Extending Participatory Strategic Planning in the Direction of Quality Improvement: An Example from Higher Education

Yaroslav Prytula¹
Universytetska str. 1,
79000 Lviv, Ukraine
Tel: +38 032 239-4602
Fax: +38 032 240-3182
E-mail: ya_prytula@yahoo.com

and

Stuart A. Umpleby²
2033 K Street NW, Suite 230
Washington, DC 20052
Tel: (202) 994-1642
Fax: (202) 994-5284
E-mail: umpleby@gwu.edu

¹ Department of International Economic Analysis and Finance
Lviv Ivan Franko National University
Lviv, Ukraine

² Research Program in Social and Organizational Learning
The George Washington University
Washington, DC
Abstract

The Participatory Strategic Planning method, developed by the Institute of Cultural Affairs, can be enhanced so that it allows, in addition to defining the strategic directions for an organization, to prioritize them according to the opinions of the stakeholders of the organization. A practical example -- improving the performance of universities in transitional economies -- is presented. The results of the planning exercise suggest several directions for improving the home universities of the participants. The suggestions include internal reorganization, introduction of new university structures and services, increasing the efficiency of faculty, staff and students, and influencing the external environment. Using a Quality Improvement Priority Matrix and introducing a new method of priorities ranking, the authors conclude: a) the external environment has a great influence on university performance and can make considerable improvements in a relatively short period of time; and b) small but permanent quality improvements receive more support from faculty and are easier for management to implement than large, rapid changes.

Keywords: Participatory Strategic Planning, Quality Improvement Priority Matrix, university reform, transitional economies

1. Introduction

Universities in the former Soviet Union and Southeast Europe are well developed. They have good facilities, experienced faculty, and a tradition of excellence in education. But the future is not clear. The transition period that started in the economy in the early 1990s recently reached academia. Presently large changes are occurring in the system of higher education in these countries. The changes are motivated in part by the transition toward a market economy, which requires changes in the labor market and education.

Some of the trends causing change in higher education in all countries are the following:

1) The Internet enables faculty members to exchange ideas and to work on papers together more easily than ever before. Faculty members can now co-author papers with colleagues located in other countries. The World Wide Web makes vast amounts of information quickly available.

2) Low cost international travel enables students and faculty members to experience different countries, to study at other universities, and to attend conferences almost anywhere in the world.
3) Political changes in once closed societies are making new ideas available.

4) A shortage of funds for higher education in many countries is leading universities to charge tuition and to establish endowments. Both of these trends will make universities more sensitive to the concerns and opinions of students.

5) The Bologna process in Europe, which is spreading to other countries, is causing universities to establish common procedures for courses and degrees to make it easier to transfer credits and for students and faculty members to study or teach at other universities.

6) Increasing use of English as an international language is facilitating the sharing of ideas.

7) Quality improvement methods, which have been successful in business and government, are increasingly being used to improve the management of universities.

8) Participatory teaching methods are becoming increasingly common. These methods encourage initiative and critical thinking rather than memorization.

9) Service learning as a method of education makes universities more helpful to their surrounding communities and acquaints students with practical problems in organizations and society.

10) The trend toward a knowledge society and economy is sending increasing numbers of people back to universities for further education.

11) Distance education technologies make higher education available to people in their homes or workplaces.

2. Method

To help us understand the processes we are facing at our universities and how we might be able to help each other in improving them, we conducted a Participatory Strategic Planning (PSP) activity from October to December 2003. Two groups of people were involved. The first, ‘face-to-face’ group consisted of fourteen visiting scholars from the countries of the former Soviet Union and the former Yugoslavia together with some George Washington University (GWU) faculty members and some staff members of The World Bank. The second, ‘distance’ group consisted of about 140 Junior Faculty Development Program (JFDP) scholars then in the U.S. on other campuses, and about 100 JFDP alumni who had studied at GWU.
The method we used to guide our discussions is called Participatory Strategic Planning [ICA, 1996]. It is part of the Technology of Participation, a set of group facilitation methods developed by the Institute of Cultural Affairs [Umpleby, *et al.*, 2003]. These methods can be used with any group of people who share a common interest. They may be residents in a community, employees of a business or a government agency, residents of an apartment building, members of an association, volunteers working with a non-governmental organization, or members of a university department [Umpleby, 1989]. A facilitated problem-solving or planning activity involves people in identifying problems as they see them and in devising solutions that they believe will work [Umpleby, 1994].

We had five group discussions on the following topics:

1. “The Focus Question,” the point of reference for all subsequent discussions.
2. "Practical Vision," a picture of the desired future in five to ten years.
3. "Underlying Contradictions," the obstacles preventing realization of the vision.
4. "Strategic Directions," strategies for removing the obstacles to achieving the vision.
5. "Implementation Timeline," the schedule of actions needed to carry out the strategies.

Each step of the PSP process uses the Consensus Workshop method. This method entails five steps:

1. Context -- The facilitator provides background on the task and the method to be used.
2. Brainstorm -- The participants write their ideas on cards.
3. Cluster -- The facilitator and participants group the cards according to similar ideas.
4. Name -- The key idea in each cluster is identified.
5. Resolve -- The facilitator asks if the ideas generated are complete and represent a good description.

The Participatory Strategic Planning exercise began with an introductory conversation among the participants. The main goal of our first session was to define a Focus Question to provide direction to the other steps of the planning process. The focus question that emerged from our conversation was, “How can we implement lifelong learning in our societies by improving the performance of university faculty members (and administrators)?” (See Figure 1.) The second session was dedicated to defining a vision. (See Figure 2.) The focus of the third session was finding the contradictions underlying the vision. Hence, if that is the vision that people desire, what is preventing it from happening? What are the obstacles or contradictions? (See Figure 3.) The fourth step was to define strategies to remove the obstacles to achieving the vision. (See Figure 4.) In the last step we created an “implementation timeline.” We defined four quarters in the year 2004. During the first two quarters the participants
would still be at universities in the U.S. In the second two quarters they would be at their home universities. So, in
the first two quarters the participants would do research and preparation. In the second two quarters they would
implement the plans at their home universities. (See Figure 5.)

2.1 Use of a ‘distance’ group

We held meetings every two weeks to allow the ‘distance’ group to be involved. Only a few people sent
suggestions for the next step in the process. There were about six suggestions for each step from people outside
Washington. Nevertheless, several people, who did not send suggestions, said that they found the exercise
interesting and thought-provoking and thanked us for including them in the process. We believe that these comments
indicate that a Participatory Strategic Planning exercise that seeks to involve other participants via email can, without
much trouble, have a positive effect beyond the immediate group.

2.2 Prioritizing actions

We also investigated the relative importance of the Strategic Directions. Since universities in transitional
economies have very limited financial, human and management resources, the wise use of these resources is crucial
for achieving the results we desire.

We used a Quality Improvement Priority Matrix [Umpleby, et al., 2002; Umpleby, et al., 2003] to find the
Strategic Directions that are considered most urgent now. Using the same group of local and distant people we made
an Internet survey (QIPM Web Survey Tool, www.qipm.com) asking them to evaluate the importance and
performance of the Strategic Directions for their home universities using a scale from 0 to 10 (see Tables I and II).

To achieve the most significant social effect, it is desirable to implement first the strategy that is very
important and at the same time does not show good performance. To find such a strategy we calculated the relative
importance of the Strategic Directions using the ratios of average Importance to average Performance. The values of
the IP ratios are given in Table III.

Table III implies that it is desirable to start implementing the Strategic Directions with those that relate to
obtaining external resources for a university. The less urgent Strategic Directions, according to those surveyed, are
the internal improvements and reorganizations. It is worth mentioning that almost all current efforts of governments,
local authorities and western organizations tend to focus on those strategies that are at the bottom of Table III.

- 5 -
Instead, the participants in this planning activity feel that there is a great need for more projects linking academic institutions in transitional countries with their local communities, with alumni, with central and local governments, and with international academic institutions.

Our results are marginally robust. The null hypothesis that all IP ratios are equal returns an F statistic of 1.77 and the hypothesis could be rejected only at the 11% level. Figure 6 shows the IP ratios +/- one standard deviation for each Strategic Direction.

Interestingly, the standard deviations are higher for the issues rated more important. This could be explained by the relative novelty of these concepts for this group of people. The concepts that are known for the group (because of government and western programs) have much less variance. This implies the need for faculty members from transition countries to be more aware of such matters as fundraising, oversight bodies, standardization and quality improvement.

3. Conclusions

The benefits of group facilitation methods, as noted by Rosabeth Moss Kanter are:

1. The specific plans themselves – strategies, solutions, action plans;
2. Greater commitment – ability to implement decisions and strategies;
3. More innovation – a larger portfolio of ideas;
4. A common framework for decision making, communication, planning, and problem solving;
5. Encouragement of initiative and responsibility. [Spencer, 1989]

We have demonstrated the combination of two methods – Participatory Strategic Planning and Quality Improvement Priority Matrices – that we believe can be helpful in improving universities and other organizations. We believe they can be particularly helpful for universities in transitional societies, since they emphasize participation and data-driven decision-making. Consequently, they stimulate and support local initiative and improve accountability. A software package which makes it easy to create a survey that results in a quality improvement priority matrix is now available. See www.qipm.com.
Acknowledgments

Research for this article was supported in part by the Junior Faculty Development Program, which is funded by the Bureau of Educational and Cultural Affairs (ECA) of the United States Department of State, under authority of the Fulbright-Hays Act of 1961 as amended, and administered by the American Councils for International Education: ACTR/ACCELS. The opinions expressed herein are the authors’ own and do not necessarily express the views of either ECA or the American Councils.

References


1. SUBJECT
   • Students
   • Faculty
   • Services
   • Departments
   • Quality
   • Research

2. RATIONAL OBJECTIVE
   • Work on lifelong learning
   • Improve education of professors
   • Find out what colleagues think about virtual education
   • Decide what we can do to change things
   • Formulate research projects
   • Improve research methods and practice
   • Work to develop accrediting organization

3. EXPERIENTIAL OBJECTIVE
   • Private universities (survive in market)
   • Public universities (deliver public service)

   How can we implement lifelong learning in our societies by improving the performance of university faculty members (and administrators)?

4. PARTICIPANTS
   • GW JFDP group
   • JFDP alumni via email
   • JFDP mentors
   • American Councils staff
   • GW Faculty
   • World Bank people
   • State Department people

5. STAKEHOLDERS
   • Local companies
   • International companies
   • Journalists, public groups
   • Government agencies & officials
   • Students and their parents
   • Colleagues at home universities

6. TIME FRAME
   • 4 years (1 student generation)
   • 5 years (quality improvement, research)

   October 23 – December 19, 2003
   Participatory Strategic Planning Activity
   Contact persons: Stuart Umpleby, Yaroslav Prytula, Dragana Cimesa
   Research Program in Social and Organizational Learning
   The George Washington University, 2033 K Street NW, Suite 230
   Washington, DC 20052 USA, Tel/Fax: 202-994-1642/994-5284

Figure 1. Focus Question
Focus question: How can we implement lifelong learning in our societies by improving the performance of university faculty members (and administrators)?

Practical Vision question: What do you want to see in place over the next 3-5 years?

October 24th, 2003

<table>
<thead>
<tr>
<th>1. Freedom of choice</th>
<th>2. Free access to information and use of technology in education</th>
<th>3. Thinking in terms of alternative mental models</th>
<th>4. Universities connected to community</th>
<th>5. Academic exchanges</th>
<th>6. Faculty financing &amp; incentives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Many sources of funding</td>
<td>Access to technology</td>
<td>Development of global awareness in students, faculty and administration</td>
<td>Focus on learning rather than degrees</td>
<td>Invite key specialists to engage in activities of real life</td>
<td>Recognition of higher learning by government &amp; society through awards</td>
</tr>
<tr>
<td>Education system independent of the will of a few people</td>
<td>Active use of e-mail</td>
<td>New mental models in faculty members</td>
<td>Desire and will to change yourself</td>
<td>Collaboration of universities with large public sector companies for R&amp;D and support</td>
<td>Incentives for teachers: greater pay (correct incentives)</td>
</tr>
<tr>
<td>A continuous university reform process</td>
<td>Access to others libraries</td>
<td>Clean and clear mental models not distorted by earlier communist ideology</td>
<td>More active feedback</td>
<td>Policy Research Center on campus</td>
<td>Improved classrooms and teaching equipment</td>
</tr>
<tr>
<td>Freedom from whims and fancies of authorities</td>
<td>Creative use of technology and connectivity: a PC for every staff person</td>
<td>Ability to discuss with older professors</td>
<td>No prejudices and stereotypes</td>
<td>Cooperation of society and university</td>
<td></td>
</tr>
<tr>
<td>New faculty</td>
<td>Free access to the global information system</td>
<td>Openness and academic discussions of different ideas</td>
<td>Faculty work steadily on making improvements</td>
<td>Place students in a job situation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Freedom to move around the world</td>
<td>Free exchange of information and knowledge</td>
<td>University involved in political, economic and social reforms</td>
<td>Student internships</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Free exchange of information and knowledge</td>
<td>Distance on-line education</td>
<td>Gender equality</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Virtual classes</td>
<td></td>
<td>Help students construct relevant knowledge and skills</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 2. Practical Vision
**Focus question:** How can we implement lifelong learning in our societies by improving the performance of university faculty members (and administrators)?

**Underlying Contradictions question:** What is blocking us from moving toward our vision?

October 31st, 2003

**Figure 3. Underlying Contradictions**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Fears of junior-level faculty members (dependence)</td>
<td>Fragmented faculty efforts</td>
<td>Scarcity of technology</td>
<td>Tradition supports top-down rather than bottom-up processes</td>
<td>Insufficient accreditation oversight</td>
<td>Faculty are not rewarded by institutions for work other than teaching</td>
<td>Visa and trip cost problem</td>
<td>Government regulations determine student eligibility and university budget</td>
</tr>
<tr>
<td>Not transparent university</td>
<td>Weak or absent Boards of Directors for schools/faculties</td>
<td>Obsolete technology</td>
<td>Unwillingness of mid-level decision makers to improve processes</td>
<td>Unwillingness of students to participate in decision making</td>
<td>Low IT knowledge among teachers</td>
<td>Copyright restrictions</td>
<td>Too many students entering classes</td>
</tr>
<tr>
<td>Not enough information about sources of funding</td>
<td>Dependence on decisions by the key authorities</td>
<td>No use of web-based programs in teaching (e.g. Blackboard)</td>
<td>No good performance measurement system for faculty</td>
<td>No good performance measurement system for faculty</td>
<td>Unmotivated professors</td>
<td>Excessive bureaucratic obstacles</td>
<td></td>
</tr>
<tr>
<td>Insufficient collaboration between university and community representatives</td>
<td>Imbalance in power (faculty vs. administration)</td>
<td>Insufficient use of www and email in teaching</td>
<td>Weak system for deciding appointment, promotion and tenure</td>
<td>Weak system for deciding appointment, promotion and tenure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disorganized international contacts</td>
<td>Confusing priorities (tradition or innovation)</td>
<td>Structural inertia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type of university organization</td>
<td>Narrow institutional ways of funding</td>
<td>Rivalry rather than mutual support of faculty</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traditional university practices</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**Table:**

- **1. Entrenched university practices**
  - Fears of junior-level faculty members (dependence)
  - Not transparent university
  - Not enough information about sources of funding
  - Insufficient collaboration between university and community representatives
  - Disorganized international contacts
  - Type of university organization
  - Traditional university practices

- **2. Overlapping influences in decision making**
  - Fragmented faculty efforts
  - Weak or absent Boards of Directors for schools/faculties
  - Dependence on decisions by the key authorities
  - Imbalance in power (faculty vs. administration)
  - Confusing priorities (tradition or innovation)
  - Narrow institutional ways of funding

- **3. Undeveloped technical infrastructure**
  - Scarcity of technology
  - Obsolete technology
  - No use of web-based programs in teaching (e.g. Blackboard)
  - Insufficient use of www and email in teaching

- **4. Discouraging organizational culture**
  - Tradition supports top-down rather than bottom-up processes
  - Misuse of lateral communication (negative comments about colleagues)
  - Structural inertia
  - Rivalry rather than mutual support of faculty

- **5. Inadequate measurement system**
  - Insufficient accreditation oversight
  - Unwillingness of mid-level decision makers to improve processes
  - No good performance measurement system for faculty
  - Weak system for deciding appointment, promotion and tenure

- **6. No incentives for innovations**
  - Faculty are not rewarded by institutions for work other than teaching
  - Low IT knowledge among teachers
  - Unmotivated professors

- **7. High transaction costs**
  - Visa and trip cost problem
  - Copyright restrictions
  - Excessive bureaucratic obstacles

- **8. (State) Universities do not control admission**
  - Government regulations determine student eligibility and university budget
  - Too many students entering classes
**Focus question:** How can we implement lifelong learning in our societies by improving the performance of university faculty members (and administrators)?

**Strategic Directions question:** What innovative practical actions will deal with the contradictions and move us toward our vision?

December 19th, 2003

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Devise a new university policy</td>
<td>Have students do projects with clients (service learning)</td>
<td>Expand private funding of state universities</td>
<td>Improve the internal institutional environment</td>
<td>Establish boards of directors</td>
<td>Buy web-based programs (like Blackboard) to aid teaching</td>
<td>Establish a quality improvement program in the university</td>
<td>Apply for grants</td>
</tr>
<tr>
<td>Establish an institute for innovation studies</td>
<td>Coach academic study skills</td>
<td>Create university “advancement” office</td>
<td>Limit enrollment to best students</td>
<td>Faculty Senate oversight of administration actions (including budget decisions)</td>
<td>Have training for faculty (for Black-board and distance learning)</td>
<td>Make steady incremental improvements</td>
<td>Participate in grant competitions</td>
</tr>
<tr>
<td>Create a smaller number of colleges within universities</td>
<td>Solicit prospective students</td>
<td>Solicit money for research and scholarships</td>
<td>Create a lobbying office</td>
<td>Work with international accrediting organizations</td>
<td>Create a center for instructional design and development at home university</td>
<td>Informally approach other people and start collaborating on concrete actions</td>
<td>Distribute information about international projects/grants to the faculty</td>
</tr>
<tr>
<td>Experiment with new forms of organization</td>
<td>Find partners for students’ internships and group projects</td>
<td>Improve publicity and outreach to students</td>
<td>Have training for faculty (for Black-board and distance learning)</td>
<td>Learn to measure learning</td>
<td>Discuss and set guidelines for promotion</td>
<td>Use a Quality Improvement Priority Matrix to focus efforts</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Improve publicity and outreach to students</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Use process improvement to reduce transaction costs</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Establish regular communication with university management staff</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Create a reward system for innovations</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Implement a new measurement system based on standards from high rated universities</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Imitate the positive experiences of others</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Implement ISO standards</td>
<td></td>
</tr>
</tbody>
</table>

**Figure 4. Strategic Directions**
**Focus question:** How can we implement lifelong learning in our societies by improving the performance of university faculty members (and administrators)?

**Implementation Timeline question:** What will we do the first year?

December 19th, 2003

<table>
<thead>
<tr>
<th>Strategic Directions</th>
<th>Quarter I</th>
<th>Quarter II</th>
<th>Quarter III</th>
<th>Quarter IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Make structural changes within a university</td>
<td>Study Bologna Declaration</td>
<td>Find out how other universities are changing</td>
<td>Initiate meeting on Bologna requirements</td>
<td>Write an article for a local newspaper about BD (how it will influence the community)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Translate or find Bologna Declaration in your native language and distribute it among university faculty</td>
<td>Work closely with sympathetic faculty and decision making administrators to encourage discussion of BD in home university</td>
<td></td>
</tr>
<tr>
<td>2. Improve value added for students</td>
<td>Investigate Campus Compact</td>
<td>Talk to host university President about Campus Compact</td>
<td>Speak to home university president about creating a Campus Compact</td>
<td>Coordinate rectors at several universities to create a Campus Compact</td>
</tr>
<tr>
<td></td>
<td>Talk to enrolment and recruiting officers at host universities</td>
<td></td>
<td>Find businesses and other partners for student internships and/or group projects</td>
<td>Conduct internships and group projects</td>
</tr>
<tr>
<td>3. Start fundraising</td>
<td>Create a list of questions to ask fundraisers</td>
<td>Create and maintain a list of home university alumni, and use the names for fundraising</td>
<td>Talk to rector about hiring a fundraiser</td>
<td>Evaluation and feedback</td>
</tr>
<tr>
<td></td>
<td>Talk to “advancement” officers at host universities.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Encourage colleagues in other US cities to do the same</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Influence external stakeholders</td>
<td>Create a list of stakeholders</td>
<td>Define stakeholders’ roles and involve them</td>
<td>Create plans and programs with stakeholders</td>
<td>Implementation</td>
</tr>
<tr>
<td></td>
<td>Talk to host university lobbyist</td>
<td>Learn how lobbyists work</td>
<td>Talk to rector about hiring a lobbyist</td>
<td>Hire university or school lobbyist</td>
</tr>
<tr>
<td>5. Create oversight bodies</td>
<td>Contact AACSBS (international business school accreditation organization)</td>
<td>Talk to host school dean and its Board of Advisors</td>
<td>Talk to home university dean about AACSBS</td>
<td>Advertise the idea and need for accreditation</td>
</tr>
<tr>
<td></td>
<td>Attend meetings of host school Faculty Senate</td>
<td>Talk to host university President about the role of the Faculty Senate and the Board of Trustees</td>
<td>Describe to home university dean and faculty members how Faculty Senates work in US</td>
<td>Describe to home university dean and faculty members how Boards of Trustees work in US</td>
</tr>
<tr>
<td></td>
<td>Talk to host school Finance Committee chairman about Faculty Senate oversight of university budget</td>
<td>Study the practice of other universities in creating oversight bodies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Improve curriculum and teaching methods</td>
<td>Learn about Blackboard</td>
<td>Talk to Blackboard people about cost of using Blackboard at home university</td>
<td>Write an article about Blackboard in local newspaper</td>
<td>Write proposals for funding Blackboard or similar system to different funding bodies, local government and ministry of education (this could be a joint project of all JFDP fellows in a country)</td>
</tr>
<tr>
<td></td>
<td>Gather course evaluation forms as examples</td>
<td>Talk to host university head of Inst. Tech. Lab.</td>
<td>Organize summer schools</td>
<td></td>
</tr>
<tr>
<td>7. Implement standardization and quality improvement</td>
<td>Gather information on university quality improvement processes in US</td>
<td>Learn about ISO criteria and certification</td>
<td>Use QIPM (Quality Improvement Priority Matrix) to start a quality improvement process</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Talk to people who have worked in quality improvement programs</td>
<td>Study Baldrige Award for education</td>
<td>Find good university examples of use of ISO standards</td>
<td></td>
</tr>
<tr>
<td>8. Increase proposal writing</td>
<td>Develop a list of possible funding resources</td>
<td>Establish translation services for proposal writers</td>
<td>Start proposal writing workshop series</td>
<td>Use group facilitation methods to do planning with home university department</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Create proposals (with your advisor/coordinator)</td>
<td>Develop proposals and send them out</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Talk to people in Office of Sponsored Research about gain sharing from grants</td>
<td>Establish and advertise a system of rewards for successful proposal writers</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Figure 5. Implementation Timeline**

- 12 -
Figure 6. Strategic Directions with IP ratios and standard deviations
<table>
<thead>
<tr>
<th>Strategic directions</th>
<th>Importance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  Improve curriculum and teaching methods</td>
<td>8.00</td>
</tr>
<tr>
<td>2  Increase proposal writing</td>
<td>7.86</td>
</tr>
<tr>
<td>3  Start fundraising</td>
<td>7.67</td>
</tr>
<tr>
<td>4  Implement standardization and quality improvement</td>
<td>7.57</td>
</tr>
<tr>
<td>5  Make structural changes within a university</td>
<td>6.79</td>
</tr>
<tr>
<td>6  Improve value added for students</td>
<td>6.50</td>
</tr>
<tr>
<td>7  Create oversight bodies</td>
<td>6.46</td>
</tr>
<tr>
<td>8  Influence external stakeholders</td>
<td>6.15</td>
</tr>
</tbody>
</table>

**Table I.** Strategic Directions ranked according to importance

<table>
<thead>
<tr>
<th>Strategic directions</th>
<th>Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  Improve curriculum and teaching methods</td>
<td>6.50</td>
</tr>
<tr>
<td>2  Increase proposal writing</td>
<td>6.00</td>
</tr>
<tr>
<td>3  Implement standardization and quality improvement</td>
<td>5.79</td>
</tr>
<tr>
<td>4  Make structural changes within a university</td>
<td>5.57</td>
</tr>
<tr>
<td>5  Start fundraising</td>
<td>5.46</td>
</tr>
<tr>
<td>6  Improve value added for students</td>
<td>5.36</td>
</tr>
<tr>
<td>7  Create oversight bodies</td>
<td>4.85</td>
</tr>
<tr>
<td>8  Influence external stakeholders</td>
<td>4.58</td>
</tr>
</tbody>
</table>

**Table II.** Strategic Directions ranked according to performance

<table>
<thead>
<tr>
<th>Strategic directions</th>
<th>IP ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  Start fundraising</td>
<td>2.89</td>
</tr>
<tr>
<td>2  Create oversight bodies</td>
<td>2.01</td>
</tr>
<tr>
<td>3  Increase proposal writing</td>
<td>1.61</td>
</tr>
<tr>
<td>4  Influence external stakeholders</td>
<td>1.56</td>
</tr>
<tr>
<td>5  Implement standardization and quality improvement</td>
<td>1.56</td>
</tr>
<tr>
<td>6  Improve curriculum and teaching methods</td>
<td>1.34</td>
</tr>
<tr>
<td>7  Make structural changes within a university</td>
<td>1.30</td>
</tr>
<tr>
<td>8  Improve value added for students</td>
<td>1.27</td>
</tr>
</tbody>
</table>

**Table III.** Strategic Directions ranked according to IP ratio