MANAGING THE SYSTEM OF HIGHER EDUCATION: THE CASE FOR COLLABORATION

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Synopsis:

The systems view of quality postulates that product or service quality comes as the result of interactions between various components that comprise a production process. Thus, to be effective, any quality improvement initiative should address the needs of the system as a whole. It must balance the needs of the different functional areas in the organization as no single area operates in a vacuum. All areas are interrelated and interdependent.

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December 14, 2016

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The systems view of quality postulates that product or service quality comes as the result of interactions between various components that comprise a production process (Foster, 2017, p. 10). This view asserts that most problems in the organization can be attributed to the system. Thus, to be effective, any quality improvement initiative should address the needs of the system as a whole. It must balance the needs of the different functional areas in the organization as no single area operates in a vacuum. All areas are interrelated and interdependent.

The Nature of a System

According to Evans (2017, p. 50), a system is a set of interdependent components within an organization that work together to achieve the aim of the system. The aim of any system must be for everybody within the organization to gain over the long term (Deming, 1993, p. 51). It must relate directly to the betterment of life for everyone. For example, a good aim might be to provide employees with good management, training, education, and other opportunities that will help them experience joy in work and better quality of life. Collaboration among components is key toward achieving the aim of the organization. If individuals or departments are pitted against each other, the end-result will be destructive to an organization. These individuals or departments will simply seek to maximize their own expected gain at the expense of the entire organization. Such situations will only lead to a win-lose effect among the various components. One individual may win but the other loses. One department may win but the customer loses.

It is important, therefore, for the system to be properly managed as it will not manage itself (Deming, 1993, p. 51). If the components of the system are left to themselves, they tend to

become selfish, competitive, independent profit centers. Doing the best just for the individual components will lead to suboptimization and bring eventual loss to everyone in the system (Evans and Lindsay, 2014, p. 56). An organizational system, therefore, must be orchestrated to the point that all components work together well to achieve the stated aim of the organization. This is known as the process of optimization. Anything less than optimization will bring eventual loss to every component in the system (Deming, 1993, p. 53). Optimization involves understanding the interrelationships between all the components within the system including all the stakeholders that interact within it. It is the whole system that ought to be optimized and not the individual components. In fact, optimizing the system could mean that it is possible for one component to operate at a loss, however, such action could ultimately benefit the entire organization including the component that took the loss.

The bigger the entity that the system represents, the more difficult it is to manage. The system may represent a single organization, an industry, or even an entire nation. A system must take into account the future of the organization. As an example, the management of such organization may change its course in anticipation of the needs of customers for new products and services. This involves constant scanning of the environment to identify threats and opportunities for organizational change and prepare employees for the transformation.

The System of Higher Education and Its Stakeholders

Higher education is increasingly coming under pressure from both external and internal forces. The environment is changing rapidly, however, the management structure and culture of colleges and universities make change difficult to accomplish. Existing systems are becoming obsolete and are no longer able to ensure success in an increasingly competitive market.

Consequently, perception of quality in higher education has diminished. Many believe that this loss of confidence is partly due to the tendency of colleges and universities to protect their own disciplines and culture without sufficient regard to the requirements and expectations of their stakeholders. Moreover, institutions of higher education are now operating in an era characterized by increasing complexity, novelty, uncertainty, and advances in technology never previously imagined and experienced. These forces have served to widen the gap between the quality desired by people and the quality of products and services being delivered. Technology has enabled stakeholders to compare the quality of their own educational systems with that of other institutions, causing the "quality desired" bar to rise at an accelerated pace.

Assessing the Quality of the System of Higher Education

William H. Bergquist (1995, pp. 36-43) listed four sets of criteria by which quality of service provided by higher education could be defined and assessed. They are described as follows:

1. *Input criteria*. These criteria focus on the nature and level of resources available to the institution like the characteristics of incoming students, credentials of faculty, size of library, structure and availability of physical facilities, and the amount of financial reserves. Many people believe that if you put good things together, something good will come out of it. This concept of education is often associated with traditional high-status institutions. Many accrediting agencies have used input measures to measure quality like the quality of entering students, number of books in the library, quality of graduate degrees held by faculty, number of square feet of classroom space, student-faculty ratio, and others.

2. *Output criteria*. These criteria stress the nature and extent of institutional products, characteristics of graduating students, success of alumni, research and scholarly publications, and public service. They build on the assumption that institutions of higher education are accountable to society for what they produce. In recent times, the reputation and quality of educational institutions are increasingly being determined on the basis of their demonstrated outcomes.

3. *Value-added criteria*. These criteria focus on the differences that an institution has made in the growth of all of its members: intellectual, moral, social, vocational, physical, and spiritual. Considering these criteria, an institution would be judged by the extent to

which it is effective in developing the talents of its students from whatever level they are at when entering.

4. *Process-oriented criteria.* These criteria include the level and manner of participation of all appropriate constituencies (or stakeholders) in the educational, administrative, and governance processes of the institution, including the defining and assessing of quality. Based on these criteria, it is not what we do or what we accomplish that makes for quality; rather it is the way in which we do what we do and how we decide what to do that differentiate a high-quality education.

Bergquist (1995, p. 43) proposed that a comprehensive and useful definition of quality in higher education must include all four sets of criteria described above: input, output, value-added, and process-oriented. Following this line of reasoning, service quality in higher education could be defined as follows:

> *Quality is the extent to which an institution successfully directs adequate and appropriate resources to the accomplishment of its mission-related outcomes and that its programs make a significant and positive difference in the lives of people associated with it and that these programs are created, conducted, and modified in line with the mission and values of the institution.*

The Stakeholders of Higher Education

Lewis and Smith observed that every college and university has a mission but very few fully identify who they serve (Lewis, Smith, 1994). They also noted that even fewer institutions acknowledge that they have stakeholders to serve. This was surprising given the fact that in order to be effective organizations must be stakeholder-oriented. Stakeholder-oriented organizations are successful because they have a unified focus on what they do and who they serve.

Stakeholders in higher education may be classified as internal or external. Internal stakeholders are people or units that receive goods and services from within the organization. External stakeholders, on the other hand, are those individuals or organizations which are not part of the organization in question but are nevertheless impacted by that organization's activities.

Internal Stakeholders – Academic

> The following may be identified as major internal stakeholders of higher education on the academic side.

1. <u>Students</u>. They are usually considered the most important internal stakeholders of higher education. Students usually enter school with the desire to acquire skills, to gain knowledge and learn about the world around them. They need to develop the confidence and drive to pursue their dreams and desires. They also need to experience joy in learning both within the classroom as well as within the whole school environment.

2. <u>Faculty</u>. Teachers are entrusted with the responsibility of preparing the students of this nation for the future. They deserve recognition and respect for what they do and less blame for what the system does or fails to do. Teachers need continued professional growth opportunities and the tools and autonomy to accomplish their tasks and experience joy in work. Such opportunities will greatly enhance their self-esteem and allow them to have pride in their work.

3. Programs or departments. The academic subsystem, as part of the larger system of higher education, consists of its own set of input resources, the transformation process, and outputs. Its resources include, but are not limited to, students, faculty, staff, library, computing and laboratory facilities. The transformation process consists of activities done to disseminate knowledge, to conduct research, and to provide community service. It is in the transformation process where interactions among the input resources occur. Thus the need for cooperation and collaboration among programs or departments in the performance of the various tasks. Effective communication and information exchange is also necessary within the academic subsystem and between the academic system and the administrative subsystem. The outputs of the academic process are educated people, research and publications, and service to the community.

Internal Customers – Administrative

> The following may be identified as major internal stakeholders of higher education on the administrative side.

1. <u>Students</u>. They are clearly the primary internal stakeholders with respect to many facilities in the campus. For instance, students pay for the use of many facilities such as dormitories, food services, bookstores, libraries, gymnasiums, security services, and others. These facilities help to attract better students, provide a more satisfactory campus climate and support the academic programs of the institution.

2. <u>Faculty</u>. Teachers benefit from the use of certain facilities in the campus like the bookstore, the library, the computer store, the postal office, the health club, the swimming pool and other campus facilities. Also, they benefit from services offered by other departments like the Human Resources office, the transportation department, the administrative offices, and others.

3. <u>Non-teaching staff</u>. The needs of the non-teaching staff are to a great extent similar to those of the faculty. They seek continuous personal growth, security, and joy in work. They need to be kept informed and involved and shown how they are part of the bigger system of higher education. The institution must help them develop and realize their potential in pursuing their quality and performance objectives. They should be considered as assets to be developed rather than expenses to be controlled.

4. <u>Administrators</u>. Like the faculty, administrators expect improved professional status, proper recognition for their work, and reasonable compensation for their efforts. To perform their job more effectively, they need support and feedback from all constituents of the educational system in providing constructive solutions to common problems faced by the institution.

5. <u>Units, departments or divisions.</u> The needs are similar to those of programs or departments in the academic subsystem. Units, departments or divisions within the administrative subsystem must work as a team together and in conjunction with the programs and departments in the academic subsystem. Barriers between them should be broken down to allow for effective communication and information exchange.

External Stakeholders – Direct

The direct external customers of higher education include future employers of students, other colleges and universities that students attend to further their education, and suppliers from which the college or university receives students, goods, or services.

1. <u>Employers</u>. It is fairly reasonable to say that service and manufacturing industries and other non-profit organizations are the largest direct volume stakeholders of higher education.Employers expect colleges and universities to produce well-qualified and trained graduates who could work efficiently and effectively in the jobs for which they have been hired. They need workers who have communication and problem-solving skills and are willing and able to learn their specific jobs quickly and effectively.

2. <u>Other colleges/universities</u>. Colleges and universities which admit students from other higher educational institutions require that these students possess enough knowledge, skills and preparation to take up further or higher studies. In other words, they want students who are capable of advanced learning and research.

3. <u>Suppliers</u>. Suppliers include those from whom a college or university receives students, goods, or services. Examples are high schools or academies as well as those organizations that supply goods and/or services to the college or university. Suppliers need feedback from the recipients of the goods and services that they provide in order to be able to improve the quality of their production processes. They also seek to build a long-term relationship with colleges and universities based on loyalty and trust.

External Customers – Indirect

        The indirect external customers of higher education include governmental bodies, the communities served, accrediting agencies, alumni, and donors.

1. Government. Federal tax policies affect higher education in terms of research support and financial support for students attending colleges and universities. As a condition for federal spending and tax support, the legislative and executive agencies of the government impose a variety of rules and mandates on both institutions and students. The impact of the federal government on higher education is substantial, diverse, and constantly changing.

   The state governments are a major source of funding for their respective state institutions. Thus they have a legitimate interest in the responsiveness of higher education to major societal needs. While institutional autonomy is important, there is a need for a constructive relationship between the college/university and the state. Higher education needs to recognize that it has a stake, if not responsibility, to engage with state political leaders regarding the nature of their relationship. This includes defining those societal goals toward which the college or university should direct its energies and shaping the policies which govern such relationship.

2. Community. The support of the community is crucial to the success of the operation of higher education. Community outreach and programs strengthen overall institutional effectiveness in preparing tomorrow's student for lifelong involvement. It has been found that university support for student and faculty opportunities to volunteer and perform community service leads to enhanced civic responsibility. Besides providing volunteer services, colleges and universities are expected by their communities to contribute to the development of a competent workforce, the training of leaders and followers, and the nurture of politically active and civic minded citizens.

3. Donors. The process of asking for gifts begin by informing potential donors of the social need being met by the organization, involving them in the work of that organization and then inviting them to invest financially in that work. The donor usually offers something of value to the organization for a variety of reasons, without expecting any material or monetary return. Of course, donors expect that they be informed about the legitimacy of the need and be given appropriate acknowledgement for making a donation. The college/university can acknowledge the gift by recognizing donors for their support of a worthy cause, by helping them feel that they made a difference in the resolution of a problem and giving them a sense of ownership in a program that serves the public good.

4. Alumni. In many ways, the college or university connects with the society at large through its alumni. The real success of its programs is often judged by how well its alumni represent its values in their everyday lives and in their lines of work. One way this connection can be

strengthened is through programs which bring alumni to the campus in a participatory way. It is also a known fact that alumni are a significant source of financial gifts for the institution.

5. Accrediting agencies. Accreditation provides public notification than an institution or program meets standards of quality stipulated by the accrediting agency. It also reflects the fact that to be recognized by the accrediting agency, the institution or program is committed to self-study and external review by one's peers in seeking not only to meet standards but to continuously seek ways to enhance the quality of education and training provided. Accrediting agencies expect accreditation-seeking institutions to comply with their established criteria and standards.
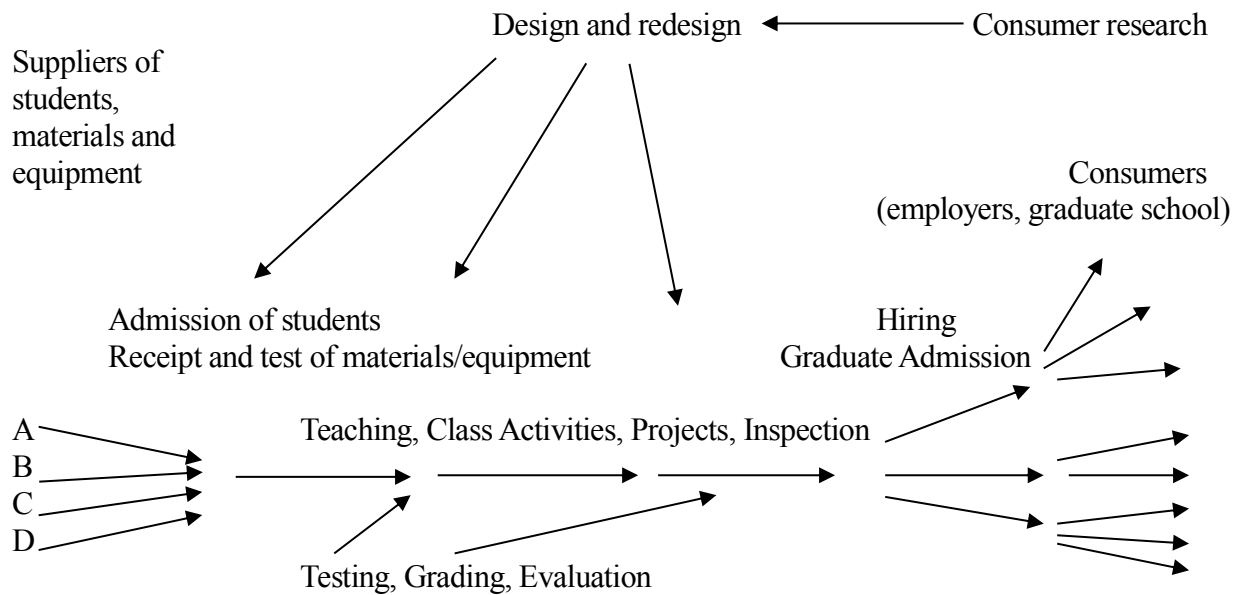
The Systems View of the Higher Education Process

Many are familiar with a typical organizational chart (pyramid shape) which shows the chain of command and accountability. It shows how an executive relate to another and others in the organization. A pyramid, however, does not describe the system of production for a good or service (Deming, 1993, p. 63). If at all, a pyramidal format seems to convey a message that the first priority of anybody in the organization is to satisfy his or her boss.

The system of production for higher education can be better viewed by the use of a simple flow diagram in Figure 1. The flow diagram begins with predicting the need of the ultimate consumer (e.g., employer, graduate school). This prediction leads to the design of the service then to actual provision of the service and then to the observation of the performance of the finished product (graduates) in the workplace or in another institution of higher learning. Feedback data obtained from this observation leads to redesign. The cycle goes on and on resulting in a process of continual learning and adjustment.

Figure 1

The Systems View of Production in Higher Education

Design and redesign ◄─────────── Consumer research

Suppliers of
students,
materials and
equipment

Consumers
(employers, graduate school)

Admission of students
Receipt and test of materials/equipment

Hiring
Graduate Admission

A
B
C
D

Teaching, Class Activities, Projects, Inspection

Testing, Grading, Evaluation

The flow diagram describes the flow of people (students), materials and information from the beginning of the system to the end where they emerge as competent graduates. As they flow through the system, people, materials and information must match the input requirements of the stages down the service production line. The flow diagram shows how each one's work fits with the work of others in the system. It also shows how a proposed change in one or more components affects other parts of the system. In some cases, the effect of a proposed change may not be felt until months or years later. The immediate net effect may be zero or even negative. A good example would be training of faculty and staff. Its cost immediately shows up in the ledger. Its benefits, however, may not be realized for some time in the future. Nevertheless, the organization continues to invest in training because administrators believe that in the future the benefits will outweigh the costs. The administration, in this

case, is guided by theory, not by figures. Another example is the attempt to cut costs by unscrupulously firing employees. This action may immediately yield positive results by lowering costs in the short-term but in the future it may generate adverse consequences such as low employee morale and lack of competent and experienced employees to take on new positions when the organization is poised for expansion.

Destruction of a System and Its Institutional Impact

If each component in Figure 1 becomes competitive with other components, the system will be ruined causing loss of unknowable magnitude to the entire system and subsequently to all the components that comprise it. Left to themselves, individual components will tend to advance their own interests at the expense of the entire system. To achieve its own goals, one department may, left to itself, ruin another department.

Table 1 shows how plans developed in one school may affect other schools and the entire college or university. Plans are developed without any regard to how they may affect other schools. Plans that are beneficial to one school may be detrimental to other schools. In this example, the net effect on the entire institution is negative.

This illustration shows a net effect on the entire institution of two negatives. If this is interpreted in monetary terms, this could represent, for example, a loss of $2 million. If this amount were to be distributed equally, each school would suffer a loss of about $670,000.

Table 1

The Effect of Plans Developed in One School on Other Schools and the Entire Institution

Schools and Their Plans	Effect on School A	Effect on School B	Effect on School C	Net Effect on the Institution
School A				
Plan 1	+	-	-	-
Plan 2	+	-	+	+
Plan 3	+	-	-	-
School B				
Plan 1	-	+	-	-
Plan 2	+	+	-	+
School C				
Plan 1	+	-	+	+
Plan 2	-	-	+	-
Plan 3	-	-	+	-
Net Effect of Adopted Plans	++	- - - -	0	- -
Distribution of Benefits/Losses	-0.67	-0.67	-0.67	-2

Table 2 illustrates how a college or university can maximize benefit to itself by acting only on those plans that have predicted positive impact on the institution as a whole. In this case, everybody wins including schools that take a loss for the benefit of the whole institution. Of course, this requires an enlightened top administration. In Table 2, the net effect on the whole institution is three positives. This can translate to a net benefit of $3 million for the institution. Assuming that the benefits are distributed equally, each school would receive a benefit of $1 million. Table 2 shows that some schools can operate at a loss to themselves in order to optimize the aim of the entire institution, including the schools that take a loss. This requires collaboration among schools.

Table 2

**The Effect of Plans Developed in One School on Other Schools
And the Entire Institution under Enlightened Administration**

Schools and Their Plans	Effect on School A	Effect on School B	Effect on School C	Net Effect on the Institution
School A				
Plan 1	+	-	-	-
Plan 2	+	-	+	+
Plan 3	+	-	-	-
School B				
Plan 1	-	+	-	-
Plan 2	+	+	-	+
School C				
Plan 1	+	-	+	+
Plan 2	-	-	+	-
Plan 3	-	-	+	-
Net Effect of Adopted Plans	+ + +	-	+	+ + +
Distribution of Benefits/Losses	1	1	1	3

Importance of Collaboration in Higher Education

The management of the system requires knowledge of the interrelationships among all the components within the system and of the people that work in it. The obligation of every component is to help optimize the aim of the system. The efforts of all components of the higher educational system must be orchestrated or managed towards achieving its stated aim because, left to themselves, components tend to become selfish, competitive, independent profit centers. People within the college or university need to know what their jobs are and how they should interact with one another as part of a system. They need to see how their work fits in with the work of others in the educational system.

The greater the interdependence between components, the greater will be the need for communication and cooperation between them. It is important for the administration to recognize and manage the interdependence between these components. It is the responsibility of the administration to resolve conflicts and remove barriers to cooperation. Take for example the efforts of the various schools or faculties in a college or a university. These efforts are not additive but interdependent. If we ignore this interdependency, one school, in its attempt to achieve its goals (one of which may require a bigger slice of the institutional budget) may, left to itself, kill off another school. The obligation, therefore, of every component in the college or university is to contribute its best to the optimization of the aim of the higher educational system. For example, when schools or departments plan for the next fiscal year and send in requests for budget allocations, they should take into account how their plans can help advance the mission of the college or the university as a whole instead of simply catering to their own narrow interests. Simply focusing on these narrow interests (e.g., fighting for a bigger slice of the budgetary pie to support new programs) can lead to in-fighting and result in eventual loss to all the components of the said institution.

The principle of a system calls for collaboration between people in the institution and between institutions. A system of education, for instance, may include pupils from pre-school on up to the university. Various groups in academia should work together to achieve its aim which is to help children grow and develop and prepare them to contribute to the prosperity of society. When institutions as well as institutional participants work together to optimize the aim of the system, everybody wins. The principle of a system also applies to joint efforts by competing institutions to expand the market and to provide better service to their stakeholders. When competing institutions, for instance, join hands to lower costs and to protect the environment, among others, everybody wins. If

competing institutions expend their time and energy trying to expand the market (and not merely worrying about market share) by serving untapped segments or niches, they would all gain.

Conclusion

Everybody in the college or university needs to understand that the efforts of schools, faculties, departments, and units are interdependent. In view of this, each part of the institution has an obligation to contribute its best to optimize the aim of the system. Simply doing the best for individual components amounts to sub-optimization and results in losses to everybody in the system. A well-optimized institution is like a good orchestra which is judged not so much by how many brilliant players it has but by the way the players work together. All the institutional members are there to support each other to deliver quality products and services to its constituents. Managing the institution of higher education requires knowledge about the interaction of forces (individuals, schools, departments, units, etc.) within the system. Pitting individuals or schools or departments in the college/university against each other for resources is self-destructive to the institution because the individuals or departments involved will simply strive to maximize their own expected gain at the expense of the entire institution. In such stress-filled environment, performance targets or arbitrary cost-reduction goals will not motivate anyone to improve the system or customer satisfaction; employees will act only to meet their own goals or targets at the expense of the institution. It is abundantly clear that optimizing the aim of the college or university will require internal cooperation of all its components.

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