, 2011; Šiaučiukėnienė & Visockienė, 2013; Dudaitė, Januškevičiūtė, Prakapas, Virbalienė, & Žibėnienė, 2015; and others) because methods undergo constant changes; moreover, their classification is frequently based on different criteria. One of the most frequently discussed criteria is level of school student activity in the process of teaching-learning, which results in the division of methods into passive teaching and active learning methods, sometimes referred to as traditional and innovative ones. Taking into consideration the defined requirements for the process of education, properly chosen teaching-learning methods have to create prerequisites for implementation of the principles of didactics.

The teaching method is "a theoretically substantiated teaching technique, which is applied to achieve the goal of teaching; generalisation of partial teaching methodological techniques, strategies and elements that outline teaching actions of others" (Bitinas, 2013, p. 354), whereas the method of teaching-learning is a kind of teaching-learning activity seeking attainment of desired competencies (Bitinas, 2011, p. 55). The application of teaching-learning methods depends on the pedagogical attitude and the context, where teaching and learning occurs. The analysis of scholarly literature sources, which discuss the available teaching-learning methods, allows to state that the teaching paradigm employs passive teaching (traditional) methods, whereas when the teaching-learning paradigm prevails, active learning (innovative) methods are applied. Teaching is oriented towards the content and standards of the programme, whereas learning focuses on the learner and his/her needs (Harkemaa & Popescub, 2015, p. 214).

Entrepreneurship education is not only conveyance of knowledge and ability development. It is a complex process, where it is necessary to be able to model various teaching-learning strategies, to apply such teaching-learning methods, which would enable to achieve efficient results with minimum time investment (Strazdienė & Geležinienė, 2008, pp. 102–103). The emphasis is laid on the significance of teaching-learning methods developing entrepreneurship, the necessity to transit from traditional teaching methods to new and innovative ones, the application of which results in learning more from experience through creation of certain real life situations, where learners become more active and more interested in learning (*Building Entrepreneurial Mindsets and skills in the EU,* 2012).

Active learning ensures school learners' initiative and engagement into the process of teaching-learning during which the responsibility is assumed by the learners themselves. Applying active teaching-learning methods, thinking skills of higher level are developed, the change in attitudes, values and expectations is ensured. The knowledge obtained while learning actively is longer stored in the memory, school student motivation for independent and self-regulated learning is enhanced and self-confidence is strengthened (Jucevičienė et al., 2005, p. 9).

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The analysis of scientific sources shows that despite criticism, passive (traditional) teaching methods are widely applied for development of entrepreneurship competency; however, lately innovative (active teaching-learning methods), which are learner-centred and focus on his/her needs and interests, have been more and more frequently used. The variety of entrepreneurship education programmes and the set educational goals encourage application of diverse teaching-learning methods. Methods have to be applied in a flexible way, to be adapted to specific cases and to become a means for achievement of a goal (Dewey, 2013, p. 101). It is particularly important to apply various teaching-learning methods in the process of education because one ideal method that fits all the cases is not available (Fayoll & Gailly, 2008, p. 579; Dewey, 2013, p. 113).

Efficiency is the effect of the programmes and methods applied in the process of education, which is evaluated considering whether the goals of the educational programme were achieved and taking into account the influence on learners, which is established according to the level of their achieved learning outcomes (Ruškytė, 2016).

Problem. The efficiency of teaching-learning methods used for entrepreneurship education can be evaluated directly and indirectly but their evaluation is complicated and subjective because it is based on various research methods and approaches. Therefore, the question is raised which teaching-learning methods are most efficient for development of school learner entrepreneurship.

The goal: to identify the efficiency of teaching-learning methods for development of school learners' entrepreneurship.

The objectives:

1. On the basis of the analysis of scholarly literature sources, to discuss teaching-learning methods applied for entrepreneurship education.
2. To conduct evaluation of significance of teaching-learning methods applying the method of indirect evaluation (ranking).

The research methods and methodology

The analysis of scholarly literature, which serves as basis for discussion on teaching-learning methods applied for entrepreneurship education.

The written questionnaire survey of teachers and school learners was conducted seeking to identify the efficiency of teaching-learning methods for entrepreneurship education of school learners.

The stages of research organisation. The questionnaire forms for teachers and school learners were designed, which provided for an opportunity to evaluate the significance of teaching-learning methods to school learner entrepreneurship education applying *an indirect evaluation(ranking) method.*

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A 5-point scale was applied, which facilitates establishment of differences in a certain variable in the increasing or decreasing order.

The written questionnaire survey of teachers and school learners was conducted during *the 22nd Olympiad of Economics and Business of Lithuanian School Learners* organised by the Ministry of Education and Science of the Republic of Lithuania and Lithuanian University of Educational Sciences 23 April 2016.

The sample of the research included 17 teachers from Lithuanian gymnasiums, who teach 9th-12th formers according to *the Programme of Economics and Entrepreneurship* and 71 (10 – 10th formers 24 – 11th formers, 37 – 12th formers) school learners – participants in *the Olympiad*.

The analysis of the data of the school learner questionnaire survey was conducted with the help of the specialised statistical programme *IBM SPSS Statistics for Windows 22.0.*

To evaluate the significance of teaching-learning methods mathematically processing and systemising data, *an indirect evaluation method was applied*, i.e., the structural components were ranked in descending order of their significance (the most significant one was equalled 1, the second most significant one was assigned the rank equal 2, etc.). The best variant complies with the lowest value of the established ranks.

The level of compatibility of teacher evaluation was established choosing the Kendall's coefficient of concordance (*W*), which is calculated ranking the assessed criteria (Kendall, 1962). Since evaluations are based on the subjective opinion of evaluators, they are frequently rather contradictory. Therefore, their evaluations or their mean ranks, to be more specific, can be used if the concordance of evaluations is proved. The closer the value of the concordance coefficient *W* is to the one, the higher is the level compatibility of evaluations. If evaluations differ significantly, the value *W* approximates the zero (Čekanavičius & Murauskas, 2002, pp. 40–42; Podvezko, 2005, pp. 101–102; 2006, pp. 82–83; Podvezko & Podviezko, 2014, p. 112). "Concordance is statistically significant because *p* value is lower than the selected level of significance α" (Čekanavičius & Murauskas, 2002, p. 42).

The results of the conducted nonparametricstatistical test show the mean rank of all the evaluated criteria, the sample size (*N*), the value of Kendall's coefficient of concordance (*W*), the value of Chi-square, the number of degrees of freedom (*df*) and the p-value (Asymp. Sig.).

The analysis of the data of the school learners survey show the mean rank of all the criteria submitted for evaluation.

The generalised data are presented in figures converting them from SPSS program to Word. Due to the limited volume of the text, the research results are presented in the figures, where the Mean Rank values and the order according to significance are presented. Each radar chart has a number of axes starting from the same point, where each axe (spoke) represents one of the variables. The lines link the values of the same sequence. The best variant complies with the lowest value of the established ranks.

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Research ethics. The research was carried out following fundamental values, universally acknowledged norms of ethics and principles of good practice (Weiss, 2006; Kardelis, 2016; Creswell, 2014; Ruškytė, 2016; and others): *objectivity* presenting results based on the research data; *reliability* conducting the research, describing research methods and expediency of their application to receive reliable data; *goodwill* and *voluntarism* that leave the right of self-determination of participating in the research; *anonymity* using the obtained data exclusively for the purposes of research with permission from all the participants; publicity discussing the research results with the academic community.

Research results

Seven teaching methods were selected for investigation and analysis. The results of the conducted nonparametric statistical test ($\chi^2 = 85.945$; $df = 6$; $p = 0.000$; $W = 0.843$) reveal that the opinions compatibility of 17 teachers evaluating the significance of the teaching methods is good according to the chosen level of significance ($\alpha = 0.05$).

The data of evaluation presented in Figure 1 show that *illustration* (ranked first according to the significance) and *demonstration* (ranked second according to the significance) are the most frequently used in the process of teaching economics and entrepreneurship.

Illustration is a teaching method, when various visual aids (slides, posters, drawings, pictures, etc.) are used teaching a topic, which facilitate school learner better understanding and memorisation of the presented essential aspects. *Demonstration* is a teaching method, where real objects or phenomena or their images become a source of teaching.

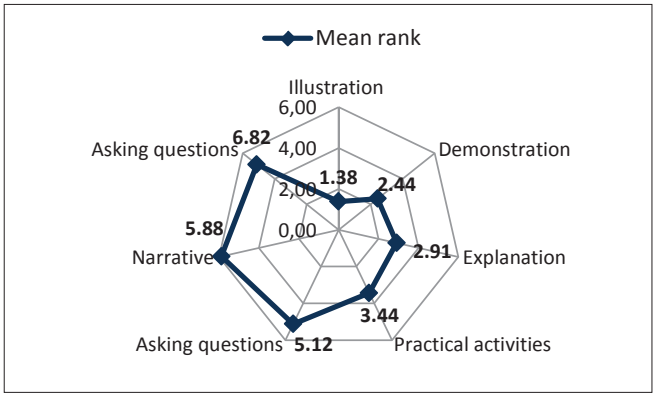

Fig. 1. The significance of teaching methods: teachers' evaluation

As it can be seen from the data in Fig. 1, *retelling* (ranked seventh) and *narrative* (ranked sixth) are least frequently used methods. *Retelling* is reproduction of acquired knowledge of economics and entrepreneurship and its consistent presentation. This is one

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of the most popular methods, which facilitates development of school learner memory, logical thinking and consolidation of what has been learnt. However, the generalised data of evaluations of teachers and learners presented in Fig. 1 and Fig. 2 show that this method is least efficient in the process of teaching economics and entrepreneurship education. *Narrative* is a consistent conveyance of newest knowledge related to economics and entrepreneurship in the process of teaching generalising and systemising the knowledge already accumulated by learners. Thus, narrative, which is not seen by teachers as most frequently applied, is ranked the second most significant method by the school learners (see: Fig. 1 and Fig. 2).

The generalised data of school learner evaluation presented in Fig. 2 show that the most efficient teaching methods are: *explanation* (ranked first according to significance), *narrative* (ranked second according to significance) and *illustration* (ranked third), *practical activities* and *retelling* are perceived as slightly less efficient.

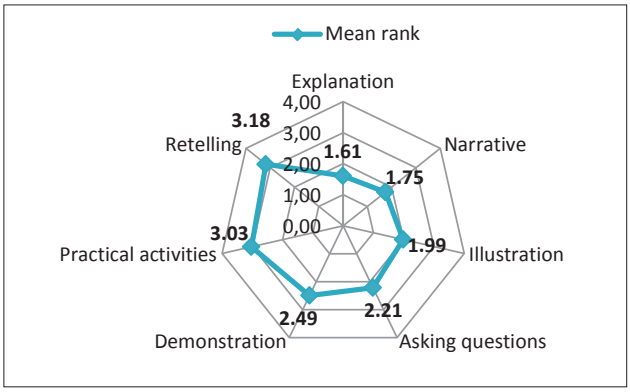

Fig. 2. The significance of teaching methods: school learners' evaluation

Following the data of school learner presented in Figure 2, it can be stated that *explanation* is the most significant method out of 7 methods evaluated by school learners. This method is most frequently based on presentation of new information and ideas to school learners. The aim of this method is to deepen school learners' understanding, grounding new knowledge on the old and previously learnt material, explaining the main concepts, laws, phenomena and their interrelations, etc.

As it can be seen from the data presented in Fig. 3, the efficiency of *cooperative teaching/learning*, which embraces *learning in groups* and *team learning* as well as *reciprocal teaching-learning (teaching of others, peer learning)* is acknowledged by the majority of teachers.

The results of the conducted nonparametric statistical test ($\chi^2 = 139.326$; $df = 11$; $p = 0.000$; $W = 0.745$) reveal that opinions compatibility of 17 teachers evaluating the significance of the universal teaching methods is good according to the chosen level of significance ($\alpha = 0.05$).

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Cooperative learning is an efficient teaching-learning method, when communication and collaboration that occur between the educator and learners during the social interaction encourage to build up and transform knowledge, to create concepts and to develop abilities, which can be adapted in various situations (Arends, 1998; Bennett, Rolheiser-Bennett, & Stevahn, 2000; Teresevičienė & Gedvilienė, 2003; Sahlberg, 2004; Petty, 2007, 2008; Strazdienė & Geležinienė, 2008; Jovaiša, 2011; Ruskovaara & Pihkala, 2013, 2015; Jakubavičius, Strazdienė, Vilys, Burinskienė, Žemaitis, & Pipirienė, 2014; Martin, Kolomitro, & Lam, 2014). Cooperative learning provides a teacher with a possibility of enhancing activity of many learners, to observe their learning, social behaviour and to help them, if necessary.

Learning in groups, which was ranked the second according the significance, is a teaching-learning method, when a teacher leads the activity in a meaningful way. Such learning enables learners to actively involved in discussions, to share obtained knowledge, to express own ideas and suggestions, to search for the best and common solution to a problem or assignment (Bennett, Rolheiser-Bennett, & Stevahn, 2000; Teresevičienė & Gedvilienė, 2003; Sahlberg, 2004; Gillies, 2006; Petty, 2007; 2008; Nussbaum, Alvarez, McFarlane, Gomez, Claro, & Radovic, 2009 and others). This contributes not only to better understanding and processing of information, to perform assignments and to improve teaching-learning outcomes but also build up independence, self-confidence, logical thinking, a positive attitude to entrepreneurship, communication, collaboration, initiative, creativity, decision-making and other social abilities (Jakubavičiuset al., 2014).

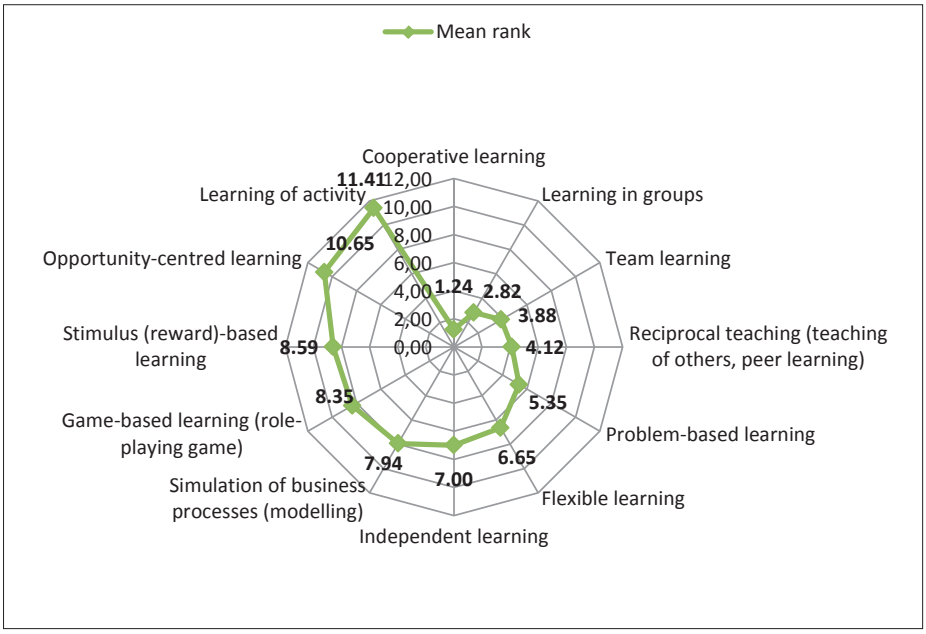

Fig. 3. The significance of universal teaching-learning methods: teachers' evaluation

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According to the teachers, *team learning* (ranked third according to the significance) is an efficient teaching-learning method, which is applied solving various problems that aim to facilitate thinking of team members and their joint activities (Senge, 2008; Martin, Kolomitro, & Lam, 2014).

Reciprocal teaching-learning (teaching of others, peer learning) is also efficient and it is ranked fourth. This is learning, when school learners working in peers or in small groups, share or exchange knowledge and experience, present material related to development of entrepreneurship education, own ideas, business plans, projects and others to each other (Bitinas, 2011, p. 49; Jovaiša, 2011).

The obtained data revealed that *learning of activity* and *opportunity-centred learning* are less frequently used by teachers in the process of teaching economics and entrepreneurship education (see: Fig. 3). Using *learning of activity* methods based on practical activities are applied in the process (Rasmussen, Moberg, & Revsbech, 2015). "Learning of activity presents a practical way of personal improvement, when activity is taken up and participants learn from it while investigating problems" (Strazdienė & Geležinienė, 2008, p. 106). *Opportunity-centred learning* embraces creation of innovative ideas based on the possessed experience, evaluation of real situation and own abilities. In the process of opportunity-centred teaching-learning, which is closely related to experiential learning, learners get familiar with the world as rich environment, where exploration challenges regularly emerge and an opportunity of choice appears (Rasmussen & Sørheim, 2006; Jakubavičius et al., 2014).

As it can be seen from Fig. 4, the school learners see independent learning as one of most efficient methods for consolidation and deepening of learners' theoretical knowledge and entrepreneurship education. Independent learning includes completion of assignments without direct assistance from a teacher (Petty, 2007; Bitinas, 2011, p. 56; Bitinas, 2013, p. 359). This is school learners' independent work with textbooks or other information sources, which targets at selection and understanding of essential issues. The search for various information sources on the issues of economics and entrepreneurship, their analysis, generalisation, selection of essential information and its processing are carried out by learners').

Cooperative learning, ranked second according to themselves. Independent learning contributes to enhancement of school learners' motivation for teaching-learning, develops ability of learning to learn and a sense of responsibility, etc. (Petty, 2007, pp. 417–423) significance, and *flexible learning*, ranked third, are acknowledged as efficient methods for entrepreneurship education (see: Fig. 4). Successful cooperative learning enhances school learners' self-esteem, self-confidence and contributes to development of independence. Collaborating, discussing, arguing, debating and asking each other questions, school learners develop cognitive skills (Sahlberg, 2004, p. 18).

Flexible learning is understood as learning, "which aims at development of an ability to change fast, to adapt to new conditions and new economic, social reality" (Bitinas, 2013, p. 351).

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Game-based learning (role-playing game) focuses on abilities to apply possessed knowledge in a real situation. This embraces analysis and generalisation of a specific situation or individual experience seeking to highlight essential aspects or their interrelations. Such games are organised applying other methods of active teaching-learning. They encourage collaboration, motivation, innovation and creativity, contributes to consolidation and development of theoretical knowledge, to acquire new practical and problem-solving abilities, etc. (Petty, 2007, p. 296; Martin, Kolomitro, & Lam, 2014, p. 25). However, following the school learners' evaluation, game-based learning is referred to as rarely applied method for entrepreneurship education (see: Fig. 4).

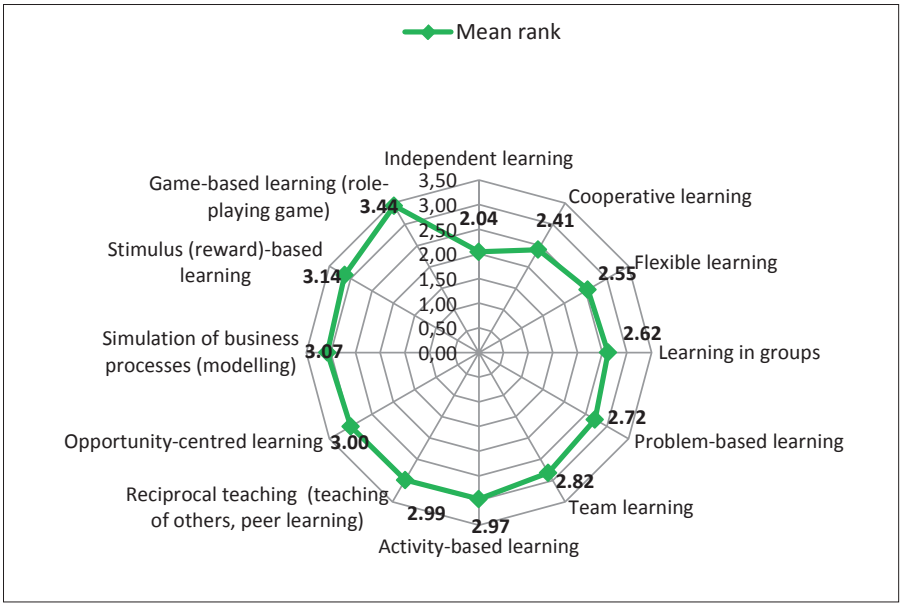

Fig. 4. The significance of universal teaching-learning methods: school learners' evaluation

Having conducted the research, it was established that teachers apply the following active teaching-learning methods in the process of entrepreneurship education most often: *discussion, solving of practical business problems, presentation and. Method of evaporating conflict cloud, method of storyboard, method of logical branch* are used least frequently *consulting*(see: Fig. 5).

The results of the conducted nonparametric statistical test (χ^2 = 251.912; df = 16; p = 0.000; W = 0.926) reveal that opinions compatibility of 17 teachers evaluating the significance of the active teaching-learning methods is very good according to the chosen level of significance (α = 0.05).

The data of significance evaluation of active teaching-learning methods, which are presented in Fig. 5 and Fig. 6, reveal that *discussion* is considered to be most significant

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out of 17 methods evaluated by teachers and learners. This is a method applied on fragmented basis, when following the curriculum of economics and entrepreneurship education, learners exchange information and share their experience analysing a certain topic or problem. Taking an active participation in discussions, they develop self-confidence, critical thinking, ethical principles of communication and collaboration, ability to provide arguments, to assume responsibility for own actions (Petty, 2007; Bennett, 2006; Nussbaum et al., 2009; Mwasalwiba, 2010; Ammerman, Gaweł, Pietrzykowski, Rauktienė, & Williamson, 2012; Harkemaa & Popescub, 2015).

Such active teaching-learning methods as *presentation* and *consulting* are ranked third and fourth respectively according to their significance (see: Fig. 5).

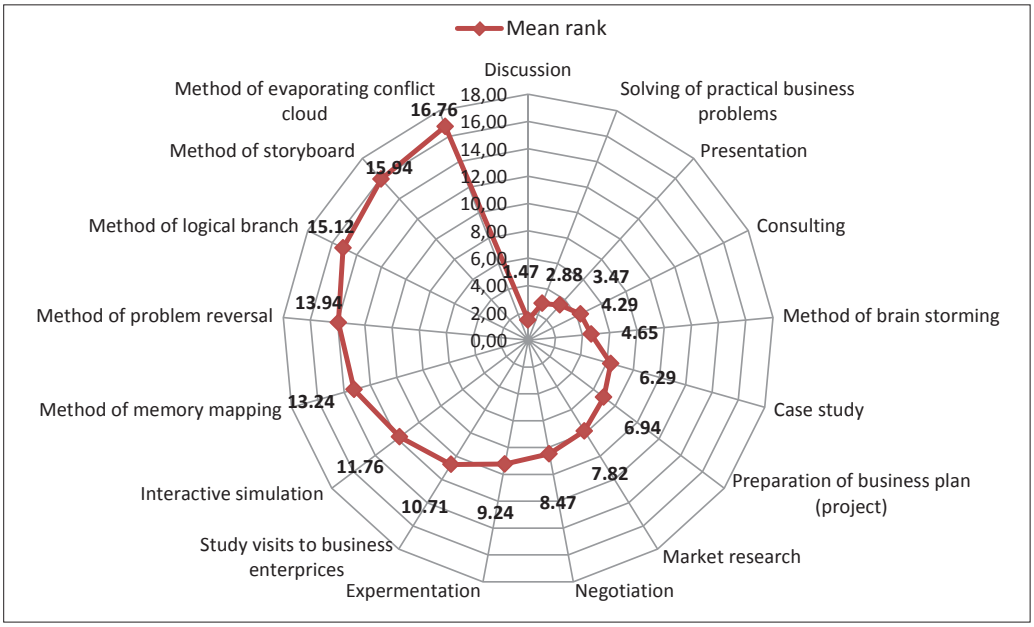

Fig. 5. The significance of active teaching-learning methods: teachers' evaluation

Solving of practical business problems, which includes completion of assignments prepared by the teacher seeking to consolidate economic knowledge and develop entrepreneurship skills, is regarded as the second most significant method by the teachers (see: Fig. 5) and as the third one by the school learners (see: Fig. 6).

Two methods of active teaching-learning methods – *presentation* and *consulting* – are evaluated equally by the teachers (ranked 3rd – 4th according to their significance) (see: Fig. 5).

Presentation is a public demonstration of school learners ideas, works, projects and other assignments, when school learners not only have an opportunity to show the obtained knowledge but also to demonstrate subject-specific and general abilities to analyse

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scientific literature, to solve problems, to think in a critical and logical way, to publicly speak and to use interactive aids, etc. (Petty, 2007, p. 274, p. 310; Lazarev, 2011).

According to the school learners' evaluation, *consulting* is ranked as the second most significant method (see: Fig. 6). It is most frequently defined as oral or written information or advice regarding business establishment, project development and others provided by teachers, business representatives (mentors) under request of school learners (Martin, Kolomitro & Lam, 2014; Melnikas, Jakubavičius, Strazdas, Chlivickas, Lobanova, & Stankevičienė, 2014, p. 4).

As it can be seen from the data of teachers presented in Fig. 5, *method of brainstorming* is acknowledged as an efficient method. This is a method of business idea generation aimed to creation of alternative solutions to problems, to enhancement of initiative, creative and analytical thinking (Petty, 2007; Jakobsen & Rebsdorf, 2008, p. 89; Melnikas et al., 2014, pp. 203–204).

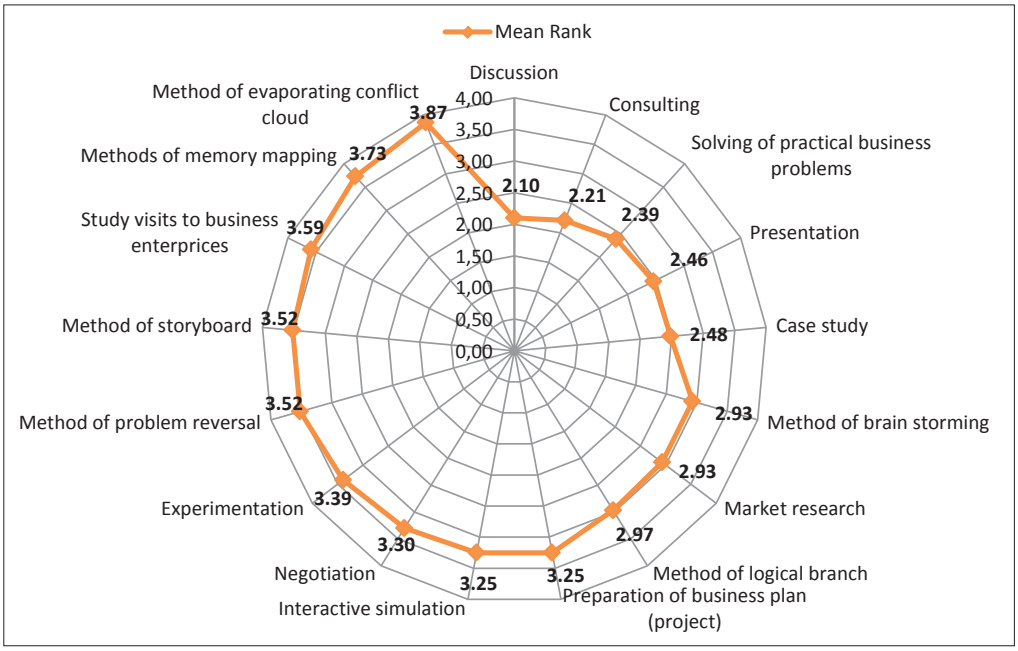

Fig. 6. The significance of active teaching-learning methods: school learners' evaluation

The school learners' evaluations reveal that *case study* (ranked 5th) is an efficient method at school. Case study is a method of teaching-learning, which focuses on abilities to apply the acquired knowledge in a real situation. This is an analysis and generalisation of a specific social, economic phenomenon, situation or problem, seeking to highlight the essential aspects and their interrelations. Case study is conducted applying other methods of active teaching-learning methods (situation analysis, group discussions, etc.). It

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promotes school learners' collaboration, develops initiative and creativity, contributes to consolidation and development of theoretical knowledge, to acquisition of new abilities to practically solve problems (Dixit, 2005; Rasmussen & Sørheim, 2006; Bennett, 2006; Ammermanet al., 2012; Yin, 2013; Martin, Kolomitro, & Lam, 2014; Jakubavičius et al., 2014; Harkemaa & Popescub, 2015).

The data on indirect evaluation of significance of active teaching-learning methods presented in Fig. 5 and Fig. 6 reveal that *method of evaporating conflict cloud* is the least significant method, though it can be applied solving internal, interpersonal or group conflict, after wishes of conflicting parties were clarified and the common goal, which unities their needs, was identified, (Goldratt, 1990; Mabin, 1999).

Method of storyboard is a widely appliedmethod for business idea generation, creativity promotion and problem solving (Melnikas et al., 2014, pp. 210–211), which is rarely used in the process of entrepreneurship education.

Methods of logical branch is a method based on cause-effect logic, which is applied analysing business processes or specific problems of business and helps school learners to foresee positive or negative consequences (Goldratt, 1990; Mabin, 1999). However, this method is also assigned to rarely applied teaching-learning methods by teachers.

The school learners' data presented in Fig. 6 shows that the teachers apply *method of memory mapping* and *study visits to business enterprises* least frequently out of all the 17 methods submitted for evaluation.

Method of memory mapping is a method for group work, strategic analysis, solving of marketing (demand and supply of goods, increase of competitiveness) and other problems, which creates conditions for exhaustive causal analysis (Petty, 2007; Melnikas et al., 2014, pp. 213–215).

Study visits to business enterprises is an efficient method of entrepreneurship education, which provides school learners with an opportunity not only to familiarise with activities of a specific local or foreign company, influence of processes occurring in the business world on decisions made in a company but also to carry out certain assignments and practically apply and consolidate possessed knowledge and abilities (*Building Entrepreneurial Mindsets and Skills in the EU,* 2012; Ruskovaara & Pihkala, 2013; Jakubavičius et al., 2014, p. 30); however, the results of indirect evaluation received from the generalised data of the results of learners' questionnaire survey (see: Fig. 6) show that in schools of general education such a method is rarely applied in entrepreneurship education.

Generalisation

The analysis of scientific sources shows that entrepreneurship education is not only conveyance of knowledge and development of abilities. This is a complex process, where it is necessary to be able to model various teaching-learning strategies, to apply various

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teaching/learning methods and techniques, which would allow to achieve efficient results. The efficiency in the process of education is determined as an effect of applied programmes and methods, which is evaluated considering whether the goals of educational programmes as well as taking into concern influence on learners, which is identified measuring the level of their achieved learning outcomes.

Applying the method of indirect evaluation, the evaluation of significance of teaching-learning methods was conducted and their efficiency for development of school learners' entrepreneurship was established. The level of compatibility of teacher evaluation was established choosing the Kendall's coefficient of concordance (*W*), which is calculated ranking the assessed criteria. The results of the conducted nonparametricstatistical test and the calculated values of the Kendall's concordance coefficient *W* (0.843; 0.745; 0.926) show that the opinions compatibility of teachers' evaluations is good and very good. It was established that the highest opinions compatibility was observed among evaluations of the significance of active teaching-learning methods. The analysis of the data of the school learners survey show the mean rank of all the criteria submitted for evaluation.

The data on evaluation of significance of passive (traditional) teaching methods show that *illustration* and *demonstration*. *Retelling* and *narrative* are least frequently used methods by teachers. According to school learners' evaluation, the most efficient methods include *explanation, narrative* and *illustration.* It was established that *explanation* is the most efficient method out of 7 ones evaluated by school learners. The comparison of the data on evaluations of teachers and learners, obtained applying the method of indirect evaluation shows that in both cases the evaluation of *retelling* coincides.

The research results show that efficiency of *cooperative teaching-learning*, which includes *learning in groups* and *team learning, reciprocal learning (teaching of others, peer learning)* were acknowledged by the majority of teachers. It was established that *learning of activity* and *opportunity-centred learning* are least often used in the process of entrepreneurship education.The school learners' stated that *independent learning* is one of the most efficient teaching-learning methods for consolidation and deepening of theoretical knowledge and development of entrepreneurship. *Cooperative learning* is ranked the second most significant method and *flexible learning* is ranked the third most relevant one, which both are also acknowledged as efficient methods of entrepreneurship education by school learners. Though *game-based learning (role-playing game)* focuses on abilities to apply possessed knowledge in a real situation, such learning is pointed out as a method least frequently applied in entrepreneurship education.

The results show that *discussion, solving of practical business problems, presentation and consulting* are the most frequent active teaching-learning methods used by teachers, whereas *method of evaporating conflict cloud, method of storyboard, method of logical branch* are rarest among active methods. The data on evaluation of significance of active teaching-learning methods show that *discussion* is the most efficient method out of all the methods evaluated by teachers and learners. *Solving of practical business problems* is the second most significant

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method and *presentation* is in the third place according to the teachers. According to the learners, *consulting* is in the second place according to its significance. The comparison of the data of evaluations of teachers and school learners, which was conducted applying the method of indirect evaluation, revealed that in both cases evaluations coincide, i.e. *method of evaporating conflict cloud*, which is the least significant method.

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Mokymo ir mokymosi metodų veiksmingumas mokinių verslumui ugdyti

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Santrauka

Kaip rodo mokslinių šaltinių analizė, nėra vienodos mokslininkų, praktikų ir ekspertų nuomonės, kokie mokymo(si) metodai yra veiksmingiausi ugdant verslumą. Nėra ir universalaus kriterijaus verslumo ugdymo metodų veiksmingumui įvertinti.

Remiantis Lietuvos gimnazijų mokytojų, rengiančių mokinius pagal *Ekonomikos ir verslumo programą*, ir *22-osios Lietuvos mokinių ekonomikos ir verslo olimpiados* dalyvių anketinės apklausos duomenimis, siekta kiekybiškai įvertinti mokymo(si) metodų veiksmingumą mokinių verslumo ugdymui. Taikant netiesioginio vertinimo (rangavimo) metodą atliktas mokymo(si) metodų reikšmingumo vertinimas bei nustatytas jų veiksmingumas mokinių verslumo ugdymui. Statistinio testo rezultatai ir Kendalo konkordancijos koeficiento *W* reikšmės (0,843; 0,745; 0,926) rodo, kad mokytojų vertinimų suderinamumas yra geras arba labai geras. Didžiausias yra aktyvaus mokymo(si) metodų reikšmingumo vertinimo suderinamumas. Atlikta mokinių anketinės apklausos duomenų analizė rodo visų vertinamų kriterijų vidutinį rangą (angl. *Mean Rank*).

Mokytojų vertinimu, iš pasyvaus mokymo (tradicinių) metodų veiksmingiausi metodai – *iliustravimas* ir *demonstravimas*, mažiausiai veiksmingi – *atpasakojimas* ir *pasakojimas*. Mokinių vertinimu, veiksmingiausias – *aiškinimas*, mažiausiai veiksmingi – *atpasakojimas* ir *pratybos*. Palyginus mokytojų ir mokinių vertinimų duomenis, abiem atvejais vertinimai sutampa – *atpasakojimas* – mažiausiai veiksmingas metodas verslumo ugdymo procese.

Mokymo(si) bendradarbiaujant, apimančio *mokymąsi grupėse*, *komandinį mokymąsi ir abipusį mokymąsi (kitų mokymą, mokymąsi iš kitų)*, veiksmingumą pripažįsta dauguma mokytojų. Nustatyta, kad iš universalių mokymo(si) būdų, mokytojų rečiausiai taikomas *veiklos mokymasis*, ir į *galimybių paieškas nukreiptas mokymasis*. Mokinių vertinimu, veiksmingiausias mokymo(si) būdas – *savarankiškas mokymasis*, mažiausiai veiksmingas – *žaidimais pagrįstas mokymasis (vaidmenų žaidimai)*.

Mokytojų veiksmingais įvardyti šie aktyvaus mokymo(si) metodai: *diskusija, praktinių verslo uždavinių sprendimas, pristatymas (prezentacija) ir konsultavimas(is),* rečiausiai taikomi ir mažiausiai veiksmingi – *išsisklaidančio konflikto debesies, siužeto lentos* ir *loginės pasekmių šakos metodai*. Taigi mokytojų ir mokinių vertinimai sutampa – iš visų vertintų metodų veiksmingiausia yra *diskusija*, mažiausiai veiksmingas – *išsisklaidančio konflikto debesies metodas*.

Esminiai žodžiai: *mokymo metodas, mokymo(si) metodas, pasyvaus mokymo (tradiciniai) metodai, aktyvaus mokymo(si) (inovatyvūs) metodai, veiksmingumas, verslumo ugdymas.*

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