

Strategic Planning and Implementation Process by the Usage of Hoshin Kanri Matrix (Case Study at ASPU)

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Abstract— This research paper investigates the importance of the employers' involvement in the university strategy development and implementation process at the Armenian State Pedagogical University (ASPU).

The university strategy implementation procedures are described using the PDCA cycle and Hoshin Kanri method. This method helped to link the long-term strategies, strategic initiatives, short-term performance activities, and indicators in one matrix.

Keywords—Strategic planning, employers' satisfaction, employability attributes, PDCA cycle, Hoshin Kanri method, action plan, soft skills.

I. INTRODUCTION

The cooperation between stakeholders is essential for the success of organizations [1].

Mitchell, Agle, and Wood suggested that identification of the potential stakeholders is vital to assess their impact on the organization [2]. Hashim noted that participative management could increase the relationship between the organization and its stakeholders [3]. It addresses fundamental issues of governance and stakeholders' role at all levels of the organizational decision-making process.

Unerman stated that the overall purpose of stakeholders' engagement is to use their potential to drive the strategic directions and operational activities of organizations [4].

According to the survey results conducted by Cappiello, the universities, which are more responsive and proactive towards stakeholder involvement perform better in utilization of resources [5]. Bourne stated that the strategic initiatives and operational activities can be successful with the input, commitment, and support of stakeholders [6].

Zandonate and Hoffman are sure that university managers will be able to think more strategically about the institution's objectives if they consider the stakeholders' opinions related to the learning outcomes of the academic programs [7].

To link strategy with day-to-day activities, the Hoshin Kanri method has been implemented.

The Hoshin Kanri method is a tool for managing and deploying strategies and was introduced by the Japanese company Bridgestone [8]. According to scholars, the peculiar trait of Hoshin Kanri is the "catchball" process [9]. According to Mano's opinion, "catchball" is a unique process involving

all staff and aligning all levels to the company's strategies [10].

The main principles of the Hoshin Kanri method and the importance of "catchball" implementation are well described by Boisvert [11]. Cwiklicki identified a link between different management methods and the occurrence of Hoshin Kanri [12]. He mentioned that only six sigma had a positive correlation with Hoshin Kanri.

Giordani developed guidelines for the implementation of Hoshin Kanri method in different types of organizations [13].

According to Soliman, Hoshin Kanri method might be successfully implemented to deploy strategies and improve performance throughout the entire organization if employees, experts, and staff are engaged in daily activities [14].

In general, we can state that Hoshin Kanri method provides a methodical, logical, and visual means for the management.

II. RESEARCH METHODOLOGY AND FINDINGS

A. Survey on Employer Satisfaction of Graduates' Soft Skills

There is a lack of research in the strategy development and implementation processes [15]. As Schmidlein and Milton noted, strategy development in higher education requires an understanding of the political, structural, environmental, and psychological dynamics of the universities [16]. To consider such complexities, the stakeholders' involvement in the strategic planning and implementation process is essential.

Therefore, to involve the stakeholders in the ASPU Strategic Plan development process, committees were formed in all departments of the University. Meetings and comprehensive discussions were initiated in the departments with the involvement of the external stakeholders.

Afterward, the key performance indicators (KPI) were suggested to assess the strategic objectives making the performance report on the Strategic Development Plan more measurable.

In general, the process is based on the PDCA cycle. All departments developed their annual action plans in line with the University Strategic Plan (Plan). The implementation of the planned actions follows the designed timetable (Do). The

reports on the intended and completed activities with KPIs for assessment of the performance are presented at the chair meetings (Check). It is followed by a list of further steps with the suggested improvements to achieve the desired objectives (Act).

The updated version of the Strategic Plan was presented to the University Academic Board and Board of Trustees for approval. Afterward, the final version of the Strategic Plan was posted on the University webpage. This approach enabled the University departments to be more analytical, transparent, and accountable.

To link Strategic Plan with the action, plan the seven-step Hoshin planning process was implemented. The external stakeholders, together with ASPU representatives, get involved in daily performance and management through a constant refinement system known as a "catchball".

We conducted a survey to get feedback from the stakeholders by using the database of the University-Employer Collaboration Center.

The Center actively cooperates with different potential employers to achieve the goals of the University Strategic Plan. Cooperation memorandums were signed with more than 93 employers of various organizations to make cooperation more targeted.

The cooperation was carried out in several directions, but in our survey, we focused only on the employers' opinions regarding the quality of teaching and learning. Therefore, they were asked to evaluate the employability attributes of ASPU graduates.

The survey examined the satisfaction of employers with the soft skills of university graduates. The survey included 14 attribute items and provided the basis for consideration of satisfaction by the fields of study: social, natural, and cultural. Taking into consideration Neilson's suggestions, graduates' skills under investigation were separated into groups [17]:

- basic competencies (management skills, basic computer skills, language),
- basic skills (interpersonal skills, leadership qualities, oral communication skills, comprehension of practice, teamwork),
- academic skills (written communication skills, problem-solving skills, project management skills),
- personal attributes (initiative, maturity, personal presentation).

Employers were asked to rate graduate attributes in terms of importance and their extent of satisfaction with each of these attributes demonstrated by the ASPU graduates. Open-ended feedback was also sought from the employers.

The collected information and employers' identities were kept confidential. The findings were presented as a group result. The survey participants (93 potential employers evaluated approximately more than 500 ASPU graduates' soft skills) were between 26-40 years old. Three percent of the respondents had 0-3 years of working experience, 13% had 3-6 years of working experience, 27% had 6-10 years of working experience, and 57% had more than ten years of working experience.

The opinions of employers from 93 organizations about the graduates' soft skills from the departments of the natural sciences are presented in Figure 1.

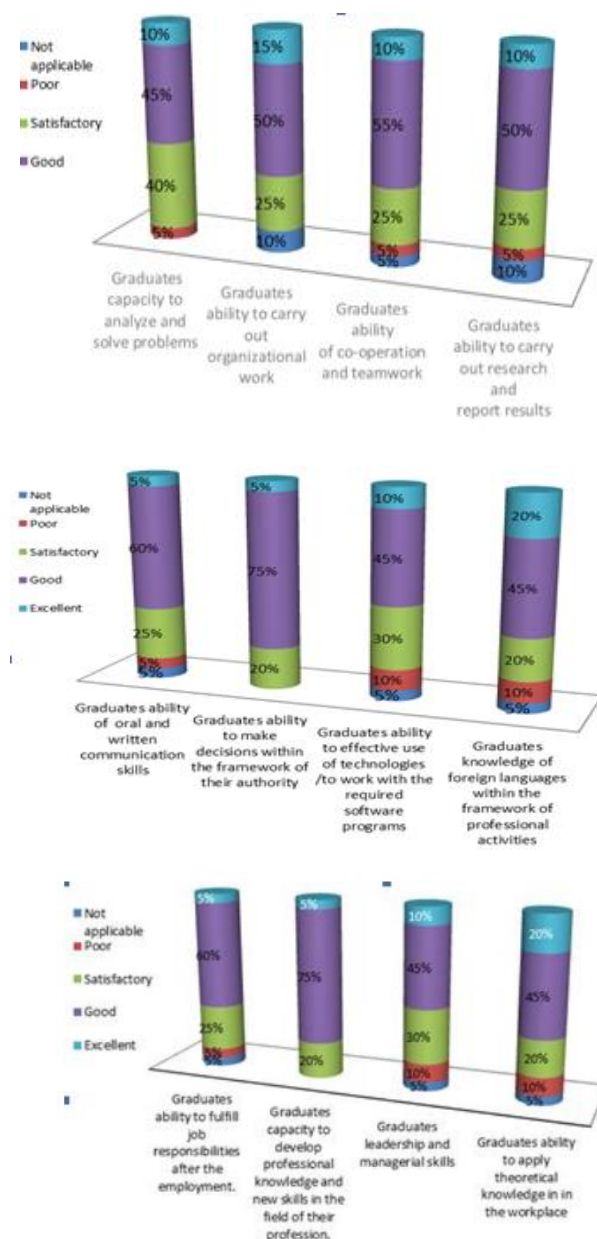


Figure 1. Employers' opinions about the students' soft skills graduated from the departments of the natural sciences.

According to the opinions of employers related to graduates from different departments of natural sciences, more valuable are graduates ability to fulfill job responsibilities immediately after employment (60%), to develop skills in professional field (75%), to make decisions within their responsibilities (75%), to carry out research and analyze report results (50%), the ability of co-operation and teamwork (55%), oral and written communication skills (60%).

We also conducted a survey considering employers' opinions about graduates' skills from the cultural departments and social sciences.

Analyzing all responses (an average result of natural, social, and cultural fields), it could be concluded that, in general, employers mainly are more satisfied with the ASPU graduates' soft skills related to fulfillment of the job responsibilities immediately after employment, ability to carry out research and analyze report results, to make decisions within the framework of their authority, as well as, the ability of co-operation and teamwork, oral and written communication skills, capacity to analyze and solve problems.

Other skills, such as the ability to effectively use technologies and work with the required software programs, knowledge of foreign languages within the framework of professional work, ability to lead, and managerial skills, need further improvements.

Therefore, the academic program leaders should review the curriculum and incorporate appropriate teaching and learning methods to achieve the learning outcomes.

B. Hoshin Kanri X-Matrix: Linking the Institutional Strategic Plans to Daily Activities

Hoshin Kanri method was implemented to ensure that the strategic goals drive progress at every level within ASPU.

Below are described seven steps of the Hoshin Kanri method (Figure 2.):

- Establish an organizational vision and assess the current state: the current statement, vision, and mission of ASPU were presented, planning and execution processes were organized.
- Develop breakthrough objectives: breakthrough objectives directed to the significant improvements of the university's different aspects were achieved within five years.
- Develop annual objectives: to reach those five-year breakthrough objectives the annual objectives were developed.
- Deploy annual objectives: breakthrough objectives were turned into workable targets and objectives at the departmental level. First, top-level improvement priorities were developed and then metrics to those priorities were applied. Afterward, second-and third-level targets were created to improve direct links to the top-level priorities.
- Implement annual objectives: key metrics to measure the progress of the implemented goals were executed.
- Monthly performance review: a monthly performance review ensuring the accountability and progress toward achievement of annual objectives was done, the action plan deliverables were suggested, corrective actions, if needed, were developed.
- Annual performance review: at the end of the annual cycle, the annual objectives were checked by a thorough review and necessary adjustments were made, later the main goals were identified for the following year.

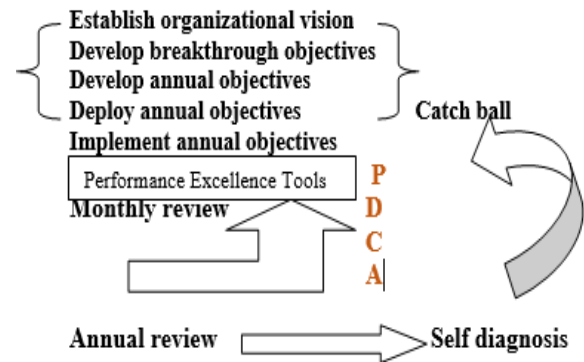


Figure 2. The Seven Steps of the Hoshin Kanri

To link the procedures mentioned above, we construct X-matrix where the key objectives and the main initiatives have been formulated, and tactical actions to execute the main initiatives have been connected. The key metrics are used to assess tactical actions, and the resources required for the tactical actions are determined.

It could be noted that with the help of the X-matrix University directed the efforts and resources towards the achievement of its mission. X-matrix helps to link the goals of the long-term strategies, strategic objectives, tactical improvement initiatives, and short-term performance measures in one matrix and has a clear map for the successful management of the whole process. We will present the chart of the developed X matrix, the deeper description of results given here and new applications areas in the further work.

III. CONCLUSION AND FUTURE RESEARCH

The paper states the importance of employers' involvement in the development and implementation of the ASPU strategic plan. This is a way to adapt the university strategy to the changing nature of the educational environment and enhance its societal role. On the other hand, employers should understand their roles in the reform process of the Higher Education sector as regulators, investors and facilitators.

On the basis of an intensive review of the literature, it can be confirmed that University should focus on, first of all, expanding the cooperation with the university's potential employers, second, suggesting appropriate management models engaging them in the strategy development and implementation process. Therefore, to link strategic objectives and operational activities Hoshin Kanri method is suggested. In further work, an X-Matrix chart should be designed summing up strategies, tactics, resources, processes, and staff involved in one matrix for the achievement of strategic goals of the university.

Considering the survey results, special attention is paid to the feedback from the potential employers related to the university graduates' soft skills. So, the university should create an appropriate environment to develop students' professional abilities and soft skills. Therefore, in further

work, ASPU employers' satisfaction survey results should be used to improve the quality of teaching and learning and to review academic programs.

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