



SHEET OF A MODEL OF THE THIRD PROCESS OF DEVELOPING TRANSVERSAL SKILLS AS PART OF PRACTICAL TRAINING

I.	No. of intellectual work result	O5	II.	Testing period	01 March 2017- 30 June2017
III.	Partner conducting testing		UM FEB		

1. Process presentation

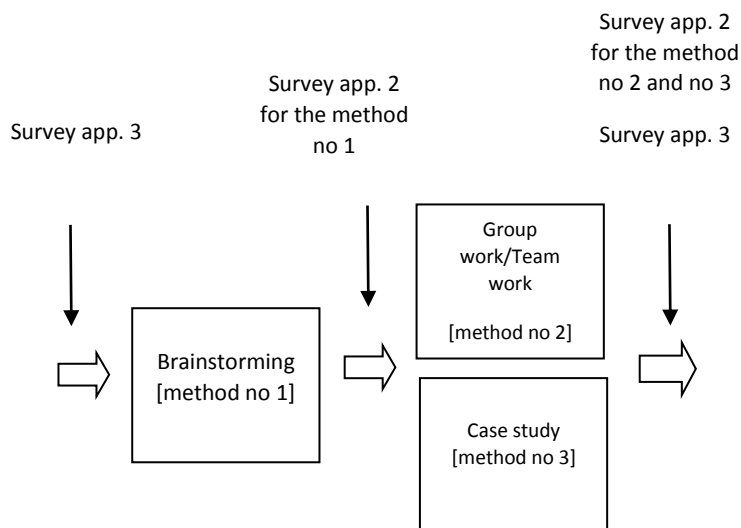


Figure 1. Application of the practical training methods in designed process

Table 1. Selection of the practical training methods for designing process based on the matrix of the dependencies between practical teaching methods and an increase in students transversal competences.

No the method in the process	Name of practical teaching method	Quartile	Rank of the method in matrix	Entrepreneurship	Creativity	Communicativeness	Teamwork	Group of methods	Impact of the method on 4 transversal competences
1.	Brainstorming	I	3	0.97	1.25	0.96	0.94	Problem-solving methods	4.11
2.	Teamwork	I	15	0.65	0.68	1.02	1.26	Problem-solving methods / Activating methods	3.60
3.	Case study	II	24	1.03	1.00	0.60	0.82	Problem-solving methods / Activating methods	3.44



2. Analysis of the ways of using practical teaching methods selected for the process of developing transversal skills

Methods	Analysis
<p>Brainstorming</p>	<p>1) One of the practical teaching methods selected for the testing process of developing transversal skills is brainstorming. Brainstorming (Business Dictionary, 217) is a process for generating creative ideas and solutions through intensive and freewheeling group discussion. Every participant is encouraged to think aloud and suggest as many ideas as possible, no matter seemingly how outlandish or bizarre. Analysis, discussion, or criticism of the aired ideas is allowed only when the brainstorming session is over and evaluation session begins. Brainstorming (MindTools, 2017) combines an informal approach to problem solving with lateral thinking. It encourages people to create thoughts and ideas that can, at first, seem fuzzy (out of their normal ways of thinking). Some of them can be crafted into new, creative solutions, while others can spark even more ideas. During brainstorming sessions, people should avoid criticizing or rewarding ideas. This opens up possibilities and breaks down incorrect assumptions about the problem's limits. Judgment and analysis at this stage stunts idea generation and limit creativity. Ideas are evaluating at the end of the session. Brainstorming provides a free and open environment that encourages everyone to participate. When used during problem solving, brainstorming brings team members' diverse experience into play. It increases the richness of ideas explored, which means better solutions to the problems. Brainstorming helps team members bond, as they solve problems in a positive, rewarding environment. While brainstorming can be effective, it is important to approach it with an open mind and a spirit of non-judgment. If participants do not do this, the number and quality of ideas plummets, and morale can suffer.</p> <p>In Slovenia, at University of Maribor, Faculty of economics and business (UM FEB), faculty teachers use usually the Alex Faickney Osborn (Osborn, 1953 and later) brainstorming, with some modifications. This extraordinary means of creative thinking is according to UM FEB former Full Prof. Dr. Janko Kralj carried out as follows (Kralj, 1995, p. 378, supplemented with the last bullet point):</p> <ul style="list-style-type: none"> • Participants take part in small groups (5–12 people), they are separate from the other, and no one bothers them. They must be well informed about the problem and "warm up" to solve the problem. • In the first part of creative thinking, which lasts 20 minutes, they collected ideas: Each participant says what he remembers; he may also present unusual ideas. Criticism or mockeries are not allowed, the authorship is ignored. Ideas are complementary and transparent recorded. • The next 20 minutes are dedicated to maturing. Each participant is considering about the collected ideas. • Then participants are governing ideas: Unusual ideas they transform into useful or discarded them; they combine the ideas and prepare a table of ideas; they seek priority ideas. • The next step is to criticize priority ideas and other ideas in the role of devil's advocate. With extremely sceptical views on the proposals is necessary to promote critical thinking. This is a reversal brainstorming: how an idea fails. In this way remain just good ideas that are worthy of further study. • Good ideas that remain participants need to combine and improve them: As suggested by the slogan "1+1=3" they need to find a synergy among them. For latter some faculty teachers (e.g. Assist. Prof. Dr. Tjaša Štrukelj) encourage participants to combine the brainstorming method with the Mulej's (1974 and later; Mulej et al., 2000; 2013) Dialectical Systems Theory, which refers to synergy, interdependency and holistic approach.



Brainstorming solution findings with a systemic approach were at the Faculty of Economics and Business encouraged e.g. with of the workshop of Kovačič (2015), to develop the skills of systems thinking. We used gamification, which is becoming a modern approach to solving specific business challenge. Gamification element has represented rewarding. Participants were evaluated according to the principle: the more ideas – the higher the score. The participants in the first phase focused on the addressing of all, in their view, essential viewpoints of a given challenge. Of all the viewpoints identified, they choose a few significant for them. In the second phase, the participants focused their attention on the dealing with all significant relationships (linkages) between the selected viewpoints. In the end of this phase, they also among the identified relationships selected a few significant for them. This was followed by the third phase, when the participants for the selected significant viewpoints and significant relationships (linkages) between them looked for the synergy effects – wrote a single most important statement that could represented an important development opportunity for the enterprise (as an answer to a specific business challenge that was solving). In the context of gamification, the participants received a request from the Director. In their solution, they had to highlight how the enterprise will be able to comply with the request of the key value of corporate social responsibility – 0% waste in the production in 2020. Director has requested products, which will be sustainable and developmental solutions that will support social responsibility. By raising awareness of the need for systemic thinking, we get more holistic solutions that included all and only the essential viewpoints, the significant relationships (linkages) between them and synergistic effects.

Brainstorming method is at the University of Maribor, Faculty of economics and business (UM FEB) used especially at both first- and second-cycle levels of full-time and part-time courses. As an example of using diverse practical teaching methods (also brainstorming) in practical classes in a business subject UM FEB (Belak et al., 2016, pp. 78–79, supplemented), we describe the course 'Enterprise Policy and Strategic Management' at UM FEB. The course is delivered to the students of last (third) year of professional undergraduate study programme. We describe this example from the personal experiences viewpoint. Usually, the practical teaching process in this subject starts with an empowering example with the aim to develop appropriate values, culture and ethics among students. In this subject, students learn how to make decisions as owners/governors and/or top managers of an enterprise or other organisation. To teach responsible values, appropriate culture and ethical attitudes, the teacher and the students first discuss their values, culture and ethics through stories with a moral lesson. A moral precept and the importance of moral behaviour for every person in the world are discussed. This is followed by a revision of essential theoretical starting points that are needed for work in the each time specific teaching process subject together with examples from practice. At this stage 15–20 minutes are devoted to brainstorming method, with students delivering ideas of practice examples associated with this specific teaching process subject. During the teaching process, students learn how to choose a large amount of cases, even bizarre ones, and their ideas complement other students. The teacher directs students to connect practical examples provided by students with content of the course. At the end of this process, presented examples are critically assessed and highlighted the particularly useful examples. In this way, students learn to integrate theory with practice. After that, the students are divided into an even number of groups and they receive their tasks. Each of the two groups that form a pair has the same task, but this task is different from the task of other 'two group pairs'. Therefore, students usually solve two or three different tasks (problems of two or three different enterprises). This, of course, depends on the number of groups (e.g. 4 groups – 2 tasks; 6 groups – 3 tasks). After they confirm that they understand their tasks, students use teamwork method to solve these tasks. When the time allocated for teamwork ends, students report their solutions to their colleagues. Since one of the aims of the subject 'Enterprise Policy and Strategic Management' is for students learn how to make decisions as enterprise owners or



	<p>top managers, the solution of each group solving the same task may be different although both can be correct. A higher mark is given to the group, which gives a correct solution (i.e. the solution based on correct theoretical backgrounds transferred to a concrete example / task at hand), which must also be well justified (i.e. the students present better arguments). Therefore, the students develop a group discussion about the solution found, which is better also because of using brainstorming method at the beginning of the tutorials.</p>
	<p>2) According to our further analysis there are several possible ways in which further stages of using brainstorming at University of Maribor, Faculty of economics and business (UM FEB) should/could be conducted so that an increase in transversal competences, including skills making up these competences, could happen as quickly as possible.</p> <p>UM FEB retired Full Prof. Dr. Štefan Ivanko suggests solo brainstorming (Ivanko, 1996, p. 71), 6–3–5 brainwriting (also 635 Method, Method 635) (ibid., p. 71), and brainwriting pool (ibid., p. 73). Clarification:</p> <ul style="list-style-type: none"> • Solo brainstorming (Ivanko, 1996 p. 71) uses individual person at himself. One relaxed and confidently produce ideas which he latter evaluate. In doing so the group processes do not apply. Several studies have shown (MindTools, 2017) that individual brainstorming produces more – and often better – ideas than group brainstorming. This can occur because groups are not always strict in following the rules of brainstorming. Mostly, though, this happens because people pay so much attention to other people that they do not generate ideas of their own – or they forget these ideas while they wait for their turn to speak. This is called "blocking". When you brainstorm on your own, you do not have to worry about other people's egos or opinions, and you can be freer and more creative. However, you may not develop ideas as fully when you are on your own, because you do not have the wider experience of other group members to draw on. In group brainstorming you can take advantage of the full experience and creativity of all team members. When one member is stuck with an idea, another member's creativity and experience can take the idea to the next stage. Participants can develop ideas in greater depth with group brainstorming than individual person can with individual brainstorming. • 6–3–5 Brainwriting (or 635 Method, Method 635) is a group-structured brainstorming technique (McNicholas, 2011) aimed at aiding innovation processes by stimulating creativity developed by Bernd Rohrbach (Rohrbach, 1968). In brief, it consists of 6 participants supervised by a moderator who are required to write down 3 ideas on a specific worksheet within 5 minutes; this is also the etymology of the methodology's name. The outcome after 6 rounds, during which participants swap their worksheets passing them on to the team member sitting at their right, is 108 ideas generated in 30 minutes. The technique is applied in various sectors but mainly in business, marketing, design, writing as well as everyday real life situations (McNicholas, 2011). On each worksheet that participants receive (Ivanko, 1996, p. 72), they must attribute three ideas. Prior to this, they should read already written ideas and try new ideas associated with them, transform them or used otherwise. • The brainwriting pool is a brainwave technique, which is also a group brainstorming. It was first described by Helmut Schlicksupp (1943–2010) in 1975 as creative ideas for enterprises (Schlicksupp, 1975). This technique of creative co-operation (Ivanko, 1996, p. 73) is similar to the method 635, but participants do not need the ideas, written on the worksheet, give forward in a certain order. Participants are seated at the table. In the middle of the table is a bunch of worksheets, which may be empty or they could have written a few ideas. This bunch of worksheets is called "pool". When a participant on a worksheet records his ideas, deposit it in the middle of the table. At the same time, he takes a new worksheet in which another participant has already written a few ideas; these ideas he has to read and try to add new ones. When using the worksheet he has no more ideas, he returns it to the middle of the table and takes a new one. Participants repeat this until they can produce ideas.



	<p>Evaluation of ideas follows later. When evaluating all ideas can be classified into three groups: (1) the useful; (2) could be useful, but need to be further developed; and (3) unusable. Ideas can also be grouped according to their similarity; we can then make the evaluation within each group. In assessing the value of ideas, we must take into account the realization that the most popular ideas are usually not the best. The most creative ideas because of their originality, strangeness or shocking effect usually do not attract other participants.</p> <p>You often get the best results by combining individual and group brainstorming (MindTools, 2017).</p>
	<p>3) In this section, we will describe the way in which brainstorming method will be used in the testing process, which is described in the present document (compatibility of the description with the point 2 is ensured).</p> <p>The method will be used as a part of the subject “Management of small and medium-sized enterprises” in a group of first-cycle students at the University of Maribor, Faculty of economics and business (UM FEB), full-time studies, 6th semester, elective subject for all students of the program (the subject taught during 30 hrs. of lectures and 30 hrs. of tutorials).</p> <p>Two meetings are planned (weeklong interval between meetings is recommended).</p> <p>Meeting 1 (90 minutes):</p> <ul style="list-style-type: none"> • Step 1: Introducing students with the content of the Erasmus+ project “The acceleration method of development of transversal competences in the students’ practical training process” (10 minutes). • Step 2: Introducing students with the competencies to be developed in the process (entrepreneurial skills, communicativeness, creativity and teamwork skills) (10 minutes). • Step 3: Introducing students with the testing process of developing transversal skills as part of practical training (including the planned implementation – on which meetings and how long will be the performance of this process carried out) (15 minutes). • Step 4: Implementation of the survey “Questionnaire for assessment of the evaluation of transversal skills level of the students in practical teaching process (the level of possessed skills)” (app. 3 of instructions, part one) (10 minutes). • Step 5: Lecture on the topic Success factors in the start-up and development of the enterprise (this is the theme of the subject “Management of small and medium-sized enterprises”). At the end of the lecture, the lecturer should explicitly explain students, that their results of Meeting 2 work will be better if they will be theoretically prepared (if they will know the theory) (45 minutes). <p>Meeting 2 (2 hours and 30 minutes; plus 5–10 minutes pre-class preparation and 15 minutes pause):</p> <ul style="list-style-type: none"> • Step 1: Pre-class preparing a comfortable meeting environment and resources needed (post-it notes, colour sheets and pens of different colours, flip chart or whiteboard) (5–10 minutes). • Step 2: Introducing students with the brainstorming method to be applied (general rules, application) and criteria we must meet. The teacher must explain which competence’s abilities will be especially developed, when applying the method brainstorming. For the competence entrepreneurship, e.g. ability to invoke and accept changes and ability to create new unique solutions. For the competence creativity, e.g. ability to create original and useful solutions to problems. For the competence teamwork, e.g. ability to become active and engaged in tasks. For the competence communicativeness, e.g. ability to express and defend one’s own opinion (25 minutes). • Step 3: Introducing students with the inclusion of an entrepreneur from practice.



	<p>With entrepreneur, we will solve the problem from practice (and an entrepreneur will play an active role during the whole process of brainstorming) (5 minutes).</p> <ul style="list-style-type: none">• Step 4: Entrepreneur's introduction (5 minutes).• Step 5: Introducing students with the problem from practice and "warming up" them: Clearing on the problem to be solved, related to the success factors in the start-up and development of the enterprise. Students have to be well informed about the problem (10 minutes)!• Step 6: Students independently from each other identify the various viewpoints to solve the problem. They have to have enough quiet time to write down as many ideas as they can. The ideas are recorded on the colour sheets; each student has another colour of the sheet; each student on the upper left corner writes "Viewpoints" (3 minutes).• Step 7: Teacher writes the number of collected ideas for each student on the clip chart or whiteboard (2 minutes).• Step 8: Students pass their colour sheet to the student on the left. All students are required to read already written ideas and again independently from each other identify (and write down) the various viewpoints to solve the problem. They should try new ideas associated with already written ideas, transform them or use them otherwise. They have to have enough quiet time to write down as many ideas as they can. The ideas are recorded (version of 6-3-5 brainwriting) (3 minutes).• Step 9: Students get their colour sheet back. They again try to find as many as possible new viewpoints to solve the problem. The idea is maturing. They have to have enough quiet time to write down as many ideas as they can. The ideas are recorded (3 minutes).• Step 10: Teacher writes the number of additional collected ideas for each student on the clip chart or whiteboard. The "winner" is the student with the bigger number of collected ideas (2 minutes).• Step 11: Students independently from each other subjectively identify the 3-5 for them the most important viewpoints to solve the problem (and circle them with another colour) (2 minutes).• Step 12: Students get the second sheet of paper in the same colour. They independently from each other identify the various relationships (linkages) between the selected viewpoints. They have to have enough quiet time to find and write down as many relationships (linkages) as they can. The relationships (linkages) are recorded on the colour sheets; each student on the upper left corner writes "Relationships (linkages)" and below that he records "The selected most important viewpoints: viewpoint 1, viewpoint 2, ..., viewpoint n" (3 minutes).• Step 13: Teacher writes the number of collected relationships (linkages) between the selected viewpoints for each student on the clip chart or whiteboard (2 minutes).• Step 14: Students pass their colour sheet to the student on the right. All students are required to read already written relationships (linkages) and again independently from each other identify the various relationships (linkages) between the viewpoints their colleague has selected as most important to solve the problem. They should try new ideas associated with already written ideas, transform them or use them otherwise. They have to have enough quiet time to write down as many ideas as they can. The ideas are recorded (version of 6-3-5 brainwriting) (3 minutes).• Step 15: Students get their colour sheet back. They again try to find as many as possible relationships (linkages) between the viewpoints to solve the problem. The idea is maturing. They have to have enough quiet time to write down as many relationships (linkages) between the viewpoints as they can. The ideas are recorded (3 minutes).
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	<ul style="list-style-type: none">• Step 16: Teacher writes the number of additional collected relationships (linkages) between the viewpoints for each student on the clip chart or whiteboard. The “winner” is the student with the bigger number of collected relationships (linkages) between the viewpoints they pointed out to solve the problem (2 minutes).• Step 17: Students independently from each other subjectively identify the 3–5 for them the most important relationships (linkages) between the viewpoints, they pointed out to solve the problem (and circle them with another colour) (2 minutes).• Step 18: Students get the third sheet of paper in the same colour. They independently from each other identify the synergies among 3–5 most important circled significant viewpoints and relationships (linkages) between the viewpoints they pointed out to solve the problem. This means that from selected relationships between the selected viewpoints students write a sentence that best exemplifies viewpoints and links between them, which they consider most important for the solution of the problem to be solved; students also write a keyword (keyword phrase), which upon their opinion best describes the problem solution. In such a way, we get their personal solutions to the problem. For example, student selects an idea for the product (described with keyword/keyword phrase), which he would recommend to start producing and selling on the market (taking the success factors in the start-up and development of the enterprise into consideration). This would be his solution of the problem, which he then describes with the selected most important viewpoints and relationships (linkages) detected so far. Student writes very convincingly sentence that describes the product, he would propose to the enterprise. The synergies and keywords (keywords phrases) between viewpoints and relationships (linkages) are recorded on the colour sheets; each student on the upper left corner writes “Synergies”, below that he records “The selected most important viewpoints: viewpoint 1, viewpoint 2, ..., viewpoint n” first, and below that he records “The selected most important relationships (linkages): relationship (linkage) 1, relationship (linkage) 2, ..., relationship (linkage) n” (4 minutes).• Step 19: Students pass their colour sheet, on which writes “Synergies” on the upper left corner, in the middle of the table. This bunch of worksheets is called "pool". Each student takes one colour sheet that is not his and read already written synergies and keywords (keyword phrases). Independently from each other students based on written phrases (synergies) write a keyword (keyword phrase), which in their opinion best describes written synergy. Then they return the colour sheet to the middle of the table and take a new one. Students repeat this until they can produce ideas. They have to have enough quiet time to write down as many keywords (keyword phrases) as they can. The ideas are recorded (version of brainwriting pool technique) (10 minutes).• Step 20: Students take their colour sheet back and independently from each other subjectively identify one keyword (keyword phrase) most important for them to solve the problem (and circle keyword (keyword phrase) with another colour). This may be the keyword (keyword phrase) they have written before, one that another student has written or new one. Students write down the selected keyword (keyword phrase) on the post-it note (3 minutes).• Step 21: Working as a group: Students explain and share their keywords (keyword phrases) to other students and attach post-it notes with their keywords (keyword phrases) on the flip chart or whiteboard, in a line (3 minutes).• Step 22: <u>Pause and idea maturing</u>. Each participant is considering about the collected ideas (viewpoints, significant relationships (linkages), synergies and keyword (keyword phrase)) (15 minutes). <u>The rest of the process could be organised as a Meeting 3</u>; when so, a 10 minute long conclusions – teacher summarising brainstorming process and key points till so far is needed before ending (before pause) and 10 minutes long starting “warm-up” in sense of summarising work so far
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is needed after pause (at the beginning of the Meeting 3).

- Step 23: Group analysis 1: Students are governing ideas under the guidance of teacher: Unusual ideas they transform into useful; they combine the ideas and in such a way seek priority ideas. Group discussion allows building on others ideas, which is perhaps most valuable viewpoint of group brainstorming. Teacher is guiding the discussion and takes care that all students participate. Creativity ideas are welcomed and no criticizing is allowed. New ideas are recorded (also on the post-it notes) (10 minutes).
- Step 24: Group analysis 2: Students criticize priority ideas in the role of devil's advocate. With extremely sceptical views on the proposals is necessary to promote critical thinking. This is a reversal brainstorming: how an idea fails (10 minutes).
- Step 25: Group evaluation: Students evaluate the ideas (that are recorded on the flip chart or on the whiteboard) and to three in their opinion the best allocate points. They distribute points: (3) the most useful idea; (2) the second useful idea; and (1) the third useful idea that still gets points. Each student writes his evaluation on the flip chart or whiteboard. After the evaluation on the flip chart or whiteboard stay 3–5 selected extremely good ideas, which get the highest scores (5 minutes).
- Step 26: Group final solution: Students need to combine and improve 3–5 selected extremely good ideas, which get the highest scores and form a sentence or two representing their final proposal for a solution to the problem, which was solved. As suggested by the slogan "1+1=3" they need to find a synergy among 3–5 selected extremely good ideas. First, they have to find relationships (linkages) between these viewpoints (3–5 selected extremely good ideas, which get the highest scores); next, they have to find a synergy between relationships (linkages) identified. So they find a group solution of the problem (in a sentence or two sentences) on the clip chart or whiteboard. They also select a keyword (keyword phrase) that best describes their group solution. At the end students once more make final check if the theoretical framework supports the solution found (10 minutes).
- Step 27: Conclusion: "When managed well, brainstorming can help you generate radical solutions to problems. It can also encourage people to commit to solutions, because they have provided input and played a role in developing them" (MindTools, 2017). Discussion on the results and summarising the whole process (10 minutes).
- Step 28: Implementation of the survey "Research methodology of the pace of an increase in competences during the implementation of training processes including selected practical teaching methods" (10 minutes).

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Teamwork	<p>1) As Finelli et al. (2011) stated in their research the characteristics of effective student teams have been widely studied, and there is ample research on what makes student teams succeed. Johnson et al. (2007), for example, define five traits of effective student teams, and they note that each one is critical for success. The first trait is positive interdependence: students work together to accomplish a shared learning goal, and each student can achieve his or her learning goal if and only if the other team members achieve theirs. The sense of accomplishment must come from the knowledge that every person on the team succeeded. Second is individual accountability, which suggests that each member should be accountable for his or her learning, and every person must do a fair share of work. This can improve student motivation and improve the overall energy level of the team. The third trait, face-to-face interaction, is crucial for building interpersonal skills, as teams work best when members are physically present to interact with the others on the team. Fourth, team members should learn interpersonal and small-group skills and should use these skills as the team works together. Last, but not least, the team should periodically assess its performance as a team, reflecting on what has been useful or problematic in ensuring effective working relationships and making decisions about what behaviours should continue and which ones should change. The framework of successful teamwork consists of four related components: designing good team assignments, constructing student teams carefully, teaching teamwork skills, and assessing student teams.</p> <p>References: Finelli C. J., Bergom I., Mesa V. (2011). Student teams in the engineering classroom and beyond: setting up students for success. CRLT Occasional Paper No. 29. Johnson, D. W., Johnson, R. T., & Smith, K. A. (2007). The state of cooperative learning in postsecondary and professional settings. <i>Educational Psychology Review</i>, 19(1), 15-29.</p>
	<p>2) Teamwork method is classified as problem-solving method and activating method. Based on the results of analysis of teaching methods and employers' opinions contained in Reports O1, O2 and O3, the teamwork method should be used to develop skills related to creativity, entrepreneurship, communicativeness and teamwork.</p>



When teacher uses the teamwork method in classroom, he/she should follow the framework of successful teamwork process: designing good team assignments, constructing student teams carefully, teaching teamwork skills, and assessing student teams.

Design Good Team Assignments

Well-planned team assignments are crucial to using student teams well. Michaelsen et al. (2004) observe that most problems of poor student behavior during teamwork “are the result of bad assignments, not bad groups”. As with any class assignment, team assignments should have a clear purpose and function and should align with course goals and grading criteria (e.g., Piontek, 2008; Svinicki & McKeachie, 2011), but they also should require individual accountability as well as positive interdependence (Johnson et al. 2007; Michaelsen et al. 2004). Planning a team activity that fits these characteristics requires the instructor to consider the content of the assignment, the academic expectations for the task, the level of preparation required of the students, the way in which the work will be assessed, and the reasons why a team is needed to accomplish the activity. In order to ensure that activities will be suitable for teamwork and that students will have the tools and time to complete the assignment successfully, instructors should consider four components of using student teams successfully also think through practical aspects of having students work in teams (e.g., when teamwork will take place, whether students will have time to report to the class, and how and when feedback will be given to students). The list of suggestions that follows expands on some of the key points for developing good team assignments.

Construct Teams Carefully

Creating student teams that will work well is another critical aspect of using student teams in the classroom. Important considerations in this regard include the number of students per team, the level of diversity on student teams, and whether or not the instructor determines the membership.

Teach Teamwork Skills

The ability of team members to work effectively together can evolve over time as students acquire important skills. The four stages of forming, storming, norming, and performing are commonly used to describe this evolution. Forming is characterized by orientation to the team and dependence on others, while storming is often marked by conflict and resistance to group influence (Hansen, 2006). This resistance is overcome in the norming stage, during which cohesiveness develops, and new roles are adopted. Finally, in the performing stage the team is focused on the task, and “structure can now become supportive of task performance” (Tuckman, 1965). It is important for students to know that their teams are likely to experience conflict as they work together and for instructors to provide students with ways to deal with those conflicts (e.g., Michaelsen et al., 2004; Millis, 2009; Stein & Hurd, 2000).

Assess Student Teams

The fourth component of successful student teams in the classroom involves assessment, both of overall teamwork and of individual contributions. This section provides guidance on evaluating the success of team interactions and using peer evaluation to assess individual contributions.

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	<p>3)The teamwork method will be used in the course "Management of small and medium-sized enterprises" in a group of first-cycle students at the Faculty of Economics and Business, full-time studies, 6th semester (30 hours of lectures and 30 hours of tutorials).</p> <p>The method will be tested and applied in the frame of 2 meetings.</p> <p>During the 1st meeting, the presentation of the method (25 minutes) and construction of the teams (20 minutes) will be carried out. During the presentation of the method the teacher must explain which competence's abilities will be especially developed, when applying the method teamwork. For the competence entrepreneurship, e.g. ability to invoke and accept changes. For the competence creativity, e.g. ability to make use of creative thinking techniques. For the competence teamwork, e.g. ability to build pleasant atmosphere and positive relations and ability to encourage others to achieve a common goal. For the competence communicativeness, e.g. ability to negotiate.</p> <p>During the 2nd meeting the team assignments will be forwarded to the teams in a frame of parallel testing of the case study method (see method no 3). Further, the teaching of teamwork skills will take place in a context of the process of solutions finding and discussion within every team (30 minutes). After discussion within the team, all teams will be faced with the "general" discussion where different teams will introduce their own views concerning the stated problem (45 minutes). The presentation of the results and cognitions will take additional 10 minutes. Further, the assessment and evaluation of teams will be done (10 minutes) as well as the fulfilling of the research questionnaire (app. 2) (10 minutes).</p> <p>To be successfully in use the teamwork method the teacher will follow the framework of successful teamwork process: designing good team assignments, constructing student teams carefully, teaching teamwork skills, and assessing student teams.</p> <p>Construct Teams Carefully (1st meeting)</p> <p><i>Form teams of three to five members</i></p> <p>Smaller teams better facilitate individual accountability and allow for more flexible scheduling when out-of-class activities are required. On the other hand, larger teams have the potential for more resources, ideas, and points of view to be brought to the problem. In general, teams of three to five students work best, with smaller teams recommended for short-term activities or simple tasks and larger teams for long-term, complex activities (Birmingham & McCord, 2004; Johnson et al., 1998c).</p> <p><i>Form heterogeneous teams</i></p> <p>Heterogeneity is an important characteristic for effective teams. Students on heterogeneous teams bring diverse perspectives and problem-solving approaches, but they may require more time and effort to develop strategies to work efficiently as a team (Birmingham & McCord, 2004). The benefits, though, outweigh these issues for long-term teams, and research finds that "although diverse groups typically have more initial difficulties, after forty hours of working together they are typically more effective than homogeneous groups". What types of diversity are good for teams? First, teams that have a broad range of</p>



abilities and problem-solving perspectives among members tend to be more successful than those that are homogeneous in this regard (Brewer & Mendelson, 2003; Heller & Hollabaugh, 1992). Hong and Page (2004) suggest that such functional diversity, or “differences in how people represent problems and how they go about solving them” can be an important attribute of high-performing teams. Other researchers have also demonstrated that working with others of different abilities offers benefits to students at all levels—the more capable students become more aware of their thinking processes, while the less capable student learns from an advanced peer (Oakle et al., 2004; Wankat & Oreovicz, 1993). Teams should be heterogeneous in other respects as well—they should include men and women, as well as majority students and minority students whenever possible (Tonso, 2006). Research suggests that when women or minorities are outnumbered in engineering teams, their team participation can be negatively affected because their opinions may not be considered valid by their teammates, or they may be assigned unimportant tasks (Ingram & Parker, 2002; Michaelsen & Sweet, 2008). Therefore, it is critical that whenever possible, teams be formed in ways that avoid isolating individual women or minorities. This is especially important in introductory courses when students are new to the field and have not yet established support mechanisms like study groups or academic networks.

Use instructor-assigned teams

Team membership can be selected by students, determined randomly, or assigned by the instructor based upon individual student characteristics. Of these three methods, teams chosen by students tend to be the most homogeneous, while instructor-assigned teams that are balanced in terms of race, gender, ability, and problem-solving approach are more likely to be heterogeneous (Oakley et al., 2004). Instructor-assigned teams also offer control over the ways in which resources are distributed among teams and result in a stronger sense of fairness.

Consider practical issues when creating teams

The length of the team project and expectations for meetings outside class should be considered when forming teams, because even the best heterogeneous team is likely to fail if the team cannot find a common meeting time. Thus, when students need to work together outside class, instructors should consider out-of-class availability when forming the teams. One way to do this is to query the students about their schedules and use this information in conjunction with other criteria in forming teams (Oakley et al., 2004).

Design Good Team Assignments (2nd meeting)

Begin with simple, well-defined tasks, then increase their difficulty

Team assignments early in the term should include relatively simple, well-defined tasks that require a specific product so students can concentrate on the mechanics of teamwork (Michaelson & Sweet, 2008). For example, a good first-time task may require teams to collaboratively complete a table of definitions and reflect on their team interaction during the process, allowing the instructor to award points based on how well the students worked together to accomplish the goal. As the term progresses, the instructor should assign more complex and ambiguous tasks that promote higher level thinking skills. (Of course, regardless of complexity, assignments should always be relevant, solvable within a reasonable time frame, and intrinsically interesting.) For example, instead of having students make a list or choose among a few alternatives, students could be asked to “make multiple comparisons and discriminations, analyse content information, and verify rule application” (Michaelse et al., 2004).

Define individual versus team accountability



A common student complaint about team assignments is that unclear instructions about student roles and division of work allow individuals on a team to contribute unequally without penalty, especially if a single assignment is to be submitted by the team. One strategy to overcome these issues is to require students to rotate through well-specified roles (e.g., scribe/note-taker, time-keeper, clarifier, reporter, and manager) during the term to ensure that each student has the opportunity to take on different responsibilities (Hansen, 2006; Stein & Hurd, 2000). Rotating the leadership role has been shown to result in higher levels of cooperation and performance on student teams (Erez et al., 2002) by helping students understand expectations, encouraging individuals to contribute fairly, and enabling students to experience group work as more rewarding and productive (Hansen, 2006; Page & Donelan, 2003). The number and types of roles will depend on the number of people on the team, the length of time the team will be together, and the complexity of the task. In addition, the assignments should define individual versus team accountability (Cooper, 2009) and provide guidance about expected student contributions to the project. Without careful structure, this simple approach to team assignments may result in students completing the task via a divide-and-conquer method. Each team member should participate equally in preparing the class presentation, and one member of the team will be chosen randomly to make the presentation. The team will be graded on both the written report and the presentation, and individual scores will be adjusted based on the quality of the two-page research overview. This second set of instructions clarifies how the work should be distributed among individuals, and it conveys the expectation that the team should work together to create the final cohesive report and presentation. Develop assignments that require interdependence. As Michaelsen and Sweet (2008) write, "the most fundamental aspect of designing team assignments that promote both learning and team development is ensuring that they truly require group interaction". That is, assignments should require teams to make complex decisions together and allow all team members to contribute and participate in the decision making process. This requires complex reasoning and a lot of teamwork, but because it can result in a relatively simple presentation, it can allow the team to focus on interacting and content-related decision making, thus further promoting interdependence.

Teach Teamwork Skills (2nd meeting)

Have students talk about important team behaviours

Students typically have not received specific guidance on how to be a good team member, and they lack strategies for addressing common team dilemmas. It is the instructor's responsibility to explain to students why teamwork is being used in the class and to help students develop the skills needed to be good team contributors. Johnson, Johnson, and Smith (2007) explain that students not only need to learn practical skills for working in a team, but they also need to learn "civic values," including commitment to the common good and to the well being of other members, a sense of responsibility to contribute one's fair share of the work, respect for the efforts of others and for them as people, behaving with integrity, caring for other members, compassion when other members are in need, and appreciation of diversity. To impart these values and offer resources for resolving some of the challenges of working on a diverse team, instructors might devote a portion of the first class meeting to team building activities (see Kapp, 2009, for a description of successful activities) or develop an initial assignment to help the team work together. For example, having students complete a learning style questionnaire and then reflect on their team's results (e.g., by writing a team essay that describes differences in members' learning styles that could affect collaboration, as well as possible ways of using the differences to their advantage) has been shown to increase students' team skills (Finelli, 2001). Similarly, instructors can create simple scripts depicting common team dilemmas and invite students to role-play the situation or give a class assignment asking teams to reflect on characteristics



of successful teams, discuss challenges they have encountered, and list strategies for resolving conflict. After seeing the performance, students reported being better able to resolve common team problems than they could at the beginning of the term, and they placed greater value on diversity, compared to students in a control group who did not see the performance (Finelli & KendallBrown, 2009). One explanation for these benefits may be the interactive segment of the sketch during which students generate a list of strategies for having a successful teamwork experience. The director of the theatre company has compiled the strategies from several performances into the following list of seven suggestions (McKee, 2010): 1. Think about the roles you tend to play within teams, and make a conscious effort to be open-minded about how these roles will play out in teams. For example, if you usually lead, take time to step back and listen. Be aware of how gender, cultural backgrounds, socio-economic status and life experiences could affect your team members' performance. 3. Assume that your team members are doing their best and want the team to succeed. 4. In meetings, communicate clearly, directly, and respectfully. If a team member's behaviour is inhibiting progress, address the issue in a timely, professional manner. 5. Communicate expectations, schedules, and goals for the project at the onset of working together. 6. Be prepared to make sacrifices and be considerate of each other's schedules. Team members may have to rearrange their schedules to get everyone in a meeting, and they may have to hand over part of the project or make changes in plans to accommodate everyone's unique situation. 7. Organize and use time carefully. Set agendas for meetings, be clear about the action items for each team member before leaving each meeting, leave time to work as a team, and make use of each team member's skills and interests in order to take advantage of working with a diverse team of students. Instructors might consider sharing the list with students who will be asked to work in teams.

Have teams develop contracts

Another way to foster teamwork skills is to have each team develop a contract, which involves discussing the team's purpose or mission, defining appropriate roles for each team member, and setting norms for conduct. Having – and using – a contract gives students ways to mediate team conflict and negotiate agreements on their own, enhancing team productivity (Johnson et al., 2007). Several faculty require the student teams to develop a team charter (i.e., a shared set of team rules) as one of the first course assignments. The charter is intended to help the team plan for managing cases in which a team member does not do his or her fair share of the work, does not attend team meetings or shows up late, exhibits disrespectful or unprofessional behaviour, is excessively demanding, or is overly reserved. The team drafts a charter that everyone signs (indicating agreement with the principles) and gives a signed copy to the instructor. Then, when conflicts arise, the instructor can remind students about the contract, asking them to work together to define the source of the conflict, communicate feelings and positions, take the other person's perspective, and reach an agreement that is satisfactory to all team members (Smith & Imbrie, 2007). If the team needs it, the instructor can intervene to address unresolved conflicts.

Observe and guide teams

In some cases, teams need a great deal of support while individuals learn to interact with diverse peers. Observing the teams is fundamental to detecting and correcting problematic dynamics in a timely way (Fredrick, 2008). Instructors should periodically check in with the teams, perhaps by scheduling times to meet with each team during office hours or being present when the team works together. During these meetings, the instructor should determine the extent to which the team is on track and observe the team dynamics. As needed, the instructor can ask refocusing questions such as, "Kathy, please summarize what the team has done thus far," or "Tim, please describe the team's plan for completing the task," and reiterate expectations about both individual accountability and interdependent



work. When monitoring team interaction, it is important for instructors to be mindful that team dynamics may vary based on the backgrounds of team members. For example, teams composed of students from cultural backgrounds that value the collective perspective display more cooperative behaviour than teams composed of students from individualistic backgrounds (Cox et al., 1991). Moreover, in traditional U.S. culture, women have often been socialized to develop group rapport and to seek interaction, while men have been socialized to seek independence (Ingram & Parker, 2002). Furthermore, gender-typical dynamics often exhibited by women students on teams (e.g., willingness to admit vulnerabilities or conceding one's own weaknesses in order to help a teammate "save face") also have an impact on perceptions of student ability. As such, coaching students to understand the value of collaboration, take ownership of and speak confidently about their ideas, and accept (or even demand) technical roles on projects might help students of varied backgrounds achieve success in an engineering community (Wolfe & Powell, 2008).

Other student characteristics can also affect dynamics. Students who are outspoken in class, for instance, may dominate their team, while other students may tend to avoid conflict and simply refrain from participating in the team (Heller & Hollabaugh, 1992). Being mindful of these dynamics, coaching the students through common team dilemmas, and intervening in ways that promote team awareness and encourage change (e.g., praising the class for exceptional behaviours or talking about ways to handle a particular situation) can lead to more successful team interaction.

Assess Student Teams (2nd meeting)

Encourage and allow time for team processing

It is important to provide time and guidance for teams to examine how they are working together (Cooper, 2009). Because students may not know how to reflect on their teamwork behaviours, instructors should periodically ask individual students questions such as, "What are the things that your team is doing that work well and what things would you like to change?" Such questions allow students to reflect on their own and their peers' contributions to the team and, when shared with others, illustrate the kind of responses that are useful. Instructors should build in time for in-class team processing throughout the term, debrief the class afterwards when appropriate, and discuss issues that arise with the whole class so students are informed of potential problems and given opportunities to brainstorm possible solutions. The short time investment required upfront for this has the potential to save time later in the course by preventing the escalation of conflicts or confusion.

Use peer evaluations

Because students have the most knowledge about individual contributions to the team, peer evaluations are an important method of team assessment (Cestone et al., 2008; Loughry et al., 2007; Williams et al., 2002). A simple peer evaluation form commonly used in engineering is shown in the Appendix. This form allows the instructor to solicit self- and peer-evaluations about team contributions. The Comprehensive Assessment of Team Member Effectiveness (Figure 2) is a free, web-based version of the form that produces automatically generated instructor reports, compiling student ratings and alerting faculty to potential team problems. It was developed through rigorous research and has been shown to be valid and statistically reliable (Ohlan et al., 2005). When effectively facilitated, the benefits of peer evaluation are many. Soliciting students' perspectives of their peers can help an instructor identify "free riders" who fail to contribute to the team and rely on others to get the work done (Glenn, 2009; Slavin, 1995). Students are challenged to think more critically about the process of teamwork (Fredrick, 2008), they reflect on the goals and objectives of a course (Cestone et al., 2008), and they are more motivated to produce high-



quality work when their peers evaluate them than when their instructor does (Searby & Ewers, 1997). Research also shows that students who participate in peer evaluation have an increased awareness of the quality of their own work and increased confidence in their abilities (Dochy et al., 1999). Overall, students find peer evaluation to be a fair method of assessment (Gatfield, 1999) and are generally very satisfied with the process (Cestone et al., 2008). Peer evaluation can be useful both to provide feedback to improve team interactions while the teamwork is in progress and to measure individual accountability in students' course grades. To accomplish the first objective, instructors should distribute peer evaluations at multiple points during the term so students can learn how to score their teammates and get used to sharing their (anonymous) ratings with teammates. In addition, at the end of the term, the instructor can factor the students' ratings into the overall grade or adjust each student's team score by a multiplier based on the ratings to reflect their team contributions (Kaufman et al., 2000). Though it is important to make peer ratings count, if the course becomes overly dependent on them, students may start to feel as if they have not received appropriate credit for their individual efforts, and the peer feedback may become counterproductive.

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<p>Case study</p>	<p>1) Case method has been used often not only in management education but as well as in other disciplines (e.g., medicine, law). Wherever decisions are required and issues must be solved, the case method is an effective educational method (Mauffette-Leenders et al., 2001). Quality case teaching requires extensive preparation, careful thinking, intellectual intensity and a personal commitment of a teacher (Erskine et al. 1998). Based on the type and complexity of cases several approaches can be distinguished within the case method (Kralj, 1995): Case-Problem-Method, Incident-Method, Live-case, In-Basket-Exercise-Method and Case-Study-Method. The later was adopted by Harvard Business School for management education purposes in the first decades of twentieth century (Mauffette-Leenders et al., 2001) and is presented in the continuation.</p> <p>A case is a description of an actual situation using a real life data and involves a decision, a challenge, an opportunity, a problem or an issue faced by a person or persons in a company. Cases enable students to learn by doing and gives them opportunity to identify, analyse and solve a number of issues in a variety of settings thereby enabling them to take on the roles and responsibilities of specific persons in specific companies. The discussion-based format of the case method enable students to develop self-confidence, ability to think independently and to work in a team. Since managers need to adapt to rapidly and continuously changing environment, the case study method encourage students' creativity and entrepreneurial thinking (Mauffette-Leenders et al., 2001). Therefore, several skills and competences are developed by the case study method (Mauffette-Leenders et al., 2001, 5-6): analytical skills, decision-making skills, application skills, oral and written communication skills, time management skills, interpersonal or social skills and creative skills.</p> <p>At the Faculty of Economics and Business at the University of Maribor (UM FEB), the case study method is used especially at both first- and second-cycle levels of full-time and part-time courses such as Family business management, Enterprise's policy and strategic management, Governance and strategic management, Start-up and developmental management, Development of a dynamic enterprise and management of small and medium-sized enterprises. Analysis of practical teaching methods in formal learning at UM FEB showed that the case study method is one of 15 the most frequently used practical teaching methods (Belak et al. 2016).</p> <p>References: Belak, Je., Duh, M., Štrukelj, T. (2016). Practical teaching methods applied in higher education – Slovenian experiences. In Report O1 (pp. 75–86). Erskine, J. A., Leenders, M. R., Mauffette-Leenders, L. A. (1998). <i>Teaching with Cases</i>. London, Ontario: Ivey Publishing. Kralj, J. (1995). <i>Politika podjetja v tržnem gospodarstvu</i>. Maribor: Ekonomsko-poslovna fakulteta. Mauffette-Leenders, L. A., Erskine, J. A., Leenders, M. R. (2001). <i>Learning with Cases</i>. London, Ontario:</p>



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	<p>2) Case study method is classified as problem-solving method and activating method. Based on the results of analysis of teaching methods and employers' opinions contained in Reports O1, O2 and O3, the case study method should be used to develop skills related to creativity, entrepreneurship, communicativeness and teamwork.</p> <p>A teacher can reasonably use the case study method in a class that varies from twenty to sixty students and taking into consideration other prerequisites for case teaching. Among prerequisites, for effective teaching are physical facilities that must be suitable for the use of cases; this includes the layout of the classroom that encourage participation, availability of boards, charts and screens, and participant identification (e.g., name cards). Course planning is of the same importance in classes where cases are used as in non-case courses and consist of (1) setting the learning objectives, (2) the general course design, (3) detailed planning - sequencing of the sessions and materials, and (4) defining the performance evaluation measures.</p> <p>The major steps conducted by a teacher are (Erskine et al., 1998, p. 15):</p> <p>a) preparation for class – assigning a case and often readings for students preparation, and completing the Case Teaching Plan. The Case teaching Plan should include time (i.e., anticipated time in minutes that may be on the various class agenda items), agenda (i.e., agenda items are potential topic areas or activities on which time will be spend during the class), and participants (i.e., who will be expected to talk in class and when; preparation of preference list is important if we want that all students in the class participate).</p> <p>b) in-class teaching – a teacher resolves questions arising out of the designed readings; leads the case discussion by probing, recording and facilitating students comments, supplying data, theory or insight which may enhance the thinking and learning in the class; executes the Case Teaching Plan.</p> <p>c) evaluation after class – evaluates the students' participation; evaluates the Case Teaching Plan; evaluates the case and other materials in light of the original teaching objectives and updates teaching note.</p>
	<p>3) The case study method will be used in the course "Management of small and medium-sized enterprises" in a group of first-cycle students at the Faculty of Economics and Business, full-time studies, 6th semester (30 hours of lectures and 30 hours of tutorials). Two meetings are planned.</p> <p>Meeting I:</p> <ul style="list-style-type: none"> - explanation of the case study method (origins, general rules, application). During the presentation of the method the teacher must explain which competence's abilities will be especially developed, when applying the method case study. For the competence entrepreneurship, e.g. ability to invoke and accept changes. For the competence creativity, e.g. ability to develop new concepts and new relationships with existing ideas and concepts. For the competence teamwork, e.g. ability to become active and engaged in tasks and ability to respect group's norms and principles as well as other people's opinions. For the competence communicativeness, e.g. ability to make public appearances and self-presentations (25 minutes) - lecture on the topic <i>Particularities of developmental cycle and life cycle of small and medium-sized enterprises</i> and introduction of the readings and the case entitled <i>Particularities of development and management of a company</i> students need to read at home (45 minutes), - since the case discussion at the second meeting will be carried out first as a small group discussion the construction of teams will be done by applying the teamwork method (see method no 2). <p>Meeting II:</p>



A) In-Class – Pre-Class – a teacher prepares the lecture room (e.g., clearing board, arranging furniture etc.) (5-10 minutes before the class).

B) Pre-Case or Warm-up

- a) Discussion of the readings assigned along with the case (10 minutes) - resolving difficulties with the readings (students ask a teacher), discussion of the main aspects of the readings (a teacher asks students); the aim is to get to know whether students understand the theory.
- b) Case introduction - a teacher comments briefly on the origins of the case or explains how the case fits in the course sequence (10 minutes).

C) The Case Discussion (in total 75 minutes) - the case discussion will be carried out first as small group discussion (30 minutes) and then followed by a large group discussion (45 minutes).

Basic phases in a case class discussion (both in small and large groups) should follow more or less the typical decision making model (Erskine et al. 1998; Mauffette-Leenders et al., 2001): defining the issue; analysing the case data with focus on causes and effects as well as constraints and opportunities; generating alternatives; selecting decision criteria; analysing and evaluating alternatives; selecting the preferred alternative; and developing an action and implementation plan.

Therefore, the case class discussion is going to follow the next phases:

- a) Start – a teacher starts a class discussion with the opening question; this question is a specific question that is a part of the case assignment. Question is: *Which are developmental problems of a company? How can they be solved?*
- b) Issue and analysis – identification of the exact nature of the *issue, problem or decision* in the case. It is necessary to agree within the class what is the right issue that is being addressed.

Points c) to e) are done first within small groups and then in the large group.

- c) *Analysis* starts with developing a clear understanding of why the issue arose. Further analytical work is both quantitative and qualitative. The framework and theoretical concepts of the course will be used in the analysis of the case. The main goal of analysis is to ensure that alternatives generated are appropriate for the decision or issue under consideration.
- d) Alternatives, decision criteria and decision – and important part of the case class discussion is the discussion on *alternatives*. The *list of alternatives* is going to be made before the discussion of appropriateness or advantages/disadvantages will start. Next, the *list of decision criteria* is going to be defined (i.e., the criteria against which to compare all possible alternatives). Decision criteria can be quantitative (e.g., profit, cost, capacity, risk, growth rate etc.) and/or qualitative (e.g., competitive advantage, customer satisfaction, employee morale, corporate image, safety, motivation, ethics etc.). Since usually more criteria are used, the list need to



be prioritized (ranking of criteria). Next we have to narrow down alternatives (e.g., we take into consideration only those that have high probability of success) which is followed by serious examination of the two or three the most attractive ones. We record the key alternatives and their pros and cons on the board (on the paper within the small group discussion). This is followed by the class comparison between alternatives (i.e., the alternatives discussion stage). At the end, we need to reach a conclusion on the best alternative(s).

- e) Action/Implementation Plan – action plan should answer five basic questions: who, what, when, where, and how? At least actions should be specified that are necessary to produce the advantages (pros) and avoid or minimize the disadvantages (cons) identified earlier.

D) Conclusion – a teacher summarizes the case and key points (10 minutes).

The last stage of the method ends (20 minutes):

- with a questionnaire to measure the pace of an increase in transversal competences (appendix 2 to the instruction) among students taking part in the testing process and
- with a questionnaire whose aim is to evaluate the level of transversal competences after the completion of the tested process (appendix 3 to the instruction, part two).

Summarizing how all three methods contribute to the improvement of all four competences (10 minutes).