

Future managers' responsibility enhancement in the framework of education for sustainable development

Elevación de la responsabilidad de los futuros gerentes en el marco de la educación para el desarrollo sostenible

BOROVA, Tetyana A. [1](#); POHORIELOVA, Tetiana Y. [2](#); PETRENKO, Viktoriia O. [3](#) & BORODAY, Gennadiy P. [4](#)

Received: 23/04/2019 • Approved: 30/08/2019 • Published 16/09/2019

Contents

- [1. Introduction](#)
 - [2. Methodology](#)
 - [3. Results](#)
 - [4. Findings and discussion](#)
 - [5. Conclusion](#)
- [Bibliographic references](#)

ABSTRACT:

In the framework of education for sustainable development agenda future specialists nowadays are expected to undertake greater societal responsibilities. This fact substantiates the need to enhance responsibility of future managers to ensure our sustainable future. Literature analysis reveals that future managers' level of responsibility and learning outcomes can be enhanced by making educational process value and action oriented. The questionnaire conducted reveals that future managers exhibit moderate responsibility and motivation levels and substantiates the need to create a pedagogical environment that would enhance these levels.

Keywords: Education for sustainable development, future managers, HEI, responsibility enhancement, social and personal responsibility, value and action oriented learning environment

RESUMEN:

En el marco de la Educación para el desarrollo sostenible, se espera que los futuros especialistas de hoy vayan a asumir las responsabilidades sociales más grandes. Este hecho confirma la necesidad de elevar la responsabilidad de los futuros gerentes para asegurar nuestro futuro sostenible. El análisis literario revela que el nivel de la responsabilidad y los resultados del aprendizaje de los futuros gerentes pueden mejorarse orientando el proceso educativo hacia el valor y la acción. El cuestionario realizado revela que los futuros gerentes demuestran los niveles moderados de responsabilidad y motivación confirmando la necesidad de crear un ambiente de aprendizaje que ayude a elevar estos niveles.

Palabras clave: Educación para el desarrollo sostenible, futuros gerentes, centros de educación superior, elevación de la responsabilidad, responsabilidad social y personal, ambiente de aprendizaje orientado hacia el valor y la acción.

1. Introduction

Education in the world is currently undergoing major changes in almost every part of the

system to match burning needs of the modern society, which is striving for sustainability. Many paths to sustainability exist and are mentioned in the 40 chapters of Agenda 21, the official document of the 1992 Earth Summit (UNCED Agenda 21: programme of action for sustainable development). Education is one of these paths. The United Nations Decade of Education for Sustainable Development (2005-2014) (DESD) sought to mobilize the educational resources of the world to help create a more sustainable future (Shaping the future we want: UN Decade of Education for Sustainable Development; final report, 2014). The overall goal of the UN DESD was to integrate the principles, values and practices of sustainable development into all aspects of education and learning. This educational effort encouraged changes in behavior that created a more sustainable future in terms of environmental integrity, economic viability, personal and social responsibility and a just society for present and future generations.

The notion of education for sustainability is most commonly associated with basic human values. Education for sustainability denotes a new and expanded understanding of education that signifies taking action based on common values, leading from a living processes paradigm, and creating a collaborative, responsible and reflective educational environment. The overall goal of sustainable education in higher educational institutions is to bring up responsible and thoughtful citizens ready to be accountable for their social interactions (Wodzickowski, 2014, Tilbury, 2013).

Thus, modern society mainstreams the need to promote responsibility in younger generation to ensure our sustainable future. For that very reason, we consider it relevant to study the construct of human responsibility and the professional responsibility of future managers in particular, and identify ways of enhancing the existing responsibility levels of future managers.

2. Methodology

Since publication of the Brundtland Report in 1987, the term "Sustainable Development" has been used as a general guide for global social development (Herweg et al., 2017). The importance of education for sustainable development (ESD) was reinforced in the Outcome Document of the 2012 UN World Conference on Sustainable Development. Many researchers and academics (Freiberg & Brophy, 1999; Watson & Newton & Kim, 2003; Hellison & Martinek, 2006; Lavay & French & Henderson, 2006) consider sustainable approaches in higher education relevant to promoting academic achievement, a safe environment for society, development of responsible behaviors, cognitive and social development.

According to the definitions suggested by Hargreaves & Fink (2006) sustainable education preserves and develops deep learning for all that spreads and lasts, in ways that do no harm and indeed create positive benefit for others around us, now and in the future. According to Jackson sustainable education goes beyond temporary gains in achievement scores to create lasting improvements in learning (Jackson, 2008). This is consistent with M. Fullan who views sustainability as the capacity of a system to engage in the complexities of continuous improvement that is consistent with deep values of human purpose (Fullan, 2005).

The above-mentioned ideas share a common view that educating effectively for sustainability requires education, which is flexible and adaptable, interdisciplinary, collaborative, experiential, locally relevant, value-oriented, future-oriented, learner-centered, problem solving etc. (the UN DESD, final report).

University graduates can play a decisive role in implementing sustainable development agendas after their studies, as they take on positions of responsibility in research, teaching, administration, private industry, civil society, and politics. To participate in societal transformation, students need not only knowledge and skills but also corresponding attitudes and values and the willingness to change. While knowledge and skills can be built up and tested within the framework of lessons as learning outcomes, attitudes, values, and motivation and responsible behaviors often only manifest themselves in actions after one's studies. (Herweg et al., 2017). Thus, the dimensions of "willingness" and "responsibility" are essential in a search, learning, and shaping process.

Hattie (2011) mentioned about the nature and aims of education. The researcher highlights that education is never neutral, and its fundamental purpose is intervention or behavior change (p. 132). Students` desire to implement knowledge and skills cannot be tested in a course, but it can be stimulated, by discussing attitudes, mindsets and values with the students. If systems knowledge is built up at the same time and concern is triggered, a sense of responsibility is promoted and realistic visions for action are demonstrated and developed, and, as a result, the chances to improve those knowledge and skills are also implemented (Wiek & Withycombe & Redman, 2011; Herweg et al., 2017).

According to Lambert (2011), the following pedagogical strategies for leadership and responsibility development include critical reflection, dialogue, an integral, global orientation, awareness of context, and authentic relationships.

Thus, literature review reveals the fact that in today`s realities future specialists are expected to take greater societal responsibilities and manifest themselves in actions as responsible professionals. Most scholars believe that the levels of responsibility as well as learning outcomes of students can be enhanced by making educational process value and action oriented. This necessitates enhancing responsibility of future managers to address sustainable development through a balance between specialized expertise, inter-disciplinary competence, value orientation and social engagement and finally produce competitive professionals. Thus, the aim of the article is to specify the ways to create such a learning environment that would enhance responsibility of future managers.

The methods of research, used in the study, included theoretical methods (analysis, interpretation and generalization), empirical methods (observation, interviews, and questionnaires), and statistical analysis of the findings.

3. Results

After in-depth analysis and generalization of the concept of ESD and pedagogical literature in the researching field, we have found out that it is necessary to create such pedagogical environment that would enhance the responsibility level of students. We share a common view that value and action oriented learning is essential to sustainability education and to enhancing responsibility because it signifies, as Lambert (2011) underlines, "a deep cultural shift in the basic premises of thought, feeling that action ... dramatically and permanently alters our being in the world". This shift can alter our understanding of ourselves, our relationships with the earth, our vision, sense of possibilities for social justice, different ways of living, and personal joy.

One of the ways to create value and action oriented learning environment is strengthening students` sense of community and deepening their sense of belonging to a region. In the light of this idea we assume that strengthening future managers` sense of community and deepening their sense of connectedness will facilitate the development of responsible collaboration and hence enhance their managerial skills. In this regard we rely on the idea that effective managers are to bring people together to collaboratively create a shared vision and strategies for change. We agree with Cook`s suggestion that in order to develop management skills, students need opportunities to create environments of collaboration instead of competition (Cook, 2014). Based upon this approach it is very important to organize special training courses for students how to operate in a local community by engaging in problem solving and project work. This can be provided by engaging student in hands-on training and industrial work practice.

Secondly, building an authentic and trusting learning community within the classroom will strengthen future managers` sense of belonging and encourage responsible collaboration. This learning community should provide students with the opportunity to express their values and beliefs. Building relationships within a learning community also requires individuals to reflect on how they relate to other individuals and the community as a whole. According to L. Jackson (2008), by engaging in collaborative projects, students have the opportunity to make new relationships, to relate to and appreciate those different from themselves, and to practice communication and professional skills. Therefore, creating supportive and connected learning environment is crucial for developing future managers`

ability to explore their own responsibilities. By practicing leadership and exercising responsibility in a meaningful context, future managers have the opportunity to support others while also experiencing personal growth.

Another way to create value and action oriented learning environment is building and strengthening students' motivation towards learning process. In this idea we relied on the fact that motivation, both intrinsic and extrinsic, cuts across all areas of human activity and is a key factor in the success of students at all stages of their education (Cotton and Winter, 2010, Lambert, 2011, Hattie, 2011). Working with future managers to identify topics they are passionate about or where they see themselves having opportunities to work for change can help them to take ownership of their experiences and practices and ultimately connect more deeply with the idea of themselves as responsible leaders.

Higher education institutions themselves can be the key stakeholders to advance the crucial role of responsibility upon encouraging and empowering individual researchers and teachers to make a substantial contribution to fostering sustainability values in higher education by the following actions: working actively together with experts from other academic disciplines and non-academic stakeholders, both in research and in knowledge transfer, assuring close cooperation between researchers and teachers.

In the frame of our research with a view to identify the existing responsibility levels of students and find out whether there is a need to enhance their sense of responsibility, we conducted a questionnaire survey among students of S. Kuznets Kharkiv National University of Economics that specialize in management. The participants were 54 university students who completed the questionnaires.

We used a self-reported questionnaire developed by Watson et al. (2003). The authors of the questionnaire believe that studying the concept of human responsibility at two levels (social and personal) increases clarity and accuracy of the findings. The questionnaire consists of two core factors (social responsibility and personal responsibility) with seven items for each core factor and assesses individuals' perceptions of social and personal responsibility. The assumption was that the core factor, associated with personal responsibility and the second one, associated with social responsibility would combine to identify corresponding factors, which would be positively related to each other. The participants were supposed to rank the statements from 1 to 10 in accordance with the degree of consent with the statement. The questions were the following:

Factor 1. Social responsibility

1. I respect others; 2. I respect my teacher(s); 3. I help others; 4. I encourage others; 5. I am kind to others; 6. I control my temper; 7. I am helpful to others.

Factor 2. Personal responsibility

8. I participate in all of the activities; 9. I try hard; 10. I set goals for myself; 11. I try hard even if I do not like the activity; 12. I want to improve; 13. I give a good effort; 14. I make goals.

To process the results of the current survey, we used the method of factor analysis (Nasledov, 2006). Thus, the array of initial data is two matrices of size 54x7, where 7 is the number of variables (questionnaire statements) and 54 is the number of respondents. One matrix (factor 1) is designed for studying students' social responsibility, the second one (factor 2) – to identify their levels of personal responsibility.

The purpose of the questionnaire was to trace and compare the existing perception of the social and personal responsibility of students and examine how it relates to the levels of their motivation in the learning process. It was hypothesized that participants who exhibited high levels of social and personal responsibility would report greater personal motivation and would likely be more disposed to enhancing their professional responsibility in the learning process.

Table 1 features the levels of factor 1 (social responsibility, questionnaire statements 1-7) of the surveyed students. The table shows the answer data of ten randomly chosen questionnaires based on the data reduction principle.

Table 1

STUDENT	gender	age	Questionnaire statements (1-7)							SUM
			1	2	3	4	5	6	7	
1	F	17	1,35	0,8	2,4	0,6	0,6	0,7	1,2	7,65
2	F	17	1,2	0,8	2,7	0,8	0,7	0,7	1,2	8,10
3	F	18	1,5	0,9	2,7	0,9	0,9	0,9	1,05	8,85
4	M	17	0,9	0,8	1,5	0,7	0,4	1	1,2	6,50
5	F	17	1,35	0,9	2,1	0,6	0,7	0,7	1,2	7,55
6	F	17	1,05	1	2,1	0,5	0,8	0,8	0,9	7,15
7	F	17	1,2	0,8	2,7	0,9	0,5	0,7	1,35	8,15
8	M	18	0,75	0,8	2,4	0,7	0,6	0,5	1,05	8,15
9	F	17	1,2	1	2,1	0,5	0,5	0,8	1,05	6,30
10	F	17	1,2	0,9	2,4	0,7	0,7	0,8	1,2	7,15

4. Findings and discussion

4.1. Analysis of social responsibility

According to the factor analysis, the number of corresponding factors is determined by considering the table of characteristic values of the correlation matrix and the number of factors that is equal to the number of components, which characteristic values are greater than one. In this case, there are two characteristic values. Therefore, we assume that the number of corresponding factors, which determine the level of social responsibility, is two.

The authors of the questionnaire (Watson, Newton, & Kim, 2003) present the following interpretation of corresponding factor 1 with positive value: "Developed social and communicative competence; the ability to help others in solving various problems." The interpretation of the corresponding factor 2 is "Developed level of empathy, ability to listen and understand others". A respondent with a higher factor loading is characterized by a higher level of display of the corresponding factor. Positive factor scales refer to the respondents with factor levels greater than average, and negative – below average accordingly.

The number of respondents who exhibit both positive factors and the first factor coefficient is greater than 1 (the highest level on both factors) is 9 out of 54 respondents (16.6%). The number of respondents with a negative factor and an absolute value greater than 1 (the lowest level on factor 1) is also 9. 18 respondents (33.3%) exhibit both positive factors, 11 (20.4%) exhibit both negative factors, positive value in the first factor is exhibited by 30 out of 54 (55.3%) respondents.

4.2. Analysis of personal responsibility

Here three characteristic values can be traced, thus we assume that the number of

corresponding factors, which determine the level of personal responsibility, is three. According to Watson, Newton, & Kim the first corresponding factor is "students' formed ability to study", the second is "formed motivation to study", the third is "social activity, finding place in life".

The number of respondents who exhibit the first positive factor and the first factor coefficient is greater than 1 (the highest level of display of ability to learn) is 9 out of 54 respondents (16,6%), the number of respondents with a significant positive (greater than 0.6) in the first factor is 17 (31.5%), all three coefficients are positive – 10 respondents (18.5%), positive in the first and the second – 18 respondents (33.3%), only the first positive – 27 respondents (50%), negative in the first and the second – 11 (20.4%), all the factors negative – 7.4%.

Thus, statistical data indicate that the majority of students exhibit moderate responsibility and motivation levels. About 17% of the surveyed exhibit low levels of responsibility and motivation towards learning and only about 16% of students display high levels of personal and social responsibility and motivation in the learning process. The findings substantiate our initial hypothesis and show that students who exhibit high levels of personal and social responsibility consequently exhibit greater personal motivation in professional education.

The results of the questionnaire survey are consistent with the above-mentioned idea that there is a need to create a pedagogical environment that would enhance the responsibility level of students since lack of students' responsibility and motivation has been revealed. The questionnaire findings reveal the components of social and personal responsibility that need to be enhanced, namely "social and communicative competence", "ability to help others in solving various problems", "level of empathy", "ability to listen and understand others", "ability to study", "motivation to study", "social activity, finding place in life". In this regard, it would be reasonable to contribute to the enhancement of responsibility levels of the surveyed students based on the above ways.

5. Conclusion

The carried out research reveals the fact that in the framework of education for sustainable development future specialists are expected to take greater responsibilities and manifest themselves in actions as responsible professional. In this regard, there is a need to enhance responsibility of future managers to ensure our sustainable future. Most scholars believe that the levels of responsibility as well as learning outcomes of students can be enhanced by making educational process value and action oriented. We assume that this goal can be achieved by strengthening students' sense of community, building an authentic and trusting learning environment within the classroom and improving students' motivation towards learning process. We conducted a questionnaire survey aimed to identify the existing responsibility levels of 54 students that specialize in management and find out whether there is a need to enhance their sense of responsibility. Statistical findings indicate that the majority of students exhibit moderate responsibility and motivation levels and substantiate the need to create a pedagogical environment that would enhance their responsibility levels.

Bibliographic references

Cook John, W., (2014). Sustainable School Leadership: The Teachers' Perspective. NCPEA International Journal of Educational Leadership Preparation, 9 (1).

Cotton, D., & Winter, J. (2010). It's not just bits of paper and light bulbs. A review of sustainability pedagogies and their potential for use in higher education. In: P. Jones, D. Selby, & S. Sterling (Eds.), Sustainability Education: Perspectives and Practice across Higher Education, New York, NY: Earthscan, 39–54.

Freiberg, H. J., & Brophy, J. E. (1999). Beyond behaviorism: Changing the classroom management paradigm. Boston, MA: Allyn and Bacon.

Fullan, M. (2005). Leadership & Sustainability: System Thinkers in Action Corwin Press.

Hargreaves, A. & Fink, D., (2006). Sustainable leadership. San Francisco: Wiley & Sons.

Hattie, J. (2011). Which strategies best enhance teaching and learning in higher education? In: Mashek D, Hammer EY, eds. *Empirical Research in Teaching and Learning*. Oxford: Wiley-Blackwell, 130–142.

Herweg, K, Zimmermann, AB, Lundsgaard, Hansen L, Tribelhorn, T, Hammer, T, Tanner, RP, Trechsel, L, Bieri, S, Kläy, A. 2017. *Integrating Sustainable Development into Higher Education – Guidelines with In-depth Modules for the University of Bern*. Foundations. Bern: University of Bern, Vice-Rectorate Quality, Vice-Rectorate Teaching, Centre for Development and Environment (CDE), Educational Development Unit (ZUW), and Bern Open Publishing (BOP).

Hellison, D., Martinek, T. (2006). Social and individual responsibility programs. In: D. Kirk, D. Macdonald, & M. O'Sullivan (Eds.), *The handbook of physical education*, Thousand Oaks, CA: Sage, 610-626.

Jackson, Liz., (2008). *Leading sustainable schools: what the research tells us*. National College.

Lambert, S., (2011). Sustainable leadership and the implication for the general further education, college sector. *Journal of Further and Higher Education*, 35(1), Bedford, UK.

Lavay, B. W., French, R., Henderson, H. L. (2006). *Positive behavior management in a physical activity setting* (2nd ed.). Champaign, IL: Human Kinetics Publishers.

Nasledov A.D. (2006) *Mathematical methods of psychological research*. [Text]: Textbook / A.D. Of the heirs. - SPb.

Shaping the future we want: UN Decade of Education for Sustainable Development; final report / [Buckler C., Creech H., Bokova I.]. – Paris: UNESCO, 2014.

Tilbury, D. and Ryan, A. (2013). *A Guide to Quality and Education for Sustainability in Higher Education*. (Retrieved from: <http://efsandquality.glos.ac.uk/>).

Watson, D.L., Newton, M., & Kim, M. (2003). Recognition of values-based constructs in a summer physical activity program. *Urban Review*, 35, 217–232.

Wiek, Arnim, Withycombe, Lauren, & Redman, Charles L. (2011). Key competencies in sustainability: a reference framework for academic program development. *Sustainability Science*, 6(2), 203–218. (Retrieved from <http://link.springer.com.proxy.lib.umich.edu/article/10.1007/s11625-011-0132-6>)

Wodzickowski, C. (2014) *The Values and Principles of Sustainable Development in the Policy and Legislation of the Republic of Poland* / Czesław Wodzickowski. // *Studia Ecologiae et Bioethicae*. №12, 151–170.

UNCED (1992). *Agenda 21: programme of action for sustainable development*. Rio declaration on environment and development, New York: United Nations.

1. Doctor of Science (Pedagogy), professor, chair of the department of Pedagogy, Foreign Philology and Translation, Simon Kuznetz Kharkiv National University of Economics borovat71@gmail.com

2. Lecturer of the department of Pedagogy, Foreign Philology and Translation, PhD student, Simon Kuznetz Kharkiv National University of Economics. tatipogorelova@gmail.com

3. PhD in Pedagogical sciences, associate professor of the department of Pedagogy, Foreign Philology and Translation, Simon Kuznets Kharkiv National University of Economics. viktorija.petrenko@gmail.com

4. PhD in Math and Mechanics, associate professor of the department of Math and Physics, Municipal Establishment "Kharkiv Humanitarian Pedagogical Academy" Kharkiv Regional Council. genboroday@ukr.net
