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Methodology of simultaneous utilization of case study and immersion during teaching of managerial disciplines

Metodologia jednoczesnego wykorzystania studium przypadku i immersji w nauczaniu zarządzania

Abstract

The study examines the effects of simultaneous utilization of immersion and case studies on the outcome of practical preparation of future professional raising their value for the labor market. The results are indicating that immersion is capable of amplifying the outcome of case studies by raising the level of focusing during the in-class work and independence of decision-making.

Keywords: *immersion, case study, economic education, labor market, analytical skills, decision making; leadership, controllability*

Streszczenie

Artykuł omawia wpływ równoległego wykorzystania immersji i studiów przypadku na praktyczne przygotowanie przyszłego pracownika podnosząc jego wartość na rynku pracy. Wyniki wskazują, że immersja może zwielokrotnić wyniki studiów przypadku poprzez podniesienie poziomu koncentracji w czasie pracy na zajęciach i wzmocnić niezależność w podejmowania decyzji.

Słowa kluczowe: *zanurzenie, edukacja ekonomiczna, rynek pracy, umiejętności analityczne, podejmowanie dezycji, przywództwo, kontrola*

1. General formulation of the problem and the relationship to the important scientific and practical problems

Improving the quality of economic education, training for best employment in contemporary market condition require from academic teachers to be much more focused on the development of students' specific practical skills and general experience of decision-making. Theoretically, these important features of future specialists are explicitly indicated in the learning outcomes, skills and competences which should follow the study of certain academic disciplines. But unfortunately, the traditional training system is visibly not effective when solving this problem. It is quite realistic to expect that former students entering labor market are lacking independency in decision making and suffering from inconsistency between their abilities and employer's requirements.

It is believed that case-study approach is very efficient tool for resolving this problem being especially powerful at providing students with analytical skills and independency in decision making. But it should be noted that this approach has already been in common use for some decades and students are still reluctant to elaborate their own responsible decisions and seeking for strong guidance when getting first job causing sometimes great troubles for employers.

1.1. Task specification and objectives

Basing on the above mentioned the aim of this research is to provide academic teachers with insights into enriching the classical case-study approach, raising the level of its efficiency to the rate needed for granting the high school graduates with sufficient level of independency and responsibility.

2. Main content

From the methodological point of view, the case-study method based on brain-storming belongs to so called actors approach of knowledge creation. According to a widespread point of view the result of such an approach depends on individuals who are involved as well as their opinions and attitudes. So to improve the efficiency of such an approach some ways for strengthening the focus of case-study "actors" should be found. Doing this one will both raise the involvement into decision making process and get higher independency level of attitudes and opinions of people taking part in this process.

There are many pedagogical techniques to improve the focus of students (trainees). The aim of this study lays not in providing with comparative characteristics of these approaches, because this is a subject of study in pedagogical sciences. Let's recall that this study focuses on practical issues of increasing the value of highschool students in the labor market, so we will look for

a method (technique, recipe) to improve the focus of the educational process participants so that it simultaneously provides other useful qualities to improve competitive positions at the labor market in the future. The knowledge of a foreign language is generally recognized today as one of the most valuable qualities of the competitors in the labor market. Therefore, the present study focuses on the simultaneous use of the case method and the immersion method which lays in the teaching of some subjects exclusively in a foreign language (English in our case). We will show that this approach leads to the desired goal – to improve the responsibility and independence of future specialists in the decision-making process, realistic level of independence and self-sufficiency at the first employment and increase the scope of practical skills.

To prove this hypothesis, the research has been organized in two directions –

1) in depth studying of the educational process itself and comparing the results with traditional approaches;
2) examining the opinion of employers on the site of the first students' employment.

The research was carried out in Alfred Nobel University (ANU) and enterprises, which had been employing the students who graduated from the university in the period from 2007 to 2015. By means of the immersion method the authors were teaching the following educational disciplines: Fundamentals of Management", "Communications Management", "Human Resource Management" and "Strategic Management". A total of 678 students were involved in the following fields of study: "Management and Administration", "Business Economics", "Marketing", "International Economics" both at bachelor's and master's level (2 full academic groups each semester each academic year), and 32 companies where communicated were the ANU students had found their first employment. In the analysis of the educational process, a team of professional psychologists of the University, observed the students doing brainstorming – the ratio was one observer per 3-4 participant of the educational process. The learning outcomes obtained by the utilization of the experimental procedure were compared using a simple method of comparison with results for academic groups who were trained by the traditional method.

Both direct andvestigial control of performance and quality of knowledge was carried out. In accordance with the methodology of evaluation, adopted in Ukraine, the performance level corresponds to the proportion of students who have received a positive assessment during the processof learning outcomesmonitoring; level of quality of knowledge is the proportion of students who have acquired the good and excellent grades. The measurements and comparing took place during 8 teaching years and will be discussed a bit later.

It should be mentioned that practical management which embraces strategic, tactical and operational levels in different directions including human resource and communications, the control of complex social-economic systems combines

elements of science and art, since the resolution of practical day-by-day tasks quite often isconnected with problems that cannot be predicted in the theoretical researchin principle. Some sources [1] suggest that practical management of complex social-economic systems – is up to 70% art and only by 30% – science. Therefore, the process of teaching disciplines of managerial cycle in the higher school should be very focused onthe development of the art of decision making mastering of which in turn will add a great value of future competitors at the labor market.

As is had already been mentioned a case-study is one of the most effective means of acquiring fundamentals of this art. Classical case-study is a teaching technique which suggests to the students a specific practical problem for resolution that relates either to the theoretical positions of particular teaching discipline or to the specific field of business (industry) for which future professionals are training. Of course the practical case selection and the preparation a methodological part of case-study (highlights, questions, problem statement *et al*) is an independent issue which is treated in numerous professional publication. So are the problems of students' motivation and self-preparation to class work and possible other problems of case-study preparation and organization. In our research we are focused entirely on the behavior of the students during in-class case study so we leave these questions aside. We suppose that the term "case-study" does not fully reflect the nature of interaction between student and teacher, which arises during classwork in the specific situation.

An organization of a rather broad scientific-pedagogical experiment in ANU aimed at enriching this interaction, raising the motivation of the students preparing for case study and as a result adding a value to their future competitive positions on the labor market was too a large extent the result of the intense international activities of the University.After the number of international projects in modernizing the system of economic education in ANU a whole new generation of teachers was prepared who received training in the best universities in Western Europe having very good command of English. 27 teachers took part in this experiment having scientific degrees of ScD (11,11%), PhD (40,74%) and without scientific degree (48,15%). An educational platform Moodle was also used giving the students essential freedom and flexibility in the process of preparation for in-class work.

The motivation of teachers evidently was very big so no special research was made to uncover this fact. An opportunity to measure the true significance of case-study approach in the system of economic and managerial education as one of the most promising methods of training the future professionals who equipped with substantial level of independency and self-confidence in the process of decision making was a very motivating factor for all the participants of experiment mostly due to the fact that we saw direct practical outcome in form of providing of our students with better quality education and thus with much better opportunities to compete in the labor market raising in turn attractiveness of ANU in the nearest future.

But it should be mentioned that motivation of the students doing the homework is always the problem which obviously is reducing the efficiency of case-study approach. Our experiment also was not on exception, however the results of measurements indicate that the motivation for the students who were taught by the usage of immersion approach was higher than the motivation of the students who followed the standard method. The results for 35 arbitrarily selected students questioned each year of the experiment are generalized in table 1. Also the students taught on the basis of the immersion approach had indicated better understanding of analytics and other materials collected by teachers for specific case study. It should be repeated that motivation of the students to do individual preparation for in-class work being very important problem for high school was not the topic of this paper so no additional research was done to clarify the mechanisms of interaction between immersion approach and motivation. Supposedly teaching in a foreign language leads to better mobilization – the same effect as raising focus during in-class work which will be treated below.

Table 1. Comparison between motivation of students doing self-preparation. Self-elaboration.
Tabela 1. Porównanie motywacji studentów przygotowujących się samodzielnie. Opracowanie własne.

Year	Method	Motivation					
		Excellent	Very strong	Strong	Weak	Very weak	Absent
2008	Immersion	11	9	10	2	1	2
	Standard	5	7	7	5	5	6
2015	Immersion	15	11	5	3	1	0
	Standard	6	6	6	7	6	4
Average	Immersion	14	10	6	3	1	1
	Standard	5	7	7	6	5	5

The main interest of this research was the influence of immersion on students'activity during in-class work. To unveil this effect specially trained group of psychologists was formed who did constant monitoring of participants' behavior during case-study in-class execution. Every 34 minutes the notes that reflect the specifics of students' behavior were made on the basis of body language, unconscious gestures, face mimics, intensity of in-group communication and the direction of glances. The measurements of the psychological profile of students according to Briggs-Meyers approach was made every time preceding the experiment. Despite the fact that Briggs-Meyers testing was not compulsory, almost all the students underwent this procedure simplifying thus the understanding of some specific phenomena observed during the experiment. The students were promised that the data regarding their psychological profile will be treated as confidential and will not be published in any form so we will not use these data in our research.

For in-class case studies the students were proposed to form up to 3 subgroups inside the academic group typically consisting from 2025 persons. These groups can be permanent or flexible depending on students' wish. The teachers were only insisting the groups should be formed to do in-class work. Also the groups were advised on the role of distribution between participants but sometimes depending on students' psychological profile they were allowed to create their own set of roles the latter being not a very frequent case.

The in-class case studies were organized in rooms with a round table or the students were seated in such a manner that each small group had a localized space to carry out discussion being uninterrupted by other groups. That provides with necessary conditions for free unconstrained independent disputes and enables better monitoring of student's behavior. The above mentioned proportion between students and observers guaranteed that at least 2 observers were monitoring every single mini-group of students who were proposed to form groups which should consist of maximum 78 people. Such a condition was aimed for two reasons – first of all the group consisting of 78 persons is the most efficient unit for brainstorming and secondly the fact that group was monitored be two observers

The roles to be executed during in-class discussion which were proposed for each subgroup in brief description are the following:

- ***Analysts*** who should elaborate solution for the problem and offer possible options;
- ***Experts*** who should conduct a critical analysis of any practical steps that should be made during the problem solution realization;
- ***Decision-Makers*** who should formulate an ultimate decision depending on the opinions of the *Analysts* and *Experts* which were indicated during the preceding discussion.
- ***Speakers*** who should protect decisive solution under uncertainty (unexpected criticism and possible better alternatives presented by others groups);

In the process of the in-class work the roles could change, and the debate, which was treated as obligatory procedure of the case-study approach allows almost all students to try themselves in almost the entire set of roles during separate case-study sessions. The teachers did not insist on role distribution during homework, moreover they did not insist on doing homework in groups. it should be noted that during this long-term experiment (2007-2015) such an important contemporary phenomenon as social network had appeared deeply influencing communicative behavior of individuals but its influence on the process of students' homework as well as a process of homework itself was not investigated.

The experience of the case-study organization allowed to optimize the content and rules for role-play inside subgroups to be the following:

Students-analytics. This is the most mass role as analytical work is carried outby almost every student inside the subgroup. The teacher is limiting the time for

analytical work in subgroups by 2030 minutes regarding the fact that students should do their homework being familiar with materials of case-study. Initially analytical work has no strict criteria for prospective draft decisions. It is enough to say: "I think so!" to include in the discussion some possible ways of problem solution. The only rule that was introduced at this level – the rule of the majority, when the proposals receiving the highest number of supporters of the "group of analysts" will be considered in the first turn.

Students-experts. This role is for the "elite" of subgroup. Each subgroup typically is raising 23 participants to this role who are mainly engaged in the "filtering" of solutions. As the methodological basis for the elimination of inefficient solutions, students were proposed to use the methodology of SWOT-analysis [2], which allows to measure all the internal and external factors affecting the company in the context of the problem, as well as near and long-term consequences of the decision.

Speakers and decision-makers. Role for the very "selected elite". One person from each group is honored to protect the decision made by the subgroup. Formally, this same person selects a final decision. Representatives of other subgroups are listening to the speaker-decision-maker and are free to execute the role of an expert if they have arguments that they believe in the benefits of solutions that have been just proposed.

It is evident that the proposed structure is very similar to the system of formal steps in the decision-making [3]. Taking advantage of specific information about the real problems, you can even implement a feedback.

The observations made by professional psychologists indicated significant impact of the immersion approach on the activity of the students at the first stage. The students tend to overspend the time-budget of 30 minutes trying to formulate numerous propositions concerning the problem resolution and make very deep analysis of the selected ones. On the contrary, subgroups which had followed the standard approach tend to finish the discussion much earlier switching even to topics which are absolutely not connected with current case-study. Quite often the teachers in such a situation had to stop the discussion before the time-budget was off. Naturally the tempo of conversation in a foreign language is slower than in native one – this factor was also influencing the discussion development but again it should be repeated that problem of devotion restored by the elements of behavior for the students in the experimental groups was much bigger. The generalized data collected by the psychologists is represented in table 2. It should be noted that simple statistical processing was done to the raw data of 252 sets of observations (2 academic groups, 2 semesters per academic year with 9 in-class works each semester, 7 consecutive academic years)and onlyexpected values and modes are presented in this table.

Table 2.Comparison of typical behavior of subgroups taught by standard and experimental approach. Self-elaboration.
Tabela 2. Porównanie typowego zachowania podgrup uczonych metodą standardową i eksperymentalną. Opracowanie własne.

Group	Statistics	Measurements			
		Productive discussion length	Involvement rate	Largest focused period	Positive body language
Standard	Expected	24	2,5	17	3,2
	Mode	22	2,6	13	3,0
Immersion	Expected	37	4,0	26	4,7
	Mode	33	4,2	24	4,5

It is evident that the experimental groups demonstrate much better more focused and positive behavior. Role-play using a foreign language obviously leads to double amplification of the case-study effect. Students initially wanting to express themselves using a foreign language in the professional sphere quite fast come to understanding that strong involvement in numerous case-studies is adding to their professional knowledge and skills, raising communication habits. And of course the fact that every analysis should be defended in the presence of quite demanding opponents is enriching not only language skill but ability to fast and independently which is essential for career building. We do think that this is the main mechanism of positive effect of immersion and case-study coupling in context of providing the students with most needed qualities for future employment.

Of course one cannot compare the "quality of decisions" made by conventional and experimental groups mainly due to the fact that in contemporary management which is quite often treated as the contingency management, the multiple efficient solutions to the problems exist. But of course one could compare they results of learning, expressed in a form of efficiency and quality of knowledge as it was mentioned above. The results are compiled into table 3.

Table 3. Comparison between efficiency and quality of knowledge for standard and immersion approach. Self-elaboration.
Tabela 3. Porównanie skuteczności i jakości wiedzy w podejściu standardowym i z wykorzystaniem immersji. Opracowanie własne.

Method	Item	Academic year						
		2008/9	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Standard	Eff	92,3%	91,5%	93,1%	93,2%	92,7%	92,9%	94,6%
	Qual	63,5%	61,7%	64,5%	64,7%	62,9%	63,4%	65,6%
Immersion	Eff	92,6%	92,4%	93,3%	93,6%	93,2%	92,3%	95,1%
	Qual	65,2%	65,6%	66,1%	67,1%	66,0%	66,8%	68,1%

Analyzing the quality of knowledge (share of marks greater then D) it is clear that teaching results for the immersion groups are better than for the conventional approach. Naturally, this improvement cannot be linked to exceptional role of case-study mainly because of better mobilization of students due to the necessity to absorb the teaching material in a foreign language. In also should be noted that in general immersion student do have better motivation for individual preparation at home (see *Table 1*). This also is leading to improvements of teaching results. But again it is obvious that using the case-study approach in the framework of an immersion experiment is also playing remarkable role in this.

One of the most significant facts arising from the experience of several successive generations of the students is self-organization and self-restoration of role-structure described above even when working on case-study without teachers advise concerning role distribution. Regardless of the specific instructions of the teacher almost all students took part in the discussion, information was filtered by 23 subgroup members, and the final decision was taken by one the most active participant who finally became a speaker. Such experimenting was made not every year but it is a very important argument in favor of case-study and immersion coupling. Really extensive empirical data indicate that the process of role distribution in "unguided" immersion groups is typically much faster than in standard one. The statistical processing (Kolmogorov-Smirnov test and Student T-test) of typical lead time for the process of independent role selection prove significant difference between standard and experimental approach the latter being typically 1-2 weeks faster. The explanation of such a phenomenon supposedly is that using a foreign language in the communication leads to a more defined leadership which, in turn, facilitates faster group structurization.

In general, the cause of role structure self-organization inside a subgroup is that the essential real life conditions of decision making are simulated in framework of case-study approach:

- need of independence in judgment;
- exploring the maximum number of possible solutions;
- strict limitation on solutions variety in the final (in-depth) analysis of alternatives.

It should be noted that all these features are characteristic to the standard case-study approach, immersion technique is only facilitating the process of training high-class professional with well-established individuality and independent thoughts by enriching communication process during the brainstorming and raising the motivation.

The need to ensure the independence of judgment creates the situation when even a small group of students was divided into 2-3 subgroups, while the desire to take account of the maximum number of possible solutions leads to limiting the number of participants in the subgroups because the students who form the group are potential carriers of different solutions.

Typically, during the first case-study the subgroups are formed around a formal or informal leaders who often act as experts. The teachers had never interfered which this stage of self-organization just advising students on the role distribution.Usually the leaders who crystallize the subgroups in everyday life are also "organizational culture" keepers of the group. It should be noted that immersion does not influence this process at all. Again the case-study itself adds value to these leaders in the labor market.

Considering the process of making higher level decisions, *i.e.* about decision-makers' functions again we get a complete analogy between real life and a role-play model, which was adjusted for the student group. The model combined the role of speaker and decision-maker. Almost certainly this dual function will be fulfilled by a leader, who had just participated in the expertize of all possible solutions and has the best imagination of all the pros and cons.

Thus, a conclusion can be formulated that when the main objectives of decisions elaboration and acceptance are put before student groups simply and accessibly, the motivation and involvement of the students into this process is quite high andthe empathy level of teacher is quite high, the group will inevitably create the self-organizing structure, which is pretty close to reproduce psychological conditions of real decision-making. The immersion technique is helping a lot to raise motivation and focus. Interview with representatives of 32 companies where the students of ANU had found their first employment held during 6 years of experiment (approx. 5 companies each year) prove the fact that employers are mostly valuing such skills and abilities of the students as independency in decision making and focus on the problem the latter being increased by immersion the technique.

It is clear that the simulation of a real psychological atmosphere of decision-making and instilling of practical skills in management of the social-economic object is not only the ultimate goal of the case-study approach. Of course it is the main objectivebut there are several others which were not yet treated. The latter include:

- improving the culture of thinking;
- instilling of skills in defendingown position;
- instilling of skills to consider the long term consequences of any decisions and actions;
- acquisition of skills of dispute and arguing.

Our experience testifies that in organizing in-classes work according to case-study approach the teacher must resolutely eliminate the element of non-discussion-based guessing and pure improvisation at the stage of preparing the solutions to defend. Whatever the origin of solutions is it should necessarily be exposed to the deep analysis and obligatorily should be protected. This requirement constitutes the "culture of thinking"concept related to the solutions development.

The requirement to comply strictly with the strict procedure of solution development and protection is the only compulsory requirement that should be put to the organization of in-class work according to the case-study methodology. This requirement was followed both in standard and immersion approach. And again an both approaches this requirement is often blamed by students as being very rigid and formal. Typically, during the first 1-2 classes the students sincerely wonder why even the "correct" response, which means adequate and seemingly efficient problem solution, is not received by the teacher in the case when it is not properly developed and presented.

Observations made by professionals indicate that very often improvisation is a psychological reaction of the students to the inability to defend their positions. However, experience shows that two or three sessions of case-studies are enough establish the basic skills at a satisfactory level. Therefore, the desire for improvisation is a problem only at the initial phase of case-study but in a way to mastering the art of oral presentation and defense of the solution developed, this trend will weaken considerably.

The acquisition of free debate skills also did not begin immediately. This goal is logically adjacent to the previous one. One of the main points which needs teacher's attention during the debate – is again insisting on standard procedure of developed solution presentation and defense that allows students to "speak the same language" that is to exchange arguments, which directly concerns the case content.

The importance of instilling skills of the future prospects considered during the case-study solution elaboration is not occasionally treated as a particular issue. The fact is that students, especially considering their age tend not to think about the long term consequences of their actions. This feature is projected on their performance in the case-study framework. But on the other hand, future professional, entering independent activity, must be aware of long-term consequences of his/her decisions (actions). Inside student group micro-environment through the creation of specific structures just simulating the conditions of real life decision-making, there is no possibility to achieve the standards of independent and responsible specialist behavior. The teachers 'experience is necessary to approach these standards requiring from the students putting forward some argumentation of opportunities or threats that arise much later after the proposed decisions' technical implementation.

The specific features of the case-study approach treated in this paper as well as additional objectives ofutilization of such a progressive form of teaching process organization indicates that most teacher's work load corresponds to the initial stages of the teaching process. A lot depends on the first initiating classes where the teacher explains the "rules of the game" and the basic requirements.

The middle stage of the case-study procedure is quite fruitful both for the teachers and the students, the main requirement here – do not overdo "administration" of it and do not restrict the initiative, struggling with

"improvisers". At this stage, efforts are also important to identify the sources of non-standard individual opinions and, if possible, encourage the students who are capableof such a contribution.

At the final stage or in the very final class the teacher should provide the students with an "open case", that is to formulate the problem, which relates to a specific problem in the activity enterprise of the national economy, which has not yet been resolved. In the final analysis of the results of such a case the discussion is recommended realization of the possibilities and obstacles of the proposed actions and, of course, possible long-term consequences.

3. Concluding remarks

To summarize the analysis of utilization of case-study and immersion during teaching of managerial disciplines the following conclusions should be made:

- immersion is a very effective add-on to the classical case study technique to raise the level of future specialists' independency and responsibilities in the decision making process which was proved by statistical processing of long-term observations;
- main mechanism of such a raising is sharpening students' focus during the in-class sessions of case-study and improving the motivation for individual homework;
- the professional observations indicate that the focus of students during in-class work using immersion approach is significantly bigger than without it;
- the teacher approach in educational process guiding and administrating should be very adaptive at different stages to raise the level of independency of future specialists;
- in-depth study of contemporary communications trends (i.e. social networks) impact on students' behavior at the preoperational phase of case-study should be indicated as a perspective direction of future research.

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