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Case Study Teaching Method in Effective Higher Environmental Education for Sustainable Development Goals

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Abstract Higher environmental education has an important role in the development of quality of human resources, bearing in mind that it has as a goal directing of young people as carriers of the future development towards sustainability. The reason lies in the fact that higher environmental education "produces" environmental educated students for the extensive social changes needed for achieving sustainable development goals. On the other side, the case study teaching method is becoming an increasingly common teaching strategy in education and specially higher education. The authors of the paper stand that the use of case study teaching method effectively achieves the fulfillment of specific learning objectives and outcomes of higher environmental education for sustainable development goals. The results reported in the paper represent organized Competition in environmental case study "Activism and local community: environmental volunteer actions in the River Basin of West Morava" at the University of Belgrade - Faculty of Organizational Science, Serbia.

Keywords: • environmental education • case study teaching method • sustainable development goals • activism • environmental volunteer actions •

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1 Introduction

Case study teaching method is becoming an increasingly common learning tool in terms of providing adequate knowledge and skills required of university students (Christensen & Carlile, 2009; Gamble & Jelley, 2014; Damnjanović & Mijatović, 2017), while at the same time environmental education for sustainability, sustainable development and the goals of sustainable development is becoming an essential part of the curriculum of all universities.

Bearing in mind the above, the main objective of our work is to provide insight into the benefits for students from introducing an environmental case study as a competition into the curriculum of the obligatory course Environmental Management at the third academic year of the Faculty of Organizational Sciences - University of Belgrade, Serbia. The applied case study learning in a form of case competition represented an opportunity for students to implement concepts of coursework to "real world" problems (Bale, Senteza, & White, 2013; Damnjanović & Mijatović, 2017). In this "green" competition 12 teams competed, comprised of four participants, making 48 students in total. The students competing were chosen based on their motivational letters and CV forms. The contest itself was of open type, so all students enrolled at the mentioned course attended and were indirectly involved, more precisely 234 of them.

The competition was organized by the students' environmental group from the Faculty of Organizational Sciences – EkoFON, and the Centre for environmental management and sustainable development – CEMOR in cooperation with a NGO Volonter.rs and the Department of Civil Protection Affairs of the City of Kraljevo, with the support from the Standing Conference of Towns and Municipalities, Public Investment Management Office of the Republic of Serbia, Ministry of Public Administration and Local Self Government and the United Nations Development Program - UNDP.

2 Environmental education for sustainability and sustainable development goals

Disorders of the natural balance caused by human activities have caused significant changes in the global eco-system of our Planet such as changes in temperature, climate and weather patterns (Borojević et al., 2017). These changes impair the conditions of survival of many populations, including our own – human, and, all of this is, under one name, called the environmental crisis (UNESCO - Division of Science, Technical and Environmental Education, 1986). Precisely because of this, the current environmental crisis requires a holistic and environmental education (Petrović, 2016).

For these reasons, the United Nations Conference Stockholm Conference on the Human Environment in 1972, recommended, in the principle 19 of the Declaration of the United Nations Conference on the Human Environment for all nations to promote environmental education, which must be both adequate and of good quality, and developed in accordance

with the principles of sustainability with the aim of including environmental issues in order to extend the basis for responsible behavior of individuals, organizations and communities in protecting and improving the environment. Sachs (2015) calls this day and age -The Age of Sustainable Development, emphasizing that sustainable development is an organizing principle for all policies, economics and ethics. The most important requirement for a successful transition to a sustainable development model emphasizes the quality of human resources in which the key role is that of adequate and well or good environemntal education. Many authors agree that good environmental education is of crucial importance for achieving sustainable development that will provide the necessary way of life for people within the carrying capacity of nature (example McCormick et al., 2005; UNESCO, 2012; Petrovic, Jeremic, Petrovic, & Cirovic, 2014). More specifically, the achievement of the objectives of preserving the ecosystem, the behavior of entire societies towards the biosphere must be transformed so that the long-term task of environmental education is to encourage and reinforce attitudes and behavior in accordance with environmental ethics (IUCN-UNEP-WWF, 1980).

When it comes to Environmental Education for Sustainability - EEFS, it should be noted that its origins are linked to the nineties of the last century, when it was realized that changes were necessary that would lead to a sustainable way of life of the human population, and that that can only be reached through education (Sterling 1990; Tilbury, 1995). It was concluded that environmental education should be re-orianted, and focus on improving the quality of life of people with a reconceptualization of the essence and goals of environmental education in terms of strengthening its interdisciplinary and global approach, not only in perception, but also in addressing environmental concerns. As a result, EEFS is not intended only for environmental improvements but essential education for long-term sustainability as well. Specifically, EEFS according to the World Conservation Strategy and the Brundtland Report implies the need for: reconciliation of economic development and conservation of the environment, placing environmental concerns in socio-economic and political context, combining environmental and development needs (IUCN/UNEP/WWF, 1980; WCED, 1987).

In Agenda 21, which is the result of United Nations Conference on Environment and Development in Rio de Janeiro in 1992, Chapter 36 is particularly noteworthy (Education, Awareness and Training), this chapter highlights the issue of sustainability in environmental education and emphasizes the role of universities in achieving: reorientation of education towards sustainable development and sustainability, increasing the level of public awareness on environmental issues and the promotion of environmental training for educators (Agenda 21, 1992).

Furthermore, “when it comes to conditions for a successful transition to a sustainable development model we should emphasize the quality of human resources, in which environmental education plays a key role because it is aimed at training to create social changes that lead to the creation of sustainable societies” (Radaković, Petrović,

Milenković, Stanojević, & Đoković, 2017). Adoption of a New Sustainable Development Agenda for the period between 2015-2030: Transforming our world: the 2013 Agenda for Sustainable Development by the General Assembly of the United Nations is needed in effective higher environmental education for sustainable development goals and include all of the 17 sustainable development goals and 169 of the respective objectives.

3 Case study teaching method

Case study as a way of learning, especially for business education, was first developed at Harvard and Northwestern Universities (Schlossman, Gleeson, Sedlak, & Allen, 1994; Rippin, Booth, Bowie, & Jordan, 2002), but also its roots can be found in ancient Greece through the development of critical thinking that is encouraged by Socrates with his students (Hershey & Walker, 2006; Burko, 2016). Case studies could be defined as a description of a real event (decision, challenge, opportunity, problem or attitude) with which a person or people are faced in an organization (Erskine, Leenders, & Mauffette-Leenders, 1998; Damnjanović & Mijatović, 2017).

This way of learning is the most commonly applied in the fields of law, medicine (Ozdilek, 2014) and management (Weber & Kirk, 2000; Rippin, Booth, Bowie, & Jordan, 2002; Cullen, Richardson, & O'Brien, 2004, Healy, & McCutcheon, 2004). Certainly large applicability is present in other areas as well, which reflects the advantage of this way of learning. Contributions for students that the use of case studies has, have been varied and reflected primarily in enabling students to make decisions, recognize and solve some concrete problems and be prepared for possible situations right after the end of their studies (Lindeman, 2000; Tanner, 2002; Baumberger-Henry, 2005). Combining traditional ways of learning and case studies allows better adoption, understanding, and purposeful application of theoretical knowledge, and thereby increases motivation and the desire to adopt new knowledge.

In addition to these advantages, this way of teaching provides students development of soft skills through learning to work in teams and the development of interpersonal relationships, as well as suggestions for obtaining data solutions and learning from mistakes. Rippin, Booth, Bowie and Jordan (2002) state that some authors point out that the purpose of learning through case studies is one of the ways to enable students to learn how to learn, to train their analytical skills and flexibility. Iahad, Mirabolghasemi, Mustaffa, Latif and Buntat (2013) conclude that the students consider the use of case studies as a positive approach and want to use it as a way of acquiring knowledge and that they believe it should be used more as an integral part of education and training. The steps of case study are presented in Table 1.

Table 1: The steps of case study (Eisenhardt, 1989; Marinković, 2010; Petković, 2013)

Step	**Activity**	**Reason**
Start of research	Defining research questions	Focused efforts
	Possible *a priory* settings	Provides a better basis for measurement of settings
	No theories, no hypothesis	Sustains theoretical flexibility
Choice of case study	Set population	Prevents irrelevant variation and sharpens external validity
	Choice is made from theoretical and not statistical reasons	Focuses efforts on cases that use theory, ie. those that confirm or extend theory while filling conceptual categories
Instruments and protocols	Several methods of data collecting	Strengthens the theoretical basis through measuring the evidence
	Combining quality and quantity of data	Synergetic view of evidence
	Several researchers	Encourages different perspectives and strengthens the basis
Entering the field	The overlap of data collection and analysis, including recording features	Accelerates the analysis and reveals useful harmonizing data collection
	Flexible methods of data collection	Allows researchers to take advantage of current themes and unique features of the case
Data analysis	Analysis on the context of the case	Provides familiarity with data and generates a preliminary theory
	Cross-case research of patterns using divergent techniques	Forces researchers to look ahead of their initial impressions and see evidence across multiple dimensions

Designing the hypothesis	Iterative tabulations of data-evidence for each hypothesis	Sharpens the definition of assumptions, validity and measurability
	Repeating the logic through the case	Confirms, extends and enhances theory
	Looks for the evidence of "why" that are in the basis of relationships	Builds internal validity
Enfolding Literature	Comparison with opposite knowledge and attitudes	Builds internal validity, raises the theoretical level, and focus of formulating definition
	Comparison with similar knowledge and attitudes	Improves the definition of constructions and raises the theoretical level
Getting conclusions	Theory maturation when possible	The process ends when marginal improvement becomes insignificant

3 The case study competition "Activism and local community: environmental volunteer actions in the River Basin of West Morava"

"No water, no life. No blue, no green". – Sylvia Earle

"Water is the primary life-giving resource and a key driver of economic and social development, and has a fundamental function in maintaining the environmental integrity" (UN, 2013a; UN, 2013b; Makajic-Nikolic, Petrovic, Cirovic, Vujosevic, & Presburger-Ulnikovic, 2016). Despite this it is important to emphasize that "rivers are bodies of freshwater and a source of water supply that provide many services that contribute to human well-being, particularly to those people who are living near wetlands and highly depend on these services, and who are directly harmed by their degradation" (Millennium Ecosystem Assessment, 2005; Makajic-Nikolic, Petrovic, Cirovic, Vujosevic, & Presburger-Ulnikovic, 2016). On the other side, water pollution is a serious problem faced in several parts of Serbia, such as the Morava River Basin, where due to the low flow rates of the rivers, the discharged loads have significant impact on the waters quality (EC, 2005).

West Morava, is a river in Central Serbia, a 210 km-long longer headstream of the Great Morava, which it forms with the South Morava. The Morava River forms together with the West Morava River the longest Serbian river. Unfortunately, West Morava River is one of the most polluted river in Serbia considering its pollution by: organic and inorganic waste, industrial and communal waste, illegal dumps and communal wastewater.

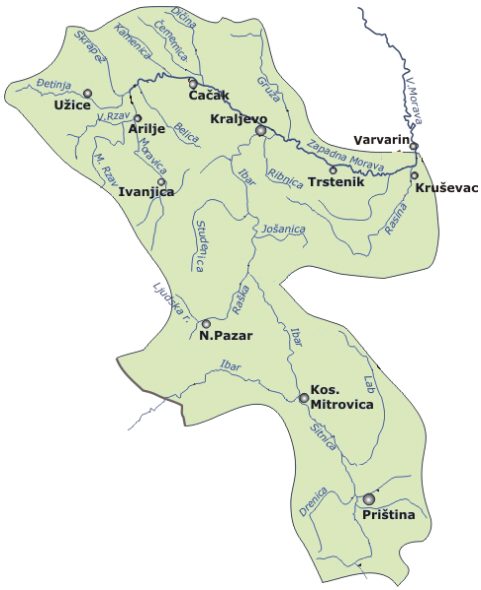

Figure 1: West Morava River, Serbia

Bearing in mind mentioned above, as well as the importance of rivers for each country, and the importance of West Morava River for Serbia and its residents, the selection of case study "Activism and local community: environmental volunteer actions in the River Basin of West Morava" for competition was obvious - it improved the students knowledge of this crucial environmental issue and significantly expanded the curriculum of obligatory course Environmental Management.

3.1 The Case Study Preparation

In order to provide comprehensive information for the students, it was crucial to bring in experts from the field who are involved in the West Morava River's environmental issues. These stakeholders are mutually recognized because they work on the same topic and represent Government team set to work on pollution and disaster risk reduction on the West Morava River. The experts were representatives from: Department of Civil Protection Affairs of the City of Kraljevo, the Standing Conference of Towns and Municipalities, Public Investment Management Office of the Republic of Serbia, Ministry of Public Administration and Local Self Government and the United Nations Development Program. After the case study introduction, students created teams of four at will and apply for the competition with a Motivation Letter and a CV. Twenty-four teams applied and 12 teams have been chosen to participate in the competition. Criterias

for selection were: students' motivation level for solving the given environmental problems of West Morava River and their previous experience in participating in other case study competitions.

3.2 The Case Study "Activism and local community: environmental volunteer actions in the River Basin of West Morava"

3.2.1 Background

At the third Meeting of the towns and municipalities of the West Morava river basin, held on 08th of November 2016 in the town of Novi Pazar, where draft of the Protocol of the Cooperation was presented. As a result, a cooperation was initiated with the aim to jointly work on prevention, risk management and quick revival from the natural disasters and other accidents. On the day of 10th of February 2017, in the town of Kraljevo, the meeting of all Town Mayors and Presidents of Municipalities at the west Morava basin was held and the Protocol of Cooperation was signed by the representatives of all 17 towns and municipalities at the basin.

3.2.2 Assignment

Description of environmental volunteer actions in the River Basin of West Morava: *For the August 2017 a happening was planned - on the same day, around 100 volunteering events of cleaning the tributaries of West Morava River, at 100 locations, in all 17 towns and municipalities of the basin. Local people were involved by local governments and CSOs. Invitations for individual teams of volunteers were announced through the platform www.volonter.rs where each individual can first see the closest team s/he can join. Because of that, only one call for action is needed for all 17 towns and municipalities: Join our team at www.volonter.rs and be a part of the event "Let's clean up West Morava – 100 as 1". After becoming a member of individual team at www.volonter.rs, each volunteer has an access to the group's chat where she/he can exchange all the needed information with other team members and team leader.*

Assignment of the case study "Activism and local community: environmental volunteer actions in the River Basin of West Morava":

- *Preparation activities (define)*:
    1. The process of reporting all individual locations that should be cleaned from waste.
    2. The report of CSOs and local public bodies whose representatives will lead individual teams.
    3. The process of reporting needed means of work.
    4. The process of reporting public companies and institutions that can give a support with non-cash assets.
    5. Prepare a budget report for the level of the team, group of municipality/town teams, and all 17 towns and municipalities.

6. Potential donors.

- *Human resources (define)*:
  1. Guidelines for the Team Leaders.
  2. Training for the Team Leaders.
  3. Adequate environmental education for the volunteers.
- *Logistics (define)*:
  1. Communication procedures for 17 Municipal/Town Coordinators.
  2. Communication procedures within towns/municipalities while organizing teams of volunteers.
  3. Communication procedures within individual teams.
  4. Logistics needed.
- *Eco marketing*

1. Invitation campaign for the event "Let's Clean Up the West Morava – 100 as 1".
2. Campaign during and after the event, from volunteers to the general public.

- *Reporting (define):*
  1. The process of participants' feedback collecting (volunteers, team leaders, public companies, local officials and general public).
  2. The process of collecting ideas for advancement and standardization of procedure for decreasing pollution of the river basins.

3.2.3 Case study competition

At the day of the Case study competition, 48 students arranged in 12 teams had 10 minutes per team to present their ideas and additional three minutes to answer the questions of the jury. The criteria for judging the proposed solutions of competitors were:

1. Creativity and suitability in solving the problems of case study (40% of total points).
2. Feasibility of proposed solution (30% of total points).
3. Analytical capabilities, capacity for problem solving, presentation skills, time management, and team work (20% of total points).
4. Answers to the questions of the jury (10% of total points).

The analytical approach to the problem was mainly unifying for all the proposed solutions of competitors, and it gave understandable structure of individual teams' works and opportunity for their adequate comparison. The first placed team, was distinguished from the others by their integral elaboration of any given task. So their work, besides being creative, gave a sense of completeness and usefulness. Other teams mostly excelled in individual topics-components and under delivered in others. The second placed team had as a result well elaborated structure of the waste cleaning process that they performed in a multidisciplinary way. It was interesting that their predictions were close to the real situation on the ground and structure of connecting real and predicted data was very satisfying for the judges. The third place was shared by two teams.

It must be noted, that the overall results were more than satisfying since the students provided a vast number of very useful individual solutions that can be implemented in the activities planned by the 17 towns and municipalities at the West Morava River, as well as enabled better learning performance for students: teamwork, brainstorming, debating, constructing creative ideas, presentation skills.

4 Conclusions

The debate on sustainable development initiated the debate about educational concepts that are necessary to achieve the objectives of sustainability. This has resulted in new concepts of education, especially higher education, which is reflected in an innovative and interactive learning process that is based on the aim of strengthening critical thinking that allows the use of case studies as learning methods.

It is necessary to ensure the quality of higher environmental education for sustainability and sustainable development in relations and development of adequate and enforceable pedagogy, as well as the competencies of students, for those who study/students and those who teach/teachers. This precisely ensures the preparation and work on a case study complements the traditional approach to the presentation of the intended curriculum subjects. This manner provides an extended and enhanced literature within the topic of environmental sustainability; integrates the concept of sustainability in research; emphasizes the need for "renewing" and continuous improvement of the curriculum, the implementation of new teaching methods and reorientation process lectures and preparing professors for classes.

References

Agenda 21. (1992). Retrieved from https://sustainabledevelopment.un.org/content/documents/Agenda21.pdf.

Bale, J. M., Senteza, J., & White, T. A. (2013). A Model for Running an Undergraduate Business-Focused Case Competition. *International Research Journal of Applied Finance*, Retrieved from: https://irjaf.com/uploads/IRJAF_case_studies_in_finance_and_accounting_Vol_II.pdf.

Baumberger-Henry, M. (2005). Cooperative learning and case study: does the combination improve students' perception of problem-solving and decision making skills? *Nurse education today*, *25*(3), 238-246.

Böcker, F. (1987). Is case teaching more effective than lecture teaching in business administration? An exploratory analysis. *Interfaces*, *17*(5), 64-71.

Borojević, T., Maletič, M., Petrović, N., Radaković, J. A., Senegačnik, M., & Maletič, D. (2017). Youth Attitudes Towards Goals of a New Sustainable Development Agenda Postawy młodzieży wobec celów Nowej Agendy na rzecz zrównoważonego rozwoju. *PROBLEMY EKOROZWOJU*, *12*(2), 161-172.

Burko, L. M. (2016). Using the case study method in teaching college physics. *The Physics Teacher*, *54*(7), 413-415.

Christensen, C. M., & Carlile, P. R. (2009) Course research: Using the Case Method to Build and Teach Management Theory, Retrieved from: http://www.thefgi.net/wp-content/uploads/2010/09/Theory-Building-Paper.pdf.

Cullen, J., Richardson, S., & O'Brien, R. (2004). Exploring the teaching potential of empirically-based case studies. *Accounting education, 13*(2), 251-266.

Damnjanovic, V., & Mijatovic, I. (2017). Student Perception of Benefits from Being Engaged in International Case Study Competitions. *Management:Journal Of Sustainable Business And Management Solutions In Emerging Economies, 22*(2), 61-72.

Eisenhardt K.M. (1989). Building theories from case study research, *Academy of Management Review, 14*(4), 532-550.

Erskine, J.A., Leenders, M.R., & Mauffette-Leenders, L.A. *Teaching with cases*. London: Ivey Publishing.

Gamble, E. N. & Jelley, R. B. (2014). The Case for Competition: Learning About Evidence-Based Management through Case Competition. *Academy of Management Learning & Education, 13*(3), 433-445.

Healy, M., & McCutcheon, M. (2010). Teaching with case studies: An empirical investigation of accounting lecturers' experiences. *Accounting Education: an international journal, 19*(6), 555-567.

Herreid, C. F. (1998). *Sorting potatoes for Miss Bonner*. JCST.

Hershey, L., & Walker, S. (2006). Using the CPPD method of analysis for teaching case studies in the marketing management class. *Marketing Education Review, 16*(2), 45-57.

Iahad, N. A., Mirabolghasemi, M., Mustaffa, N. H., Latif, M. S. A., & Buntat, Y. (2013). Student perception of using case study as a teaching method. *Procedia-Social and Behavioral Sciences*, 93, 2200-2204.

IUCN-UNEP-WWF. (1980). *World Conservation Strategy*. Retrieved from https://portals.iucn.org/library/efiles/edocs/WCS-004.pdf.

Lindeman, C. A. (2000). The future of nursing education. *Journal of Nursing Education, 39*(1), 5.

Makajic-Nikolic, D., Petrovic, N., Cirovic, M., Vujosevic, M., & Presburger-Ulnikovic, V. (2016). The model of risk assessment of greywater discharges from the Danube River ships. *Journal of Risk Research, 19*(4), 496-514.

Marinković, S. (2010). *Razvoj modela menadžmenta inovacija u uslugama, doktorska disertacija*. Beograd: Fakultet organizacionih nauka. (In Serbian)

McCormick, K., Muhlhauser, E., Norden, B., Hansson, L., Foung, C., Arnfalk, P., Karlsson, M., & Pigretti, D. (2005). Education for sustainable development and the Young Masters Program. *Journal of Cleaner Production, 13*(10-11), 1107-1112.

Millennium Ecosystem Assessment. (2005). *Ecosystems and human well-being: wetlands and water synthesis*. World Resources Institute: Washington, DC.

North American Association for Environmental Education - NAAEE. (1996). *Environmental Education Materials: Guidelines for Excellence*. Rock, Spring, GA, United States of America: NAAEE.

Ozdilek, Z. (2014). Learners' views about using Case study teaching method in an undergraduate level Analytical Chemistry course. *Journal of Baltic Science Education, 13*(5).

Petković, J. (2013). *Razvoj modela tehnološkog predviđanja u preduzeću, doktorska disertacija*. Beograd: Fakultet organizacionih nauka. (In Serbian)

Petrović, N. (2016). *Environmental management*, 3rd edition. Belgrade: Faculty of Organizational Sciences. (In Serbian)

Petrovic, N., Jeremic, V., Petrovic, D., & Cirovic, M. (2014). Modeling the Use of Facebook in Environmental Higher Education. In G. Mallia (Ed.), The Social Classroom: Integrating Social Network Use in Education (pp. 100-119). Hershey, PA: IGI Global. doi:10.4018/978-1-4666-4904-0.ch006.

Radaković, J. A., Petrović, N., Milenković, N., Stanojević, K., & Đoković, A. (2017). Improving Students' Higher Environmental and Climate Change Knowledge: A Case Study. *Polish Journal of Environmental Studies, 26*(6), 1-9.

Rippin, A., Booth, C., Bowie, S., & Jordan, J. (2002). A complex case: Using the case study method to explore uncertainty and ambiguity in undergraduate business education. *Teaching in Higher Education, 7*(4), 429-441.

Sachs, J. D. (2015). *The age of sustainable development*. Columbia University Press: New York City.

Salles, J. A., Salles, L. F., & Pinto, R. F. (2015). A Brief Overview of the Teaching Case Method in Brazil. *Procedia-Social and Behavioral Sciences*, 174, 3641-3644.

Schlossman, S., Gleeson, R., Sedlak, M., & Allen, D. (1994). *The beginnings of graduate management education in the United States*. GMAC Occasional Papers.

Sterling, S. (1990). Environment, development and education: towards a holistic view. In: C. Lacey & R. Williams (Eds.) Deception, Demonstration, Debate: towards a critical education & development education, pp. 119-132, WWF and Kogan Paul: London.

Tanner, C. A. (2002). Clinical education, circa 2010. *Journal of Nursing Education, 41*(2), 51-52.

Tilbury, D. (1995). Environmental education for sustainability: Defining the new focus of environmental education in the 1990s. *Environmental education research, 1*(2), 195-212.

UNESCO - Division of Science, Technical and Environmental Education. (1986). The Balance of Lifekind: An Introduction to the Notion of Human Environment. Retrieved from http://www.unesco.org/education/pdf/333_3.pdf.

UNESCO. (2012). *ESD Sourcebook. Learning & Training Tools, No. 4*. Paris: UNESCO: Paris. Retrieved from http://unesdoc.unesco.org/images/0021/002163/216383e.pdf.

United Nations – UN. (2013a). *Integrated Water Resources Management (IWRM) | International Decade for Action 'Water for Life' 2005-2015*. URL. Retrieved from http://www.un.org/waterforlifedecade/iwrm.shtml.

United Nations – UN. (2013b). *Integrated Water Resources Management (IWRM) | International Decade for Action 'Water for Life' 2005-2015*. URL. Retrieved from http://www.un.org/waterforlifedecade/iwrm.shtml.

United Nations – UN. (2015). *Transforming our world: the 2030 Agenda for Sustainable Development*. Retrieved from https://sustainabledevelopment.un.org/content/documents/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf, 2015.

United Nations Educational Scientific and Cultural Organization – UNESCO, 2006. The 2nd UN World Water Development Report: 'Water, a shared responsibility'. URL. Retrieved from http://webworld.unesco.org/water/wwap/wwdr/wwdr2/pdf/wwdr2_ch_1.pdf.

Weber, M. M., & Kirk, D. J. (2000). Teaching teachers to teach cases: it's not what you know, it's what you ask. *Marketing education review, 10*(2), 59-67.

World Commission on Environment and Development - WCED. (1987). *Our Common Future*. Oxford University Press: Oxford.