

A Study on the Prediction of Referral Intension based on Customer Satisfaction in Information Service of S&T

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1. Introduction

The purpose of this study is to design a model that can predict loyal customers based on customer satisfaction in information services of science and technology. To fulfill this goal, we measured the customer loyalty of 500 customers who experienced information services of science and technology which is provided by Korea Institute of Science and Technology Information (KISTI). The customer loyalty was measured based on a NPS (Net Promoter Score) theory. After this study, we constructed a model that can predict a non-promoting customer, a neutral customer, a promoting customer for a customer satisfaction level. The result of this study can be used in getting a priori prediction data for loyal customers by managing customer satisfaction management in an environment where customers' positive or negative word-of-mouth information rapidly spreads [1].

Although a Science and Technology Customer Satisfaction Index (S&T CSI) model is appropriate for evaluating outcomes of government agencies belonging to Ministry of Science, ICT and Future Planning (MSIP) in South Korea, it does not have an appropriate structure in deriving improvement directions of customer satisfaction. The S&T CSI model is good not only in getting fast results by using structured survey items but also selectively asking questions that researchers intend to learn. However, as the questions increase, the customers' survey fatigue can be increased and the questions may not reach to the intended goals. Net Promoter Score (NPS), another way to survey customer satisfaction, has an advantage in that it can simply evaluate customer loyalty for the prosperity of projects. With the use of voice of customers and probing methods, it can focus on customers' core needs than S&T CSI.

[Table1] Customer Satisfaction Index vs. Net Promoter Score

	Customer Satisfaction Index	Net Promoter Score (with VOC)
Approach	Top-down	Bottom-up
Evaluation	Evaluation of customer satisfaction targeting only the customer contact point	Integrated evaluation of the various factors affecting to the satisfaction
Questionnaire	Structured questionnaire	Unstructured questionnaire
Interaction	One-time transaction evaluation of customers and customers engaged	Assessment of comprehensive relationship with the customers
Correlation	Low correlation with management outcome	High correlation with management outcome
Strength	Manageability in large survey Ease of results calculation	Ease of finding important needs Open survey
Weakness	Restriction on free response Closed survey	Necessity of know-how

2. Methods

Korea Institute of Science and Technology Information (KISTI) has gotten an 'excellent' level for 4 consecutive years in a survey of customers satisfaction index since 2009 among government agencies belonging to MSIP. KISTI has provided high-quality S&T information services for Korean scientists, engineers, students, and others. KISTI wants to change and improve customer satisfaction system so that KISTI can do long-term projects and can make its projects sustainable. In order to improve customer satisfaction better for KISTI services by constructing robust customer relation, this NPS project started. This project selected each 500 samples by random sampling among 5,000 customers for two information service projects [2].

In this study, we investigated the difference of VOCs in comparison KCSI-ST and NPS in terms of actual service improvement for NDSL(www.ndsl.kr) operated by Korea Institute of Science and Technology Information(KISTI). KCSI model evaluate precedence factor first before determine satisfactory element of overall satisfaction, factors satisfaction, and social satisfaction. The precedence factor includes the quality of service contents, service process, service environment, service society. KCSI survey is conducted in face-to-face interview method by one-to-one visit. It uses Questionnaire scale 1 to 7 to a 7 point scale [3].

NPS is a new customer loyalty metrics which Fred Reichheld of Bain & Company published at Harvard Business Review (2003). NPS is not just measuring customer satisfaction score of the product and service, it measure the likelihood of recommendation as representation for satisfaction to others especially family member or friend. Fred Reichheld summarized the characteristics of each customer as Promoter (9~10 points), Passive (7~8 points), Detractor (0~6 points) on the basis of these results. And he defined NPS as the subtracting proportion of the difference between the Promoter and Detractor [4].

3. Results and Discussion

Men were over 50 % for S&T information service customers. Both twenties and thirties were main users. Customers of engineering, humanities, and natural sciences majors were main users. Students who are going to get bachelor degree, who got bachelor or master degree, were over 90%. Users who used various contents and spent lots of time showed high NPS. Users working in small and medium enterprises showed high NPS, whereas users in major company or professional fields showed low NPS and became Detractors in the category of searching research papers. In educational backgrounds, users who got doctoral degree were over forties who work in mutual agreement institutes. Users who are going to get bachelor degrees were mainly women under twenties and only used S&T information services below once a month. This was far below overall NPS. We analyzed the reasons for each NPS level. We learned that the accuracy of search results, the proper information and better browsing ways should be improved.

4. Conclusion

The NPS score for S&T information services was 35.8, which was an average level compared to other NPS surveys. As many users intended not to recommend the services, activities are needed converting the Passives and Detractors to recommenders or Promoters. The items users feel important in using S&T information services are search and contents. Both things are very important because if one thing is under the user expectations, it affects the other. Action plans should be prepared to improve both search and contents. Other competitive services such as National Assembly Library services and Research information Sharing Service (RISS) exist. It would be desirable if the S&T information services of KISTI improve its services by comparing the search and contents services of those institutes.

5. References

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