

SUSTAINABLE LEADERSHIP SKILLS DEVELOPMENT – LEARNING FROM BEES

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The paper aims to present the development of sustainable leadership skills based on the metaphorical organization of the bees. I hope to identify mechanisms educators could use when developing team leaders. The method used is the qualitative analysis of primary and secondary sources and the analysis of the educational exercise I implemented as a pilot study. I present the exercise I carried out at the School of Economics and Business at the University of Ljubljana for international and domestic students in the winter semester of 2023/24. I have incorporated the research question: “What can we learn from bees in developing future leaders?” into the Stanford Social Innovation Questionnaire. Students have been searching for possibilities to exercise communication, teamwork, and creative problem-solving based on the functioning of bees. The findings show that a limited number of exercises are available that incorporate into leadership skills development natural environment elements. More common is a combination of sports or art as a “playing ground” for developing games or simulations of leadership context. The research limitation in my endeavor is time, as my study is still at its beginning, and I hope to be able to do interdisciplinary research on the topic in the future.

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1 Introduction

“Organisations are organic entities whose survival depends on the environmental harmony they achieve within their dynamic ecosystem” (O’Keeffe, 2005, p. 775). Highly cooperative and socially integrated animal groups like beehives are called “superorganisms.” Also, one of the metaphors of organizations is an organism (Morgan, 2006) with the hope of acting as a superorganism and aligning common goals. The colony acts like an organism in such species despite each animal’s physical individuality. Their features include (Kesebir, 2012): (1) mechanisms that integrate individual units, (2) mechanisms that achieve unity of action, (3) low levels of heritable within-group variation, (4) a common fate, and (5) mechanisms to resolve conflicts of interest in the collective’s favor. Group identification is a key mechanism that activates human superorganismic properties, and threats to the group are a key activating condition. Global warming has raised the attention of management scholars to research if we can learn from such superorganisms how to unite our efforts toward solving global problems that concern all of us, not only managers but every citizen on this planet. Global leadership is necessary, and people need to act toward a common goal of a dignified existence (Fien, 2014; Gloor et al., 2024).

Human learning organization compares to beehive in several ways (O’Keeffe, 2005, p. 768):

“For example, worker bees are totally flexible with regard to their assigned task and will change jobs without a moment’s thought towards personal gain or loss of status. Bees will respond to the needs of the hive even when the welfare in the hive demands the ultimate sacrifice. Worker bees reassign themselves (without supervision) to alternative workstations as one or more sections of the hive come under pressure (bottlenecks), which can be determined by a small change in hive temperature and airflow movements or a sudden shift in the dance routine (board meeting). The queen (chief executive) is elected by popular vote of the workers, not by the old boys’ network or a directive from on high. The communication system is the bee equivalent of broadband, sophisticated, efficient, responsive, open to everyone, and honest”.

In developing the “bee” approach (Kesebir, 2012; O’Malley, 2010; Sousa et al., 2010) to sustainability leadership, the traditional model of the hierarchical leader with strong authority is replaced by the participative leader who works in a team where goals are created through a collaborative decision-making process. Such an approach is essential to leading in times of uncertainty and where the evidence upon which decisions can be made is ambiguous. Leading leadership journals warn us that women can act as queen bees and hinder the promotion of other women (Arwate et al., 2018; Derks et al., 2016). Raja and Riaz (2022) state that not all women exhibit

the queen bee phenomenon. Some women in leadership roles actively support and mentor their female counterparts. Which in turn facilitated their professional advancement opportunities.

2 Methodology

Our method is the qualitative analysis of primary and secondary sources. Qualitative researchers aim to explore people's lived realities and experiences (Green, 2021, p. 114). The interview is a reciprocal negotiation in which “meaning is being made through stories” (Green, 2021, p. 125). The organization is a collective storytelling system (Boje in Mills, 2021, p. 157). Narratives are the outcome of distributed collaborative action as socially constructed discursive forms negotiated between actors who engage each other in storytelling (Mills, 2021, p. 159).

We present the exercise we carried out at the School of Economics and Business at the University of Ljubljana for international and domestic students in the winter semester of 2023/24. We have incorporated the research question: “*What can we learn from bees in developing future leaders?*” into the Stanford Social Innovation Questionnaire. Students have been searching for possibilities to exercise communication, teamwork, and creative problem-solving based on the functioning of bees (O’Keeffe, 2005). The findings show that a very limited number of exercises are already available that incorporate leadership skills development natural environment elements.

3 Findings

On 13th December 2023, we gave our students an exercise where they followed the Stanford Social Innovation methodology. In the second phase, we incorporated the following questions inviting students to think about: 1) What is the role of bees in our food production system?; 2) How can bees become a symbol of sustainable organization?; 3) Can you find similarities in teamwork with beehive organization?; 4) What can we learn from bees?; 5) How often do you eat honey?; 6) How would you raise awareness about the meaning and importance of bees for human existence?

Students discussed in pairs how they developed as managers. They liked the exercise of teamwork, where teamwork leaders gained experience in leading a team and taking on responsibility for the project's outcome. They also practiced asking questions to

the managers, which in the artificial intelligence arena will be one of the most necessary skills (according to Van Quaquebeke, 2023). Prof. Dr. Niels Van Quaquebeke (2023) from Kühne Logistics University, Hamburg, Germany, is one of the top 100 best scientists in the field of business ranking *WirtschaftsWoche*, and he sees artificial intelligence mostly as the force that will demand the shift in research). On 7th December 2023 at the School of economics and business, University of Ljubljana, prof. dr. Van Quaquebeke shared the process and methods of implementing artificial intelligence in research at the business school.

Communicating with other people about the books and papers students read is also important in managing book clubs, which was one of the exercises in the course. Time management is also a valuable skill they would like to excel personally as a student.

Business students perceive the role of bees as our main pollinators. For the students bees are hard-working and efficient and have a clear structure inside their beehive. They have the complex social structure of a bee colony, communication methods, and the division of labor. Students would educate others via the metaphor of the bee so that they would make a theater play and simulate a bee colony that picks »pollen« - knowledge brings it to the company – »home«. It uses it not only for the colony's benefit but also for the human.

We need to state that the students helped themselves with Google and Chat GPT to find information about bees. In this case, with the exercise, they broadened their horizons. They connected knowledge from natural science with social science findings by reading the papers on e-tutor Management regarding teamwork, learning organization, social innovation, and sustainable leadership.

With the exercise of social innovation, students reflected on their management development and thought about their future developmental needs and priorities. Students expressed the need to learn how to encourage people, as this is important for team projects where students needed to manage a team of international students from at least three countries during the semester. Ideas for how students could do this were: 1) long discussions; 2) act as a role model; 3) come up with a good strategy; 4) share your value as a team leader with others; 5) presentation (talking in front of a large audience). Students decided that the best developmental outcome would

come from the competition, where the reward would make them leave their comfort zone and try something new with the team leader. We decided to act on students' feedback and invited company Lek to present their innovation strategy and design a management challenge at the end of our course where the best three solutions to the real-life corporate management challenge would be rewarded in future implementation of the course.

Expert prof. Dr. Valentina Kubale Dvojmoč (19th December 2023) shared a few game ideas for developing teamwork, communication, and creative problems inspired by the bees:

1. *Queen bee*: One member of each team is the "queen bee" and has special duties or rights. Queens must work with other bees (team members) and use their unique abilities to solve common challenges. In doing so, we can encourage creative problem-solving and dependence on each team member.
2. *Bee language*: We can develop a special "bee language" for participants during in-game communication. This language may include special words or symbols that players must use to solve tasks and communicate with each other. We encourage creativity in developing language and using it to solve challenges successfully.
3. *Honey competition*: Each team must develop their bee colony and collect "honey" (points) by solving challenges. Challenges can be related to various fields, from math and science to art and creativity. Teams must decide how to spend their "honey" points to improve their bee colony.
4. *Farming challenge*: Teams must plan and develop a "bee garden" together by choosing the right plants and flowers. To achieve their goals, they must consider how bees choose their flowers and how best to interact with the environment. The game can also include actual garden activities or creating a virtual garden.
5. *Bee industry*: Participants are divided into teams representing beehives. We equip each team with tasks that they must complete to successfully maintain their "hive" (project, task, or challenge). The team must collaborate, communicate, and share information to achieve the hive's goals. For added challenge, we can also add elements of competition between teams, where the winning team receives special

prizes or recognition. Importantly, the game focuses on collaboration, communication, and creativity, encouraging players to think about teamwork in innovative ways.

4 Conclusion

Our globalized world faces many challenges that demand our mindset change and interdisciplinary collaboration. In this paper, I tried to think about what we, as social scientists, can learn from natural science to overcome global challenges. By comparing the complex phenomenon of learning organization (Dimovski et al., 2009; Huybrechts et al., 2020) with the cross-functional activity within a beehive, we aim to stimulate further debate on the true nature of leadership within sustainable organizations (O'Keeffe, 2005). I hope to do further research on the topic with colleagues from both social and natural sciences and develop educational material to develop teamwork, communication, and creative problem-solving.

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