Improving the Competitiveness of UPI as a Research-Based Teaching University

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Abstract. Universitas Pendidikan Indonesia (UPI) as State Universities Legal Entities (PTN BH) have the independence (self-directing), (self-motivating), (self-regulating), (self-supporting), (self-assessing) (self-decision) in responding to the challenge encountered and should not be bound by the rigidity of bureaucratic regulation of the central government, as happened during this time. Under these conditions, this study examines the strategies of innovative approaches QDF through adoption servqual and KANO creative and innovative ways, in addition to that this research to collect data and information on the Model Development QFD and Resources University and its influence on Strategic Orientation, Capability Knowledge and Creative Value and its implications for the competitiveness of the university in this regard UPI leading research-based teaching university. This research is descriptive and verification. Unit analysis work at UPI, and a sample of 270 civitas academic of seven faculties and one graduate school Time horizon in this study was cross-sectional, where the research was done on time tertentuPengumpulan primary data done by questionnaires and interviews with the academic community and service users UPI. The analysis is done using a model verification Partial Least Square (PLS). The findings showed that the development model of QFD and Resources effect on the University Strategic Orientation, Capability knowledge, Create Value, and competitiveness of the university. Model Development QFD is more dominant in influencing the strategic orientation, while the University Resources more dominant in influencing Knowledge Capability and Value Creation.

1. Introduction

Educational services marketing is not new, but interesting to study because it relates to the function of the institution itself. The importance of the function of a university is an obligation for the formal educational institutions to provide the best quality in service.[1] Someone who has enough knowledge may be able to sell online training materials are very up to date globally. Universitas Pendidikan Indonesia (UPI) as a PTN - BH can address this situation from two perspectives. First, consider this as a threat (threat). There is a possibility the other universities are more innovative, more efficient in doing business and also a higher quality of production processes.

Under these conditions, this study will present a conceptual contribution which UPI will be seen as a corporate product that produced a form of higher education services and expertise-based services that are within an arena of competition with competitors-competitors. Some models of competitiveness (competitiveness model) will be tried is applied to understand and analyze its competitive position maps. Further marketing approach will be applied to explore the various
opportunities that can be done by UPI in order to improve the quality of product that is ultimately expected to bring UPI into Research-Based Teaching University in 2025.

There are two products owned by UPI services, namely (1) Services Higher Education, with the customer in the form of students who enroll in UPI; (2) Based Services Expertise, with customers such as industries that require the help of expertise. it is very closely related to each other. Products based services expertise will enrich the capabilities and knowledge of human resources in the UPI (especially professors), which in turn will improve the quality of higher education services.

As a college demanded independent and develop into better, UPI interested in getting customer as much as possible (adjusted to capacity) with the best possible quality. The strategy for improving the quality of service actually departed from the statement: what is needed and wanted by consumers in this case users of educational services.[2] The quality itself is defined as the overall attributes and characteristics of the products and services that demonstrate its ability to meet consumers' satisfaction either stated explicitly or implicitly. Several methods can be used to improve the quality, including the Quality Function Deployment. This method is a management tool to improve the quality in accordance with the wishes of consumers. Research results obtained in the First Year (1) the characteristics of services desired by users and academic UPI that as many as 19 service attributes (2) service strategies obtained by The House of Quality.

2. Literature Review

2.1. Quality as the competitiveness of the University

In operations management, University guarantees that the transformation process implemented efficiently and output has a value greater than the sum of the inputs used. The value of the product is often also referred to as the product quality.[3] The quality of the product becomes a central issue in the era of globalization, two-thirds of businesses University currently run globally through global marketing, production processes globally with supply chain covering many countries, human resource management from different cultures and culture, as well as financial practices involving exchanges the effect of world level. American Society for Quality defines quality as: The characteristics of a product or service that bear on its ability to satisfy stated or implied needs.

Improved quality can lower costs while increasing sales and ultimately increase profits. Quality being the University of competitive advantage (competitive advantage) by fulfilling customer satisfaction. In this approach the market research necessary to know the needs and desires of consumers. Characteristics in subsequently translated in the shape of the specific characteristics of the product (a product-based approach to quality). University then ensures the production process runs smoothly to produce zero defect products (a manufacturing-based approach to quality). This results in a series of processes that lead to customer satisfaction competitive advantage University.

2.2. Service Quality at the University Services

Dimension measurements for quality will be determined by the characteristics of the resulting product. The indicator on goods / University will vary with product manufacturing services / university services. This difference is due to differences in the characteristics of the goods with the characteristics of service products. Some of the differences that define the dimensions of service quality measurements are[4]:

1. Consumers manufactured products tend to interact with the end product, while consumer products and services actively involved directly in the process of production of services even in determining the quality of services rendered eg consultation about the legal process, the learning process in the classroom, and the treatment process at the hospital.
2. Services also tend to its customized for each customer
3. Universities tend to be labor-intensive services (labor intensive) while at the University of manufacturing tend to be capital intensive (capital intensive) so that the quality / HR competence becomes an important part of the production process services.

4. Product defect / defective product to the service known after the production process occurs, making it difficult to repair, while at the University of manufacturing defective products may undergo a process of refinement before being released to the market.

There are 7 dimensions in kualits services are [5]: Time and timeliness (timeliness of the delivery services), Completeness (completeness of services provided), courtesy (attitude and level of hospitality human resources to deliver services), consistency (consistency in the quality of services provided to each consumer at different times), Accessibility and convenience (ease of obtaining services), Accuracy (quality of services provided), Responsiveness (level of responsiveness of the University in providing services, including in addressing the issues quality below standard).

The study conducted by Juhri Iskandar about the quality of service at the Polytechnic of Padang using tangible, reliability, empathy, assurance, responsiveness. As the dimensions of service quality measurement. Priority improvement obtained by umtan as follows: tangibles dimension (study rooms are quite spacious and the coolness of the reading room), reliability (no computer for internet access and the right time to open and close the study room general), assurance (provide safety, comfort, fun and fast in the PBM), responsiveness (academic waitress had a sense of responsibility and rapid replacement of the catalog is missing), empathy (pay special attention if there is a complaint and officers wait in airport).

2.3. Quality Function Deployment / Quality Improvement Methods Based Consumer Products

QFD is a package diagram matrix (also referred to as quality tables) the shape of a house. As shown in Figure 2.3, the House of Quality consists of six parts, namely, Part 1: the quality of products who consumer wants and priorities; part 2: the assessment points first to the University of competitors; Part 3: shows the engineering / quality strategy by the University to satisfy consumer desires; Part 4: The linkage between the quality of products that consumers want with the quality strategy by the University to satisfy consumer desires; Section 5: The linkage / relationship between the quality strategy by the University; Part 6: shows the priority strategy should the University be obtained from the multiplication of consumer priorities (House 1) with Relationship Matrix (House 4) be a first priority strategies that result in highest score. Stage - Stage and Implementation of Quality Function Deployment (QFD) in general there are three phases: 1) Phase collecting consumer voice (Voice Of Customer) The general procedure in collecting consumer voice 2) phase of the preparation of a quality home (House Of Quality) 3) Preparation Response technical 4) technical Correlation 5) Benchmarking and Targeting.

2.4. University Resources

To measure whether a resource that is owned by the University of the strength or weakness can be done by comparing the resources that the resource previously owned, or with the resources owned by major competitors and the industry overall.[6] There are three basic resources required by the University i.e. tangible assets, intangible assets and organizational capabilities. Assets that looks are the most easily identified and can be found on the balance of a university, among which the production facilities, raw materials, and financial resources. Furthermore Collis and Montgomery (2005: 30) suggests three categories of the University's resources, namely: Tangible assets (tangible assets), intangible assets (intangible assets) and the capability of the organization (organization capability). It temporarily suggests two categories of the University's resources, namely: tangible assets and intangible assets.
3. Methods
This study analyzed the Quality Function Deployment (QFD) To Improve Service Quality at the University of Indonesia. The object of research is a method of Quality Function Deployment (QFD), measurement of QFD is done by measuring five variables, namely: 1) Model QFD via Integration Serv Qual, and Kano, 2) Resource universities, 3) strategic orientation, 4) Capability knowledge, 5) Create Value, 6) The competitiveness of Higher Education.

The method used is a survey method is a method of research conducted in populations large and small, but the data studied are the data of the samples obtained from the population, so the found events relative, distribution and relationships between variables sociological or psychological. which became the target population in this study is the students, lecturers and Power Administration UPI year 2015/2016 as many as 33 722 people by the number of samples in this study to 270 people. Data analysis techniques used in this study using Structural Equation Modelling (SEM).

4. Results and Discussion

4.1. Application of QFD in the Educational Services Sector
Based on the results of the development of VOC through the house of Quality then obtained the characteristics of services desired by users of educational services in the UPI that can be seen in Table 1.

| Service Indicator                                                                 | Rank |
|----------------------------------------------------------------------------------|------|
| Provide classrooms with sufficient capacity                                       | 19   |
| Provide equipment support learning activities such as whiteboards and multimedia projectors | 17   |
| Providing space equipped library reference books both from home and abroad         | 15   |
| Provides a comprehensive library room and equipped as, reading area, and cafeteria| 18   |
| Provides online library                                                          | 16   |
| Provides e-Learning                                                               | 14   |
| Facilities wifi network                                                          | 11   |
| Providing room for student academic services                                      | 3    |
| Their attendance of lecturers and lecture event news                              | 10   |
| Providing professional lecturers in their field                                   | 4    |
| Providing academic services officer                                               | 1    |
| Providing a website in which there is academic information                        | 7    |
| Providing material course according to curriculum                                 | 6    |
| Each lecturer is required to provide the syllabus and teaching in accordance with SAP | 8    |
| Provide the student laboratory practice                                           | 13   |
| Information system of student grades online                                        | 5    |
| Their standard assessment methods that should be applied by lecturers             | 9    |
The existence of the janitor and security | 12
---|---
Their communication media students and faculty through webmail and face to face | 2

Source: Data processed from the House of Quality

Based on the calculation of priority interest, it can be seen that the priority of the interests of the service can be described by the order of most important to lowest. In the first place is to provide academic services officer. Academic services is considered very important to be provided because it is one important factor in the implementation of all academic activities, which can greatly affect student satisfaction.

College changed its status to Legal Entity State Universities (PTN-BH) besides UPI is Padjadjaran University (UNPAD). In the implementation of its educational system, ubuntu should be able to maintain and improve the quality of service to be able to continue to improve the quality of education. According to the results of the analysis in the House of Quality, it is known that the desire of the items students as consumers of educational services judged to have the advantage of providing lecturers are professionals in their field. While on the other items known that assessed kualitas dimension parallel to the other services that exist in the UPI.

4.2. Effect of QFD and Resource Development of the University Strategic Orientation (Hypothesis 1)
Results of testing the hypothesis 1, that QFD Development and Resources effect on the University at UPI Strategic Orientation toward research-based university, is shown in Figure 1 and Table 2.

![Figure 1. Hypothesis Testing Results 1](image-url)
Table 2. Testing Hypothesis 1

| Hipotesis | $\gamma$ | Standard Error (STERR) | T Statistics ($|\gamma$/STERR) | R$^2$ |
|-----------|---------|------------------------|-----------------------------|-------|
| QFD -> SO | 0.674   | 0.103                  | 6.516*                      | 0.782 |
| UR -> SO  | 0.243   | 0.109                  | 2.232*                      |       |

* Significant at $\alpha=0.05$

The first hypothesis testing results show that there is an influence on the development of QFD and Resources effect on the University at UPI Strategic Orientation toward research-based University, where the influence of the development of QFD is greater than the resources of the University Strategic Orientation. The dominance of the influence of the development of QFD in influencing strategic orientates than university resources, which proposed a model contingency related approach to quality, strategic orientation, and the uncertainty of the environment. The third approach to quality that is discussed in this model is a guarantee of quality, total quality management, and total quality of learning. Model Miles and Snow typology used as a strategic orientation. The proposed contingency model is found to maximize organizational effectiveness, the quality approach must be congruent with certain strategic orientation and a certain degree of environmental uncertainty. Total quality management is proposed to fit the "analysis" in an environment of uncertainty that is moderate. Finally, it is proposed that the number matched the quality of learning by "prospectors" and measuring quality through QFD models.

4.3. Effect of QFD and Resource Development of the University of Capability knowledge (Hypothesis 2)

Results Testing the hypothesis 2 that QFD and Resource Development of the University of Knowledge Capability at the UPI leading research-based teaching university, shown in Figure 2 and Table 3.

Figure 2. Results of Testing Hypothesis 2
The test results showed that QFD and Resource Development University Knowledge Capability effect on the UPI towards the Research Based Teaching University, in this case Resources University has a greater impact than in the Capability Development QFD knowledge. The results of this study showing the dominant influence of university resources to the capability of absorption. In addition, the empirical knowledge capacity significantly and substantively can give contribution to a very important theme of dynamic capability. Also, tested the internal driver in the service organization that affect absorption, on the grounds that two of the dimensions of organizational culture, the task-oriented and risk-orientation, is negatively related to the capacity of knowledge and other three-dimensional i.e. open communication, respect collective, and cooperative culture positively affect the absorption.

4.4. Effect of QFD Development and Resources to Create Value University (Hypothesis 3)
Results of testing the hypothesis 3 that develops QFD and University Resources to Create Value in UPI towards the Research-Based Teaching University shown in Figure 3 and Table 4.
The results show that university resources to greater effect on the value creation UPI towards Research Based Teaching University, compared the development of QFD. It shows that value creation is more influenced by their university resources than developing QFD. The creation of value is something that is offered by the company in carrying out the transformation process by engaging customers to work together with companies to creations value.

The creation of value with regard to innovation with the aim of increasing the benefits to consumers. From the consumer side, the value creation associated with the increase in value that may impact on increasing customer loyalty. Value creation is part of the concept of Holistic Marketing is the marketing concept that integrates value exploration (the identification of new opportunities), value creation (creation of new offer), and value delivery (utilization capability and infrastructure to deliver bids new efficiently).

4.5. Effect of QFD and Resource Development of the University of Competitiveness University (Hypothesis 4)

Results of testing the hypothesis 4 is QFD and Resource Development of the University of competitiveness of the university in this case based Teaching Research UPI toward the university, is shown in Figure 4 and Table 5.

![Figure 4. Hypothesis Testing Results 4](image)

### Table 5. Testing Hypothesis 4

| Hypothesis   | $\gamma$ | Standard Error (STERR) | T Statistics ($\gamma$ /STERR) | $R^2$ |
|--------------|----------|------------------------|--------------------------------|-------|
| QFD -> UC    | 0.163    | 0.099                  | 1.647                          | 0.025 |
| UR -> UC     | -0.006   | 0.100                  | 0.060                          |       |

* Significant at $\alpha=0.05$

The test results showed that the development of QFD has positive effects on the competitiveness of the university in this regard UPI leading research-based teaching university, while the university resources has no direct influence on competitiveness. The use of QFD can explain the desire of consumers, evaluate the product, and kualits performed. The use of QFD can specify clearly the wants and needs of customers, evaluates products, and services capabilities offered systematically.
4.6. Effect of Strategic Orientation towards Knowledge Capability (Hypothesis 5)
Results of testing the hypothesis that 5 Strategic Orientation affect the capability of knowledge, is shown in Figure 6 and Table 7.

![Diagram showing the relationship between Strategic Orientation and Knowledge Capability](image)

**Figure 6. Hypothesis Testing Results 5**

| Hypothesis | $\beta$  | Standard Error (STERR) | $T$ Statistics ($|\gamma/STERR|$) | $R^2$ |
|-------------|----------|-------------------------|----------------------------------|-------|
| OS $\to$ KC | 0.545    | 0.067                   | 8.149*                           | 0.297 |

* Significant at $\alpha=0.05$

The test results indicate that the effect on the Strategic Orientation of Knowledge Capability at the UPI to the Research-based teaching university. The dimensions are on highest impact in reflecting the strategic orientation in influencing knowledge capability is the application of knowledge, followed by knowledge management, evaluation of knowledge and knowledge transfer. Customer orientation showing the highest influence in reflecting the strategic orientation in UPI factor because customers have high strength. Moreover, with the number of educational service organization engaged in the sector, thus providing plenty of choice for consumers. Consumer confidence will be transmitted to others, if a customer was disappointed with the service of a service of education, then he’ll tell the others.

4.7. Effect of Strategic Orientation and Capability knowledge to Create Value (Hypothesis 6)
Results of testing the hypothesis that 6 Strategic Orientation and knowledge Capability to Create Value, shown in Figure 7 and Table 8.
The test results show their simultaneous influence of Strategic Orientation and knowledge Capability to Create Value. Partially shown that the influence of the strategic orientation is greater than the influence of the knowledge of the value creation capabilities.

The results of studies that show the dominant influence on the strategic orientation towards value creation, in line with the results of the study Ngo & O'Cass (2008: 500) develops architectural value creation: the strategic space creating value process. The first stage of the model development VCB (value creation business) is concerned with identifying the "things to do". "It's the right thing to do" refers to the strategic orientation of the company in response to the dynamics of the environment and job orientation after the creation of value for customers is a priority.

4.8. Effect of Strategic Orientation and Capability knowledge of Competitiveness University (Hypothesis 7)

Hypothesis Testing Results 7 that Strategic Orientation and Capability Competitiveness Knowledge of the University in this regard to the UPI-based University Research is shown in Figure 8 and Table 9.
The test results showed that the Strategic Orientation and Capability knowledge simultaneously affect the competitiveness of the university. However partially shows that the effects of Strategic Orientation are greater than the influence of Capability knowledge on the competitiveness of the university in this regard UPI leading research-based teaching university. The results of this study show the influence of strategic orientation on business performance. Some researchers address the problem of lack of discussion of the strategic logistics based on the strategic orientation Porter namely differentiation, cost leadership, or a combination thereof Research.

4.9. Influence of the Value Creation Competitiveness University (Hypothesis 8)
Results of testing the hypothesis 8 that Create Value to the competitiveness of the university, is shown in Figure 10 and Table 11.
The test results showed that Create Value effect on the competitiveness of the university the dimensions are reflected in the value creation affect the competitiveness of the university is a business partner, followed by the business domain, and customer benefit. The role of value creation on competitiveness is also evidenced by the results of previous studies, which discusses three logic of value creation: value shop, value networks, and value chains are then integrated into the framework of resource management.

These results are also consistent which investigated whether the supplier market orientation leads to the creation of superior supplier perceived value and competitiveness of the organization. Supplier perceived value creation mediates the relationship between market orientation and competitiveness. Creation of supplier perceived value positively related to marketing performance and competitiveness.

4.10. Research Findings
The findings of this study revealed that the direct influence of the variable variable value creation on the competitiveness of the university (13.2%) is greater than the influence indirectly from strategic orientation (7.18%) and capability (0.132). While the variables that affect the larger the value creation is a strategic orientation ((0.574), followed by knowledge capabilities (8.93%), strategic orientation (greater influenced by the development of QFD (58.82%) compared to university resources (19, 37%). As for giving the highest influence on the strategic orientation is the development of QFD and resources of the University. the findings are reflected in the findings of the research model below (See Figure 11).
Based on the findings of the study to improve the competitiveness of the UPI is important to enhance the value creation is supported by the development of the strategic orientation and capability. To increase the strategic orientation, UPI should optimize the development of QFD, while optimizing the capabilities of knowledge, UPI must optimize resource development university. Dimensions of the highest in reflecting the value creation are the business partner, followed by the business domain, and customer benefit. Dimensions deliver the highest in reflecting the strategic orientation is customer orientation, followed by inter-functional coordination, entrepreneurial orientation, and competitor orientation.

Dimensions deliver the highest in reflecting the capability of knowledge is the application of knowledge, followed by evaluation of knowledge, knowledge management, and knowledge transfer. Dimensions deliver the highest in reflecting the development of QFD is through Service Quality, followed by QFD by adopting the model of Kano, and developing a QFD through the integration of canoes and Servqual. While Dimensions deliver the highest in reflecting on university resources is a tangible asset, followed by intangible assets, and capability organization.

The findings of this study show the dominant influence on the creation of value for the competitiveness of the university supports previous research. The supplier market orientation leads to the creation of superior supplier perceived value and competitiveness organization. Supplier perceived value creation mediates the relationship between market orientation and business performance. Supplier perceived value creation is positively related to the performance of the marketing and competitiveness of enterprises.

5. Conclusion
The main priority must be provided by the universities UPI is to provide academic services officer. Academic services are considered very important to be provided because it is one important factor in the implementation of all academic activities, which can greatly affect student satisfaction. There is a positive influence QFD Model Development and Resources of the University Knowledge Capability in UPI. Resources University has a bigger impact than the development of QFD in influencing
Knowledge Capability. There is positive development model of QFD and University Resources to Create Value. The University's resources to greater effect in the Value Creation UPI, compared QFD model development. There is positive development model of QFD to the competitiveness of universities at UPI, while there is no influence of university resources on the competitiveness of model development QFD good cause UPI able to anticipate and adapt to changes in markets, technology, and industry competition makes the increased competitiveness there are significant positive strategic orientation towards knowledge capabilities in the UPI. There is a positive effect simultaneously on Strategic Orientation and Capability of Knowledge to Create Value in UPI. There is a positive influence Strategic Orientation and Capability of Knowledge simultaneously to competitiveness in the UPI. There is positive value creation on the competitiveness of the university very little effect on competitiveness if the company does not have Create Value, Strategic Orientation and Capability knowledge, although understanding the development model of QFD and Resources have a good university. To achieve competitiveness towards research university-based teaching university, UPI had to do Create Value, which can be realized through the support of Strategic Orientation and Capability knowledge.

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