SUSTAINABLE DEVELOPMENT AND PRO-ECOLOGICAL EDUCATION IN THE OPINION OF STUDENTS OF MANAGEMENT

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Abstract

Modern socio-economic factors offer increasingly convenient living conditions to members of well-developed societies. According to scholars in the field of social, economic and environmental fields, the development is accompanied by several undesirable actions of individuals and social groups. In light of sustainable development, education has become one of the most pressing social challenges. Environmental education ought to be pursued on each education level. The development of attitudes of students graduating from universities and embarking on their careers is of particular significance in this context.

The subject matter of the paper pertains to attitudes towards sustainable development and pro-ecological education of students representing selected universities in Lublin. The objective of the study was to identify and examine the students’ interest in the subject of sustainable development and ecology as well as initiatives undertaken in order to improve competences in these fields. The sample consisted of students of management. Such students will prospectively be employed as managers or become entrepreneurs, and thus, will assume responsibility for establishing directions organizations will follow.

Empirical studies were conducted by means of a diagnostic poll with the application of a random survey. The survey was carried out in 2017 among the students of management at two state universities in Lublin – Maria Curie-Sklodowska University (MCSU) and Lublin University of Technology (LUT). Due to the fact that the objective of the study was associated with establishing students’ opinions on sustainable development and pro-ecological initiatives, the questionnaire addressed students graduating from undergraduate and graduate studies.

Research results revealed several factors determining the development of environmental awareness and emergence of sustainable development. These encompass e.g. sex, grade point average, respondents’ occupational situation. The results served as a basis for formulating practical recommendations pertaining to the development of competences regarding sustainable development and awareness as well as pro-ecological initiatives.

Keywords: sustainable development, environmental education, students of management, shaping students' attitudes, students' opinions, higher education.

1 INTRODUCTION

Recently, the literature of the subject has primarily discussed the issue of sustainable development. The issue aroused the interest of management scholars and practitioners as a response to the current excessive degradation of the natural environment ([5], [18], [3]). According to scholars, factors which highly contribute to the current state of affairs include excessive exploitation of the ecosystem, urbanization, industrialization, motorization, informatization, demographic issues, natural disasters, etc. ([17]). Sustainable development is discussed in literature in three aspects- economic, environmental and social ([11]).

In 2015, the United Nations accepted a new global Agenda 2030 on the Sustainable Development, as well as its tools – 17 Sustainable Development Goals (and 169 actions associated with these) ([22]). The Agenda 2030’s motto is the following: “no one will be left behind”. In order to arrive at the objective, member states ought to significantly modify their operations in relation to both external policies and internal actions and embrace new, sustainable means of development of economies and societies ([2], [7], [8]).

In 2018, the Intergovernmental Panel on Climate Change ([9]) published the latest climate report signed by 91 researchers representing 40 countries. They analyzed over 6 thousand research studies.
pertaining to global warming and came to the conclusion that our civilization had merely 12 years to
halt global warming at the level of 1.5 degrees. If we fail, the process will become irreversible.
Scholars indicated several dramatic outcomes advancing global warming may result in. These include
e.g. drought-induced food shortage, increase of deaths and fires due to excessive heat, increasing
levels of oceans and seas, threats to the natural environment (e.g. disappearance of half of the insect
pollinators population, 1% of coral reefs to remain). In order to prevent such forecasts from
materializing, a drastic reduction of CO₂ emissions ought to be pursued. This seems highly difficult at
present. Therefore, actions increasing the awareness of societies along with pro-environmental
education are critical.

Environmental education pertains to the understanding between people and nature, popularization of
deo-friendly patterns of behavior, pursuit of solutions to pressing environmental, demographic and
social problems. In face of the global environmental crisis, this type of education may prove to be the
most successful way of developing a social and intellectual basis for the principles of sustainable
development to be introduced ([15]). Scholars evaluating the pro-environmental behaviors of modern
societies indicate that respondents generally agree that the state of the natural environment depends
upon the eco-friendly behavior of individuals. In spite of the above, few respondents of the hitherto
studies declare any activity in this respect ([24], [6], [16], [14]). Authors of studies advocate a necessity
of introducing educational activities addressing suitable components of the pro-environmental attitude.

Environmental education ought to be global in character. As a consequence, it attracted the interest of
the signatory states of the United Nations, UNESCO, European Union, etc. The education of the youth
occupies a prime position in directives concerning education-related actions. The actions revolve
around providing young people with access to existing forms of education, alternative means of
education, as well as including the youth in planning and delivery of pro-environmental programs.
Despite the need for environmental education being featured in several documents and programs
developed by international bodies, the literature indicates that the youth manifest a low level of
environmental awareness. In addition, this social group is characterized by the lowest care for the
state of the surrounding environment ([24], [16]).

The gap in environmental behavior which was diagnosed by researchers proves the need for the
environmental education effort to be intensified ([12], [6]). Universities ought to play a strong part in
the process due to the fact that their role is associated with the development of knowledge, skills and
attitudes of the youth. This is one of the aspects of actions to be undertaken in the scope of social
responsibility. It is a consequence of the fact that universities train young people to function
independently on labor market. They do so not only via course-specific classes, but by enabling
students to undertake various activities ([10], [4]). It is important that graduates understand their role in
shaping the market in accordance with environmental principles and sustainable development. Special
focus ought to be placed upon the development of competences enhancing pro-environmental
behaviors of the youth, such as pro-activity, innovativeness, interdisciplinarity ([23], [1], [20], [19]).

2 METHODOLOGY

The subject matter of the paper pertains to attitudes towards sustainable development and
environmental education of students representing selected universities in Lublin. The objective of the
study was to identify and examine the students' interest in the subject of sustainable development and
ecology as well as initiatives undertaken in order to improve competences in these fields.

Respondents were selected according to their profile of studies. Due to the fact that the graduates of
managerial studies are more likely to manage organizations and set directions of their functioning, this
profile was selected for the present study. Ultimately, the study was conducted among the students of
management at two state universities in Lublin: Maria Curie-Skłodowska University (MCSU) and
Lublin University of Technology (LUT). Due to the fact that the analysis examined the state of
respondents' knowledge, the sample encompassed students graduating from (Bachelor's)
dergraduate studies and students of the graduate course. The survey questionnaire was completed
by 325 respondents (57% of them represented MCSU, 42% LUT). The students of the final year of the
undergraduate course constituted 42% of the sample, the remaining part (58%) represented graduate
studies. The sample was characterized with regard to sex, place of origin, financial and occupational
situation, and grade point average from the previous year of studies. With regard to sex, women
constituted 64% of the sample. As far as the place of origin is concerned, over half of the sample
(57%) consisted of students coming from cities. 53% of respondents were employed (and studying at
the same time). With regard to financial situation, 54% of respondents defined it as good, 44% as
average, and merely 2% as difficult. The sample was divided into two sub-groups with regard to the grade point average. The average of 4.00 was stated by 37% of respondents.

The study was conducted in May 2017 by means of a diagnostic poll with the application of a random survey. On the basis of the review of literature, a survey questionnaire was developed in order to collect empirical data. The questionnaire consisted of 17 questions pertaining to environmental education, actions in environment protection, and attitudes towards the acquisition of knowledge regarding the subject matter.

The results of the study were analyzed statistically. The values of the analyzed parameters in the nominal scale were characterized by means of the quantity and percentages. In order to determine the relationships among the analyzed features, the \( \chi^2 \) test of independence was applied. The paper made a premise that the fallacy risk amounted to 5%. The results of the test were considered as statistically relevant if they scored \( p<0.05 \).

3 RESULTS
Advancing degradation of the natural environment constitutes one of the most pressing problems of the modern world. As a consequence, the adequate education of young generations so that they protect the surrounding environment is a crucial task. Education associated with the issue is critical, especially in management-related courses. The considerable impact of schools upon the development of pro-environmental attitudes is highlighted by the fact that 74% of respondents believe that it is schools which are responsible for the development of such attitudes. The remaining factors, such as media (61% of scores), national policies (46%), surroundings (54%), environmental institutions (30%), are also indicated as important in the process. However, it is schools which are considered key in the issue.

Environmental education ought to constitute a perpetual process starting as early as pre-school and continued at every stage of education. When assessing the hitherto environmental education, respondents observed that it has not fully satisfied their expectations. Only one in ten respondents admitted that the hitherto education improved their behavior related to the natural environment. Merely 18% of respondents raised their environmental awareness. It ought to be noted that MCSU students state that the hitherto environmental education raised their environmental awareness more frequently than LUT students \( (p=0.037) \). The remaining respondents (71%) were not satisfied with their education and observed that environmental education did not meet their expectations (51% of respondents), and did not change their attitude towards the natural environment (18%), and that it was utterly useless (3%).

Unfortunately, despite obvious shortages in environmental education, 37% of respondents observed they did not need to expand their knowledge in the field any more. Every fifth respondent had no opinion on the matter. Merely 42% of the surveyed students expressed a clear need to pursue more knowledge. Interestingly, graduate students express a greater need to expand their environment-related knowledge than the students of undergraduate courses \( (p=0.019) \). Such state of affairs may result from the fact that, upon the threshold of their university education, students are more aware of gaps in their knowledge. Moreover, they are more interested in filling these gaps because they have a perspective of employment.

Students of management are particularly interested in the forms of education which depart from traditional forms, e.g. lectures. Respondents prefer learning by direct contact with nature and experiencing outcomes of the inappropriate use of the natural environment (52% of respondents). 37% of respondents believed that the participation in pro-environmental events is a form of activity they would likely pursue. Women stated this inclination more frequently. Respondents frequently mentioned thematic classes given at the university (25% of respondents) and various types of publications (24%). The printed forms are preferred by students who are already employed. This may stem from the necessity of combining education with work, thus their time for additional activities being limited. Merely 16% of respondents preferred other forms of education, such as meetings, seminars, conferences. Courses and trainings were preferred by 11%. This confirms the fact that respondents clearly prefer learning from direct contact and experience.

When analyzing the curricula of management-related studies, it was observed that there were no general classes for all courses directly addressing the issue of environment protection and environmental awareness. This does not mean that the subject does not surface during other classes, e.g. in business ethics. As a consequence, 57% of respondents observed they did not come across
initiatives organized at the university which would raise students’ environmental awareness. Only one in four students stated that the university raises students’ environmental awareness in the course of lectures or other classes discussing environmental issues. It ought to be noted that students of MCSU observe that the lectures and classes raise their environmental awareness more frequently than LUT students (p=0.004). This stems from the fact that the curriculum of MCSU features classes strictly connected with the issue, i.e. “Corporate social responsibility” and “Sustainable development”. However, such classes are offered at merely one out of three majors available in the framework of the management course (i.e. Enterprise Management). This may be the reason behind the relatively few statements concerning the matter. The remaining forms of activity offered at universities include picnics and pro-environment events (11%). Students who live in cities more frequently observe that such events raise their environmental awareness (p=0.001). This is likely to result from a better availability of such initiatives.

The survey questionnaire contains a section of questions aiming to evaluate the students’ basic knowledge of environmental issues and awareness of the impact of organizations upon the natural environment. As a consequence, respondents were requested to state their familiarity with the following terms: sustainable development and corporate social responsibility (CSR). The majority of respondents (73%) were familiar with sustainable development. MCSU students declared the familiarity with the terms significantly more frequently (p=0.012). It is also noteworthy that the students whose grade point average was above 4, indicated the familiarity with the term more frequently. On the other hand, 88% of respondents were familiar with the term CSR, and 65% were able to offer an accurate definition. 12% of respondents declared they were not familiar with the term at all. Much like with sustainable development, the familiarity with CSR was strongly correlated with grade point average- students who averaged above 4 declared the familiarity with the term more frequently than their colleagues with lower grades (p=0.001). Moreover, those employed are frequently more familiar with CSR than their unemployed colleagues. This may result from work experience they gained. On the other hand, with regard to respondents’ opinion concerning entrepreneurs’ attitude to sustainable development, 76% of respondents believe that entrepreneurs ought to devote attention to the problem, 21% had no opinion, and merely 3% believe entrepreneurs need not devote attention to the matter. With regard to sustainable development, respondents were requested to self-assess in relation to the training they received to implement the principles of the theory in practice. 43% of respondents believe they had ample education to apply the principles of sustainable development in their careers. 42% were not convinced as to their knowledge and it was difficult for them to evaluate their training. 15% stated they were not sufficiently prepared. It is noteworthy that MCSU students feel significantly more prepared to implement the principles of sustainable development in their careers than LUT students (p=0.004).

4 CONCLUSIONS

The subject matter of the present paper pertains to the opinions of management students concerning environmental education and sustainable development. Authors decided to pursue the study due to the growing interest in environmental aspects in the context of sustainable development. The impact of men upon the natural environment has been at the locus of research in various disciplines. It is highlighted that the care for the natural environment is not merely a privilege but duty of everyone. Special role is assigned to entrepreneurs and managers, who are responsible for the development of organizational strategies. As a consequence, the adequate training of the manager to implement the principles of sustainable development seems valid. Therefore, the present study focused primarily upon university students of management courses, who, due to their education, may prospectively become a part of the management cadre in enterprises and organizations, which will translate into their impact upon the natural environment becoming stronger.

Adequate education is a critical element of developing the environmental awareness of organizations’ members, especially those in management positions. The situation becomes even more serious because without the familiarity with these issues, the implementation of procedures and tools aiming to protect the natural environment is difficult. As a consequence, environmental problems ought to be featured in curricula at every educational level. The fact that the present content is insufficient is acknowledged by the observation that the majority of respondents (71%) were dissatisfied with their hitherto education by commenting that it did not meet their expectations and did not change their attitude to environment protection. Moreover, close to 50% of respondents feel the need for further education in the matter, and observe they do not feel ready to implement the principles of sustainable development. In addition, not all students graduating from a management course were familiar with
the term corporate social responsibility and sustainable development. In light of the above, adjustments in curricula of such courses are due by the introduction of content associated with sustainable development, ecology, and the impact of individuals upon the natural environment. The changes ought to especially involve the introduction of content which will enable prospective managers to set the direction of their organizations’ operations responsibly and which will enable the actions realized by experts employed in the organizations to be controlled.

It ought to be noted that at MCSU, where one of the majors includes classes discussing corporate social responsibility and sustainable development, students not only declared deeper knowledge in these fields, but also felt better prepared to implement the content in enterprises. As a consequence, when responding to the needs of students, it would be worthwhile to introduce classes discussing environmental issues to the curriculum of all management courses, even as optional classes.

When discussing environmental education, the form of classes must be discussed. Filling the curriculum with appropriate content is one thing. However, presenting it in a compelling way enabling the content to be remembered is another. In the times of globalization and development of ICT, the form ought to meet the requirements of frequently diversified recipient groups. Respondents clearly stated their preference for practical classes. As a consequence, they may become interested in solving tangible business problems, case studies, attending classes taught by practitioners, and field classes enabling direct contact with problems. The establishment of cooperation between universities and entrepreneurs in this respect is advisable. Joint projects, graduation theses which solve practical problems being commissioned, open days, internships in environmentally aware companies, would all help to engage students and develop practical competences ([1], [13], [23]). This type of solutions attracts much interest on the part of universities worldwide as a more effective way of teaching than the traditional lecture ([19], [21]).

The present study has its limits. These limits designate potential directions of further research. Due to the non-random sampling, the results of the study cannot be generalized over the whole population. By focusing upon the opinions of students, the study seems as an introduction and invitation to conduct more in-depth analyses pertaining to the level of education of future managers, especially with regard to sustainable development.

REFERENCES


