

Part 2

Key Directions and Characteristics of Research Organization in Contemporary World

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Student International Research Project on Employees' Involvement in Innovation: Experience and Outcomes

Abstract

This paper represents the experience and outcomes of a joint education and research project of Østfold University College and Southern Federal University. The project goal is to evolve and strengthen the academic cooperation between the universities by developing joint courses and improving the quality of education via mutual exchange of knowledge. The main methodological approaches, education technologies, and project activities are described. The main focus is on student international research project on employees' involvement in innovation in regional construction industry businesses in Norway and Russia.

Keywords: innovation management, high-involvement innovation, active learning, student research

Introduction

International and multicultural teams have become very common working groups in recent decades due to economic and workforce globalization. This is especially true for those working in the field of innovation and project management. One of the primary skills international managers need today is the ability to cooperate tightly with their counterparts and leverage cultural differences.

On the other hand, management graduates' professional success is impossible without implementing effective training techniques. In this context there is an urgent need for improved international cooperation of educational institutions in carrying out collaborative research and education projects, using active learning instructional strategies, developing joint courses etc.

The objective of this work is to represent the experience and outcomes of an international student research as a part of "Cooperation management education" program, an international initiative between Østfold University College (Norway) and Southern Federal University (Russia) with the support of Norwegian Centre for International Cooperation in Education. The program goal is to evolve and strengthen the academic cooperation between the universities by developing joint courses, improving the quality of education through a mutual exchange of knowledge.

Materials and methods

The project focuses on providing the students of Bachelor and Master in Management programs with integrate research in domestic and international environment, including communication, team building and motivation in international projects, as well as innovative management approach (Andreassen & Makarova, 2015).

The main activities of the project are as follows:

- planning a student research of employees' involvement in innovation in two industries in Russia and Norway (IT and construction), using active learning instructional strategies where research is an integrated part of the education;
- developing and implementing joint lectures and practices with integrated empirical research of firms to provide students with the research methodology and necessary skills, running workshops for competence-building of faculty and staff;
- planning and running international students' workshops (group and mixed group work) and online interaction to ensure consistency of goals and objectives, the research methods and techniques, stimulate intercultural collaboration and carry out the overall research supervision;
- organizing and holding a joint seminar/conference to analyze and discuss the project results, preparing papers for publication.

In terms of the methodology, the project is aimed to use research-based education model to develop student competencies within specific domain, such as innovation management. The "research in education" approach is focused on ways to optimize opportunities for students to actively engage science by direct experience, working on practical cases and field settings, interviewing, collecting evidence, making interpretations, and developing "scientific habits of the mind" (Schweingruber et al, 2007).

To foster student engagement active learning instructional strategies as well as three education technologies are used which are relevant to the project (Andreassen & Makarova, 2015):

- collaborative learning as team work to solve the student research problem (problem based learning, case studies, structured discussions, etc.);
- student research as integrated learning and education method of different forms such as research led education, research based education, research oriented education, and research informed teaching (Griffith, 2004);
- flipped classroom (Abeysekera & Dawson, 2014) as a type of blended learning technology which means that two brick-and-mortar sessions (student groups present their research plans/findings) are organized to stimulate active and social learning activities, while student interaction between these sessions is performed through the use of *Frontier* learning management system as well as *ADOBE Connect* software.

As mentioned above, the student research focuses on employees' involvement in innovation processes in firms within IT and construction industries in the regions of Østfold (Norway) and Taganrog (Russia). Let's consider the student research experience and outcomes in more detail, based on the example of construction industry.

Research shows (Urbancova, 2013) that organisations, regardless of their size, consider innovations and innovative activities important. For an organisation to be innovative is engaging everyone from the chief executive to frontline workers in developing and implementing new ways to reach the organization's goals. Bessant calls such a way of increasing innovation capacity by widening the framework of participation to a wider community "High Involvement Innovation (HII)" (Bessant, 2003).

The objectives of the student research are to define the performance of organisations' HII in construction business of Taganrog and Østfold, to analyze the correlation between HII in the countries so as to determine the potential of organizational innovation development and HII climate improvement in the industry.

The sampling of construction companies in both countries was based on the following criteria: the minimum number of employees (10), company location (Taganrog/Østfold area), and financial stability/yearly revenue (financially sustainable companies/about one million euros). Both teams interviewed company leaders, middle-managers, and frontline workers.

According to Bessant there exist five levels of HII performance which define the organisation's capacity for learning and applying that learning in its day to day operations (Bessant, 2003): level 1 – natural and background improvement, ad hoc and short-term; level 2 – formal attempts to create and sustain HII; level 3 – HII directed at company goals and objectives; level 4 – HII largely self-driven by individuals and groups; level 5 – HII is the dominant culture. Each level in turns is relevant upon an organisation's capacity to achieve eight key abilities to involve employees in innovation and the representative behavior clusters: core values in HII, strategy deployment, leadership, involvement, consistency, cross-boundary, capturing learning, improving the high involvement system. The learning organization is considered to be the highest performance level for an organization's HII, where HII is the dominant culture.

In order to define the level of the HII performance of 9 Russian and 5 Norwegian construction companies and to calculate the HII average value of the construction business areas in Taganrog and Østfold an updated behavioral model questionnaire (Bessant, 2003; Andreassen, 2014) was applied.

Results and discussion

The comparative analysis of the research results showed that the Russian frontline workers identified themselves as the most involved in innovation (3,89), they are followed by the leaders (3,72) and middle managers (3,69). The Norwegian team estimated that the leaders are closely involved in innovation (3,49) followed by the frontline workers (3,13) and middle managers (3,01). Both Russian and Norwegian middle managers state they are worst involved. The reason must be sector-specific issues.

The overall analysis of both industries according to the eight key abilities, showed that the strengths of Taganrog companies are core values in HII (3,93), leadership (3,85), and cross boundary (4,29); the weaknesses being improving the high involvement (3,43), strategy deployment and consistency (3,66), involvement (3,62). The strengths of Østfold businesses are core values in HII (3,48), leadership

(3,28), and cross boundary (3,84); the weaknesses being involvement (2,94), consistency (2,74), strategy deployment (3,09).

The lowest value of Taganrog companies' abilities is improving the high involvement system (3,34) while for Østfold companies this is consistency (2,74). The former can be explained by the fact that the process of continuous improvement could be intentionally slowed down when the current system ensures satisfactory results, the latter – by formal mechanisms malfunctions and a high degree of internal independence. These are crucial points of HII systems that deserve particular attention.

As for HII performance, the overall value of Taganrog industry is 3,76, while the Østfold one is 3,21. In practical terms this means that in both cases the HII is goal oriented, but there is a strong growth potential. Therefore, in order to move to level 4, the companies need to focus on the weaknesses improvement and strengths mastering.

Conclusion

To sum up, we can conclude that the international project of Østfold University College and Southern Federal University, supported by Norwegian Centre for International Cooperation in Education, has successfully engendered partnership between students, universities and industries. The student benefits in the context are numerous: from intercultural collaboration to future carrier opportunities. The research and education integration through a series of joint lectures and workshops provided an insight, students would not have accessed through ordinary curricula.

The project has established an academic and research cooperation of the involved universities through an increase in staff and student mobility, exerting a positive impact on the development of regional businesses and society. The project has been notably successful in providing the opportunity to do a comparative analysis of the employees' involvement in innovation in both Russian and Norwegian regions. The research outcomes may enable managers in the researched businesses to improve their companies' performance and competitiveness.

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