

‘Green skills’ of a new generation of managers and entrepreneurs as a potential of company leadership

Oksana Kozlova

Faculty of Economics and Management
Nizhnevartovsk State University
Lenina str. 56, 628605 Nizhnevartovsk
Russian Federation
e-mail: sibomsk@mail.ru

Inna Volkova

Faculty of Economics and Management
Nizhnevartovsk State University
Lenina str. 56, 628605 Nizhnevartovsk
Russian Federation
e-mail: via.uprav@gmail.com

Abstract For many years now, the growth of the economy was accompanied by the irrational use of natural resources, environmental degradation, climate change, the imbalance of the interaction between nature and man. Modern challenges of environmentally friendly policies in most countries require the preparation of future managers and entrepreneurs of the new format, who will also have green skills that will ensure the leadership of companies in the conditions of economic transformation.

This paper discusses heterogeneous approaches to the definition of "green" skills, identifies the main contradictions in their interpretation. The main emphasis is placed on the need to identify key elements that largely reflect the specifics of training managers and entrepreneurs as eco-oriented leaders. The presented studies of students (who are also the future managers) demonstrate a high potential and interest in the development of "green" skills, but also reveal the problem of the need to change the paradigm of education. According to our results, we propose forming a training system taking into account the five main distinguished elements: i) ecological consciousness, ii) ecological culture, iii) social values, iv) innovative thinking, and v) leadership.

1 Introduction

Recent development of a “green economy” is due to a large number of factors associated with the deterioration of the situation in the field of efficient and safe use and management of natural resources (e.g. water, land, biological, etc.).

The transformation of the economy based on the concept of sustainability and a green economy is comparable to key global trends, such as digitalization and globalization (Lubin and Esty 2010). These changes require a revision of the global paradigm of creating a new type of company, initially based on the principles of environmental, economic and social efficiency, and allowing to achieve significant growth and leadership in the markets.

Eco-oriented organizations by their activity create innovative products, use lean technologies, environmentally friendly methods of production and utilization, create demand for eco-products and create new types of jobs (Kozlova 2011). In these circumstances, it is extremely important to form the competences of the “green” leadership of the future generation of young entrepreneurs and managers, which will ensure the economic growth of the country in harmony with the environment and care for future generations (Zhylybayev et al. 2017).

Studying internationally accepted approaches to understanding “green skills, ”one can highlight several of the most used definitions, focusing on the technical skills, knowledge, values and attitudes required by the workforce” (NCVER 2013) abilities necessary for life, development and supporting society, aimed at reducing the negative impact of human activities on the environment (CEDEFOP 2014) and the ability to take environmental issues into account, among others, when making decisions.

The discussion of specialists regarding the definition of "green" skills leads to the conclusion that there is still no common approach to their definition and there is no common understanding for what level of employees they should be formed. However, taking into account the competencies of managers, we can

identify several key parameters reflecting "green skills": environmental and social values and attitudes, the inclusion of environmental problems in management decisions.

Some authors (e.g. Sern et al. 2018) also consider the components of green skills, among which are: design skills, leadership skills, managerial skills, energy skills, urban planning skills, gardening skills, communication skills, skills waste management, procurement and financial skills.

More extensively, "green skills" as a certain type of thinking are considered by Diep and Hartmann (2016) who claim that it includes four main categories: the skill of taking responsibility for environmental protection; social skill to prevent any discrimination; skills to develop innovation and ensure economic growth; skills in their own health, environment and communities.

Based on the presented literature review, it becomes obvious that the definition of "green" skills is extremely important for shaping the ecological culture of the future generation of managers, and this leads to the need to revise the educational process and form new innovative curricula. All these set of measures that would allow creating certain conditions for eco-initiatives of young entrepreneurs and managers.

2 Approaches to "Green Skills": a regional aspect

Objective analysis of the international experience of the countries of the European Union (EU) and the prospects for the development of environmental entrepreneurship is of a great interest and importance for the development of this area in Russia, and the Khanty-Mansiysk Autonomous Okrug-Ugra in particular. Thus, the priority directions of the strategic development of the region in the period 2020-2030 are as follows:

- priority in the development of a "green economy" (prevention of harm to the natural environment and vital interests of the population using innovative means of a green economy);
- formation of the "Lean Region" concept (rational and safe use of the existing natural-resource potential);
- development of small and medium-sized businesses in the region (improvement of innovation policy, increasing the role of small and medium-sized businesses in the economy (Khanty-Mansiysk Strategy 2019)

The presented directions actualize the issues of training specialists and managers of the new generation taking into account the development of "green skills".

Most universities build a chain of environmental competence formation from studying individual issues within traditional disciplines to specialized courses. The most active training on the formation of "green" skills was used at the Faculty of Economics and Management of Nizhnevartovsk State University in the framework of the project "Development of" green skills "in the field of entrepreneurship and business based on European experience", which takes place with the financial support of the European Commission on the Jean Monnet.

To assess the need for the formation of "green" skills among future specialists, two studies were conducted, the purpose of which was to identify the need and awareness of future managers and specialists in obtaining and developing additional skills and their role in the future activities of specialists.

The first study was conducted before the start of the implementation of the "Eco-entrepreneurship" course, the second study was conducted based on its results. The respondents were students of the Faculty of Economics and Management, training areas: "Management"; "Trading" and "Pedagogical Education" (Economics profile). The initial survey was conducted from January to February 2018, 92 students of 2-4 courses took part in it, full-time studies, the second survey was conducted with graduates of the course in May 2018 (37 respondents).

In course of the survey, it came through that 18.6% of students have a desire to become entrepreneurs; 64.8% see themselves in the future as highly qualified specialists and are ready to put their knowledge in the field of management, marketing, economics into practice, 16.6% could not clearly articulate their life position.

The survey results also showed that 60% of respondents have a clear idea of the essence, content and significance of environmental entrepreneurship, 36% could not identify the features and distinctive characteristics of entrepreneurship in the field of ecology, 4% did not have a clue about this direction. It should be noted that future marketers were better oriented than others in modern environmental business.

Students were also asked to evaluate, on a five-point scale, the importance of "green" skills in a personal career path and taking into account future professional activities. The need for the formation of environmental competencies was estimated at 3.1 points, which shows the overall average level of interest in the development of this type of skills.

Students' participation in the optional Eco-entrepreneurship course, which addressed the development of a green economy, the development of eco-innovation, methods of generating consumer demand,

promoting eco-products on the market, developing new management technologies taking into account environmental orientation and social responsibility of business, and eco-oriented business projects prepared by students allowed them to take a fresh look at the formation of "green" skills.

The open-ended question whether this course has changed anything in your training and personal life experience received 100% positive answers. Among the main answers the following ones were mentioned:

- seriously changed consumer behaviour and attitude to the environment;
- the course allowed to see new opportunities in entrepreneurship;
- the course revealed the potential for combining social, economic and environmental effects in entrepreneurship;
- the perceived value of developing a green economy has increased;
- the course influenced personal qualities for the better, as many social aspects were considered

Additionally, the survey assessed the prospects for the development of eco-entrepreneurship among the student audience, the results of which are presented in Table 1. A significant number of students highly appreciated these opportunities (67%), and to a greater extent we highlighted professional awareness in the submitted answers, as students could to assess both the potential and development risks of eco-initiatives at a higher level, which in our opinion is a very important element in the training of specialists.

Table 1. Assessment of the development of eco-entrepreneurship among the youth of the region

Answers	% of respondents	Notes
Yes	67	- rather with a focus on the use of individual elements in business processes - subject to state support for young entrepreneurs and the formation of demand on the basis of social advertising of public organizations - for those entrepreneurs who see it as their mission to contribute to a better environment but
No	33	- high level of risk in business - young entrepreneurs are not focused on caring for the environment and are not willing to invest in this effort and money - not enough knowledge about the opportunities and prospects of eco-entrepreneurship

Source: Own results

Based on the research, it becomes obvious that it is necessary to use an integrated set of topics and disciplines for the formation of "green" skills among future managers and entrepreneurs. Currently, state educational standards mostly address issues of corporate social responsibility, which is clearly an insufficient resource for changing the thinking of students. The most effective way is the introduction of additional elective disciplines aimed at the formation of the modern most in-demand skills on the part of changing processes in the economy and society.

3 Development paradigms of "green" skills among managers and entrepreneurs

On the basis of the presented literature review, research and experience with future young managers and entrepreneurs, it seems necessary to reflect, in our opinion, the most holistic paradigm of developing green skills in the future generation of managers.

Taking into account the fact that, with the environmental orientation of business, the corporate governance system should become more proactive, holistic and oriented towards a long-term orientation in development, it is necessary to form five main components for developing green skills: environmental awareness, environmental culture, social values, innovation thinking and leadership. It is on the basis of the integration of these elements that future managers will be able to make management decisions in the field of green economy at a more professional level.

At the heart of all the elements is the "environmental consciousness", which is formed at all levels of education from preschool education to higher education. In the modern aspect, the concept of ecological consciousness should be understood: "awareness of people's dependence on the rest of nature and awareness of the impact that they have on the environment." Consciousness means not only the appropriate

level of knowledge, but also its rational and emotional assimilation, which contributes to the management of certain actions (Demenshin 2017).

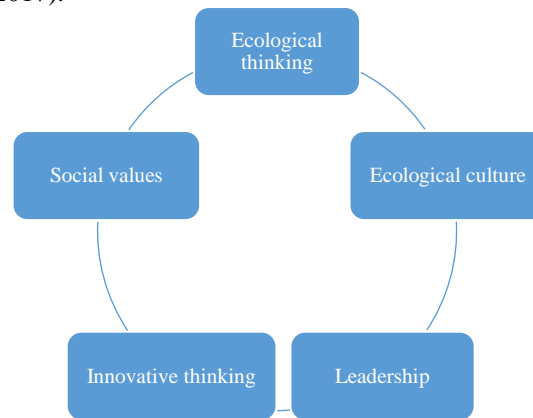


Fig.1. Integration of elements that determine the formation of "green" skills of managers
Source: Own results

Famous business psychologist LaBier (2012) considers the need for development in “greener” deeper processes, such as knowledge of environmental norms, values, and rules of conduct, which increase the level of environmental culture, which becomes an incentive for the development of harmonized practical activities between society and nature.

The range of social values is quite diverse: these values are moral and ethical, ideological, aesthetic, etc. The most important function of social values is to play the role of selection criteria from alternative methods of action, which, based on certain measures, allows you to make a conscious management decision.

The development of innovative thinking is aimed at providing innovation, carried out at the cognitive and instrumental levels, characterized as creative, scientific-theoretical, socially positive, constructive, transformative, and practical (see Usoltsev and Smalo 2014).

It should be noted that the formation of these four elements in the formation of "green" skills will not be able to ensure sufficient growth of the company. In this case, there is a need for "transformational leadership", which can contribute to the introduction of new ideas, providing vision, motivation and intellectual stimulation of followers. Green transformational leadership can be defined as “the behaviour of leaders who motivate to achieve environmental goals and inspire followers to perform above the expected levels of environmental indicators (Chen et al. 2014).

Additionally, the business psychologist LaBier (2012) considers the need to develop in “green” leaders deeper processes related to changing mentality, based on three components: self-analysis and self-reflection on values and leadership behaviour, empathy and compassion, as well as working with changing social attitudes and the needs of workers.

A holistic approach to the formation of "green" managerial skills will allow young managers and entrepreneurs to consciously choose effective eco-initiatives, commercialize new green innovations, form an ecological corporate culture and make leadership decisions based on social values.

4 Conclusions

Overall, it appears that the new challenges of the “green economy” primarily determine the need for transformation of the preparation of the future generation of managers and entrepreneurs who will ensure the leadership of companies through the modernization of the management system. The analysis made it possible to identify several approaches to the understanding of "green" skills, and to determine the need to use different meaningful elements based on different categories of employees.

The presented experience of the implementation of a course on eco-entrepreneurship among students, and the studies conducted reflect, on the one hand, a high potential for developing green skills, on the other hand, they determine the need to change the paradigm of education. Based on our results we propose to form a training system taking into account the five main distinguished elements: i) ecological consciousness, ii) ecological culture, iii) social values, iv) innovative thinking, and v) leadership.

Our review of the existing literature and the analysis of the situation in the preparation of future specialists complemented the existing research in this area to a greater extent by focusing on the training of managers and entrepreneurs. However, the questions raised regarding the change in the paradigm of

education and the mentality of future leaders require serious further elaboration and the possibility of formulating certain competencies when training in higher educational institutions.

Acknowledgements

This paper was funded by the project "Development of Green Skills" in the Field of Entrepreneurship and Business Based on the European Experience" No. 587650-EPP-1-2017-1-RU-EPPJMO-MODULE which takes place with the financial support of the European Commission's Jean Program Monnet. The content of this paper reflects the opinion of the authors, while the European Commission is not responsible for the use of the views and opinions presented in the paper.

References

- CEDEFOP (2014) Green skills and environmental awareness in vocational education and training. European Centre for the Development of Vocational Training, Luxembourg
- Chen YS, Chang CH, Lin YH (2014) Green Transformational leadership and green performance: The mediation effects of green mindfulness and green self-efficacy. *Sustainability* 6(10):6604-6621. doi:10.3390/su6106604
- Demenshin V (2017) Review of foreign studies of environmental awareness. *Internet Journal "World of Science"* 5(5). <https://mir-nauki.com/PDF/18PSMN517.pdf> Accessed 11 April 2019
- Diep PC, Hartmann M (2016) Green Skills in Vocational Teacher Education – a model of pedagogical competence for a world of sustainable development. In: *TVET@Asia*, issue 6, 1-19. Online access from: http://www.tvet-online.asia/issue6/diep_hartmann_tviet6.pdf
- Khanty-Mansiysk Strategy (2019) The strategy of socio-economic development of the Khanty-Mansiysk Autonomous Okrug - Ugra until 2030. http://www.ugra2030.admhmao.ru/strategy/full/30_года Accessed 19 January 2019
- Kozlova O (2011) Ecological marketing: a new conceptual approach and a strategic potential of manufacturers. *Bulletin of Omsk University. Series: Economy* 1:146-155.
- LaBier D (2012) Green Leadership — What Is It? Online access from: https://www.huffingtonpost.com/douglas-labier/green-leadership-what-is-_b_1689916.html Accessed 20 January 2019
- Lubin D, Esty D (2010) The sustainability imperative. *Harvard business review*. <https://hbr.org/2010/05/the-sustainability-imperative>. Accessed 02 April 2019
- NCVER (2013) National Vocational Education and Training Research Online access from: <https://unevoc.unesco.org/go.php?q=TVETipedia+Glossary+A-Z&id=232> Accessed 20 January 2019
- Sern LC, Zaime AF, Foong LM (2018) Green Skills for Green Industry: A Review of Literature. *Journal of Physics Conference Series* 1019(1):012030. doi:10.1088/1742-6596/1019/1/012030
- Usoltsev A, Shmalo T (2014) The concept of innovative thinking. *Pedagogical education in Russia* 1:94-98
- Zhylybayev Zh, Syrymbetova L, Zhetpysbayeva B (2017) The value of "green skills" for the formation of students' ecological culture. *Vestnik KazNPU named after Abay, Series "Pedagogical science"* 1(53):5-10.