

# New Kitchen Payment System Services at the University of Derby ensure long-term viability

LE LI, DR. NG KENG YAP, YANG YANG ZHANG, & MINYI JIN

## Abstract

The current project report focuses on the examination and conclusions of the interaction between the kitchen and blend areas with a new payment technique for students at the University of Derby, UK, utilizing the Servuction Framework. Essentially, our project paper evaluates the new payment systems at the University of the Kitchen using five service features and considers how to create and implement the new services. Furthermore, we identify potential challenges and develop ideas for real-world kitchen operations services utilizing service theatre models. We also focus on new services and how to market them to customers by doing strategy and development work in the university kitchen. The current kitchen payment mechanism at the University of Derby only accepts cash and credit card payments. As a result, students at the university use student cards. The new Kitchen Payment System Services incorporates new self-service equipment that takes student cards as payment. The new service payment approach raised two potential concerns for student user advancement. In the current study, we investigate if self-service machines necessitate backstage technology and university IT system support services for students. Parts of the third phase of the project provide certain advertising and media alternatives for new client services that provide some promotional strategies for students and other potential consumers and can aid in the attainment of a new service marketing mix. In the latter sections, we focus on future challenges as service managers determine which important skills and knowledge will require development in the future.



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## 1. Introduction

One new service implementation in the university kitchen departments required the discovery and evaluation of ways for customers and suppliers to communicate more efficiently, as well as the study of some necessary conditions for market promotion strategies. This paper is organized into four sections that analyze and discuss potential challenges for new services as they meet them (Wilson, 2012). The first sections analyze the new payment systems' five features at the University of the Kitchen and explore how to create and supply the new limited affected services for managers. The second portion, under "Analysis," suggests new services by utilizing service theatre models to forecast possible issue areas or by providing specifics about real-world operations services in the kitchen. The final segment focuses on the new services and how they will be promoted to clients. Using academic models for Kotler's five product tiers, it is possible to determine the principal aim of the conceivable services and have recognized university Kitchen payment system marketing activities take place in these promotional programs (Palmer, 2014). As a result, the final portions are based on the previously reviewed and analyzed new services, as well as some appropriated marketing activity and plans for the university kitchen. However, service managers are able to identify and develop skills to fill service skill gaps in the real-world service environment.

## 2. The new services five features effected for the university Kitchen

One of the primary goals of this project paper is to reflect on how to propose and develop kitchen payment mechanisms at the University of Derby. As a result, the initial portions are based on the five payment system elements in the University of the Kitchen and explore how to develop and provide new services that might have a lower effect on managers. Every service had five elements that might influence the organization's design and delivery of services. Kitchen services had distinct features. The new services were distinguished by five characteristics: intangibility, inseparability, variability, perishability, and rental/access (Fisk, 2008). As a result, this part focuses on the method of finding new payment mechanisms to help students pay more efficiently and conveniently.

The new services Five features	The New services of in the Kitchen Payment approach
Intangibility	✓ The students' cards support payment in the kitchen self-machines. However, the students can see accounted statement every consumption in the computer account (UDO Accounted).
Inseparability	➤ The self-services machines had with students cards. However, the students forgotten and lost cards. ➤ If the self-services machines systems had crashed when they busy time. The new services need and maintain support more flexible payment approach e.g.: Apple pay or PayPal payment approach.
Variability	✓ The systems is keep same times when they students use in the self-machines ✓ During in the Peak-time for students may add more self-services machines to support students payment.
Perishability	The importance of service provider in self-services supply for students' user. ✧ As for long time to waiting used in the self-services, apply for call-the number tickets machines provided for students noticed waiting. Demanded for comfortable waiting areas services for students.
Rental/Access	✓ Booking and take seat for students stay in the Kitchen in 20-30 minutes.

**Figure1:** The New services of in the kitchen payment approach (LE, 2017)

### Intangibility

In terms of services, tangibility elements in the services that affect the client mean they cannot touch and feel the real products (Wilson, 2012). Services, in particular, are not simply characterized as an intangible product. In terms of kitchen services, new payment mechanisms or a self-service approach to serving students have been implemented, and progress can be

made in providing support for new payment plans for student groups. Because self-service machines are used in the kitchen to help students pay with cards or another electronic payment method (David, 2016). Students are unable to view full-service progress. However, the students just pay and receive a receipt from the self-service devices. As a result, the new services' intangibility features presented issues for implementation in the kitchen. The new services entailed knowing about every consumption and seeing account statements. As a result, of this intangibility characteristic, certain concrete indications must be added to new services to reduce their detrimental effects (David, 2016). For example, self-service machines can be linked to UDO accounts. When students buy from self-service machines and can check the accounted statement from their UDO account, it allows them to check every consumption statement.

### **Inseparability**

The second feature of inseparability is the simultaneous creation and consumption of services. This inseparability was seen and highlighted for both the customer and the service provider (John, 2015). The self-service devices accept student cards for payment. In the case of students, however, self-service machine systems that have malfunctioned during their work progress would result in the inability to assist students' payment approaches. For example, when student cards are degaussing or self-service machines fail to function. As a result, in order for this function to be affected for self-service machines, keep using and checking in during weekends. Furthermore, the new service must always continue to support Apple Pay and PayPal services. The new services are not just used for new services; they must also deliver the right services at the right time with the proper payment method to solve any machine malfunction issue (David, 2016).

### **Variability**

The variability characteristics of services regarded as difficult for standardization are related to approaches for addressing variability problems in organizational systems (David, 2016). Applying for new services to support a new payment method is not a variable. Students can pay with their student cards if they choose foods from stores with product prices already entered into computer systems and scan for the items themselves. However, the Kitchen restaurant was busiest for students between 12 p.m. and 1 p.m. They should make more payment options available for the students' requested payments..

### **Perishability**

The fourth service's attribute of perishability meant that the services could not be saved and kept for later use (John, 2015). Furthermore, based on the earlier analysis of the University of Derby Kitchen Services in terms of intangibility, for example, because the kids lingered in the kitchen and requested some dishes or drinks, they were unable to do so without the assistance of some workers. As a result, the restaurant services and waiting areas for food must be comfortable for students (David, 2016). Students were busy in the university kitchen. During lunchtime, several kids needed to wait and utilize self-service devices to pay. However, students who are queuing for justice and comfort are dissatisfied. As a result, the queue progress had "called the number" and placed ticket machines to supply students waiting for a solution to peak-time customer waiting problems (Palmer, 2014).

### **Rental/access**

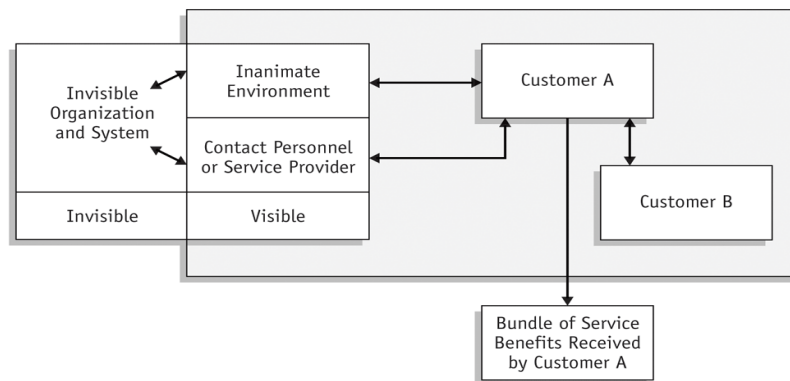
The new service rental and access characteristics denote services rather than ownership. The new services offered renters a broader range of tangible products, temporary possession, or access (Raymond, 2014). For example, a university kitchen can provide new services for

students who book a table or chairs during lunch peak hours (12 PM–1 PM) and stay for 20–30 minutes.

### 3. The Servuction Theatre frameworks for new services

According to a previous investigation, the new service payment systems in the Kitchen systems service features raised some potential concerns in the field. As a result, this part focuses on the new service frameworks and an examination of the new services used in kitchen work systems (Grove, 1983). Furthermore, anticipating possible problem areas and making reasonable recommendations for their application can meet fluctuating consumer needs.

FIGURE 2.2 The Servuction Framework



Source: From Langeard, Eric, John E. G. Bateson, Christopher H. Lovelock, and Pierre Eiglier (1981), *Services Marketing: New Insights from Consumers and Managers*, Cambridge, MA: Marketing Science Institute. © 1981 by Marketing Science Institute, Cambridge, Mass. Reprinted by permission.

Figure 2: Servuction theatre framework

The service and production theatre framework (Grove, 1983) had roughly the same theatrical elements as a staged production: actors, audience, venue, frontstage, backstages, and performance (Grove, 2000). In terms of analysis for the new kitchen services, based on the old payment method, students could only pay with cards and cash.

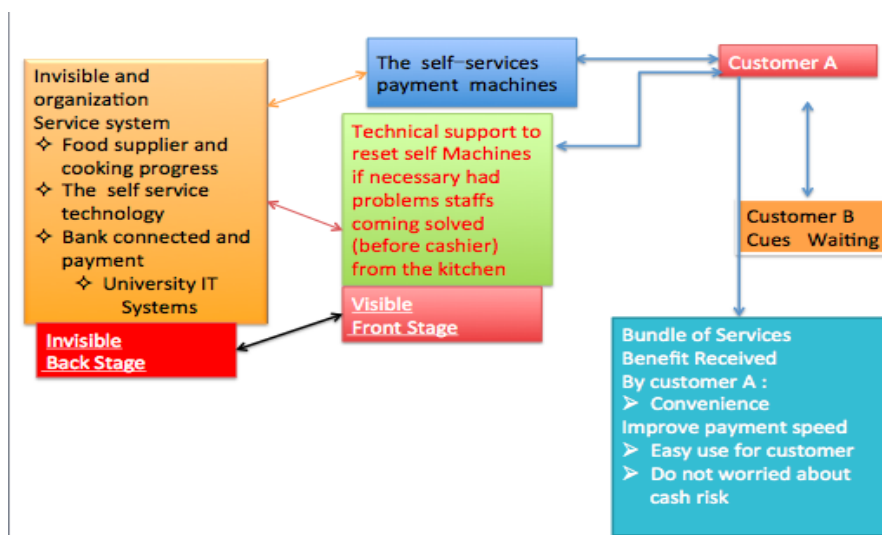


Figure 3: The servuction Framework use the self-services payment (LE, 2017)

As a result, we use the servuction framework models to analyze the progress of new services. Figure 2 depicts new services using two parts for customers A and B. The new services imply

the installation of user-self-service terminals to assist students in making payments with their student cards. Figure 3 also depicts the self-service payment method used in the kitchen for the consumer (Grove, 1983). For example, Customer A and Customer B wish to pay using the self-service devices in the kitchen. In the early stages, services engaged in the provision of self-service machines are noticeable. And another member of staff provided technical support to reset the self-service equipment, which resolved their issues. Furthermore, several self-service technologies aided the advancement of invisible backstage services. Furthermore, as an invisible service, the food provider or cooking progress provides products for a customer's consumption. In terms of self-service, students can pay with their credit cards and top up from their bank accounts. As a result, the new invisible services systems entailed connecting with the bank. inevitably, the student card and bank card, as well as any technology-connected systems based on the IT infrastructure of the University of Derby. because students can link their consumption statement account to their UDO account. As a result, the self-service payment technique included a package of service incentives for students' customers (Raymond, 2014). The use of self-service devices in the kitchen allowed a more simple payment mechanism for the consumer. Meanwhile, the new services speed up the kitchen payment approach service.

### **3.1 Anticipate two potential problems areas**

Every new service may encounter issues as the application progresses. For example, suppose the self-service machine systems crashed during the kitchen's busiest hour of 12pm-1pm. Many students who are waiting for cues and require payment use self-service devices. More precisely, the university kitchen plans include three self-service machines to meet the high demand for student services during peak hours. However, if the self-service machines had been crushed when a consumer used them, If one self-service machine malfunctioned and caused the system to fail, the consumer would be unable to use it (John, 2015). This circumstance will make customers unhappy with this service. Because, in terms of consumer perception, they were waiting for a lengthy time at self-service. Furthermore, based on consumer complaints, self-services were perceived as unsatisfactory services (Robinson, 2002). Because of a customer complaint and an incident, the culinary crew needed to move fast and provide appropriate enlargement for the consumer. Meanwhile, by checking the self-service system, employees could provide more flexible payment options for pupils. Furthermore, the second uses progress to foresee possible challenges for new services. Based on past research for new services The inseparability feature covers self-services that use the same technology as the university's IT system. Because of the self-service system, the software system requires modifications and maintenance to ensure that it can continue to provide greater services to students (Shelton, 2009). As a result, the self-service systems require improvements and are unable to match client expectations. Because of the potential complications that must be anticipated ahead of time, students will be unable to use self-service during this time period. Meanwhile, offer another payment method for Apple Pay and a flexible payment method to customers. Students were given proper explanations, and the impact on the consumer was kept to a minimum.

### **4. The New services promote based on the Marketing Mix (7P)**

This section will offer suggestions for promoting new payment services to clients via self-service machines in the kitchen area. First and foremost, this section will concentrate on analyzing this new service expansion utilizing the 7P marketing mix. Previously, new services in the kitchen needed to consider proper and effective marketing methods to generate the right kind of impression for the consumer (David, 2016). Furthermore, self-service machines learn how to add value to new service interactions. As a result, Kotler established the primary value

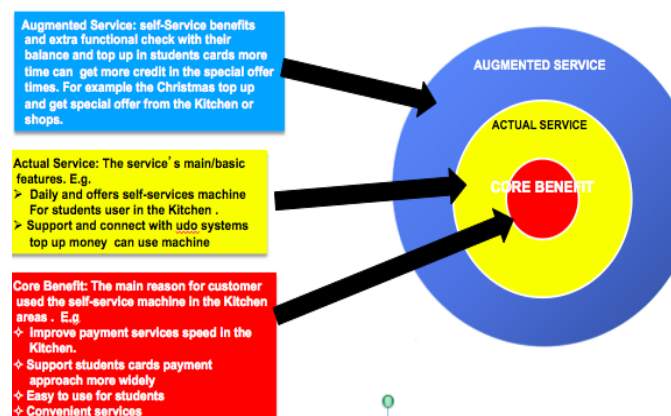
purpose of the new services using his three product levels (Kotler, 2008). Furthermore, depending on the data, marketing promotional programs should be developed to assist customers with the deployment of new services.



**Figure 4: 7Ps of Marketing Mix (Booms and Bitner, 1981)**

For ideas on service marketing, the Marketing Mix had seven parts: products and prices, place and promotion, people, and process or physical evidence (Booms, 1981). Product: The new services that use self-service machines must define how they may provide value to their customers for the various levels of items involved. The Kotler's three product scale models can help determine the main benefits and actual facilities for the consumer with the new services. Furthermore, the benefits of augmented services provided the consumer with additional benefits (Kotler, 2008). According to Figure 5, the self-service machine supports students' cards as a payment method in the kitchen. This new service product's key benefits imply faster payment services in the kitchen. Furthermore, the real services provided to students make use of self-service machines and support top-ups with student cards (Shelton, 2009). Meanwhile, the augmented service for self-service machine services included an additional function for students' needs. For example, in self-service, individuals are not only able to pay for products in the kitchen, but also during special promotion periods such as Christmas or Easter (Wilsom, 2012). Students who purchase certain things and products and top up three times can earn more credits. extra precisely, when they wish to top up the student's cards three times to gain more credit. Meanwhile, students who use their student cards to buy one coffee from Blends Coffees have the opportunity to receive one free drink.

### Three Product/Service Levels



**Figure 5: The Kotler (2008)'s levels of products models**



Price is the second of the seven Ps of marketing mix. Based on the usage of self-service equipment, the new payment technique by students using cards in the kitchen or mixing coffee is supported. Meanwhile, students can pay using this self-service payment method. When students use these new payment services, these self-service machines do not impose any fees. This is a new free service for students. However, when the institution provides new services to customers, the cost of these additional services must be considered (John, 2015). For example, during specific time periods, self-service machine systems require some payments to fix, whereas ungraded interior technology systems might continue to operate normally for students (Raymond, 2014). As a result, the new self-service machine systems must pay fees to ensure that the self-service machine meets the needs of the students. Students, on the other hand, benefit from free self-service (Raymond, 2014). However, the university must incur some monthly costs for ungraded and repaired systems. The institution requires a cost-benefit analysis for the new service. As a result, based on the new service terminals for students, How to maintain free users for students while keeping self-service machine costs under control Based on this pricing, students can continue to use self-service (Lipsey, 2015). As a result, the new service provided a cost transfer from an economic standpoint. This new service for use in the kitchen may raise the prices of specific products. Figure 6 depicts the cost transfer for food prices (Lipsey, 2015).

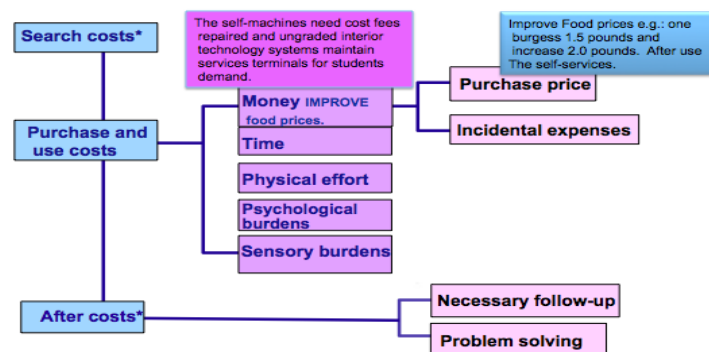


Figure 6: Le,L (2017)

The third of the seven Ps of the marketing mix is place. This new service can be used in the kitchen to provide students with a more simple self-service payment method. For example, the new services include a self-service machine in the Blends and Kitchen payment sections for students. According to Figure 6, self-service machines can give students access to the location where services are provided.

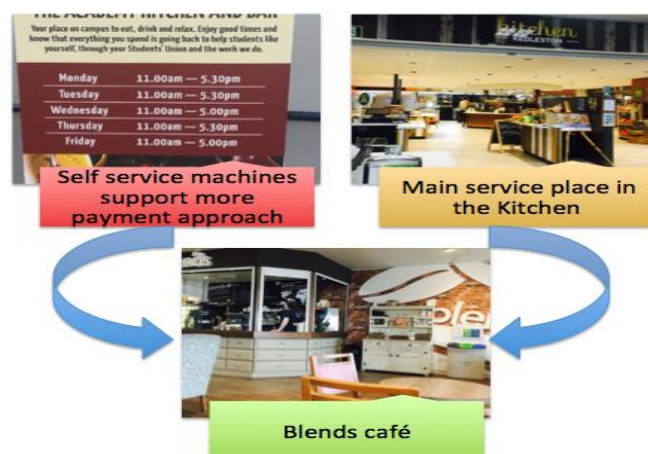


Figure 7: Le, L (2017)

Promotion is the fourth of the seven Ps in the marketing mix. Promotional development for consumer use of self-service machines in promotional plans and consideration of how some key promotional activities interact with each other in the university (Barnwell, 2014). According to the promotional strategies in Figure 7, distinct forms of promotional activity, promotional materials, and channels are used to supply new self-service equipment that may be used in the kitchen and connect with diverse target customers.

Date	Type of Promotion?	Target?	Where?	Who?	Why?	Cost	Resources	Impact	Linked to
July 2017	Poster	current Students University staffs	University of DERBY reception Students center and Kitchen	University of Derby staffs And students	instruction and notice for the new services for students	&1500	University of Derby	increase service speech for delivery convenience messages for customer.	Students union and Students card Students center university reception
August 2017	UDO Announcement	current Students University staffs	University official websites	Student unions IT SERVICES	Provided more convenience payment service for students Improve Kitchen payment service speed	Time and staffs cost \$ 2500	University of Derby IT SYSTEMS Student union	The new service payment approach Enhanced service value for customer	Student cards University of derby official websites UDO account
September 2017	Leaflet in Article	Attack more potential students (Open day)	University of Derby or International students center reception	Current Students and university staffs Travel students	In order bring more incomes for Kitchen and Blends coffee to know and use this new self service use	&2000	University of Derby Students unions	increase service speech for delivery convenience messages for customer.	Students union and Students center university reception
November 2017	Social media	Attack more Young potential student Aged(18-35)	Facebook, Twitter and Instagram	Current students and more young students social media user	the social media as popular user in the students life, and is very convenient media tools to advertising new services	\$ 4500	University of Derby	Improve the self-services impact for students and provided more satisfied images for students	University of Derby official social media account

Figure 8 (The Promotional Plans Le,L 2014)

Progress is the sixth of the seven Ps in the marketing mix. The progress for new services How to build and analyze the new self-service machines that operate in the kitchen areas This section explains how to utilize blueprinting models to demonstrate self-service development and progress (Zeithaml, 2009). Figure 8 depicts true self-service machine development.

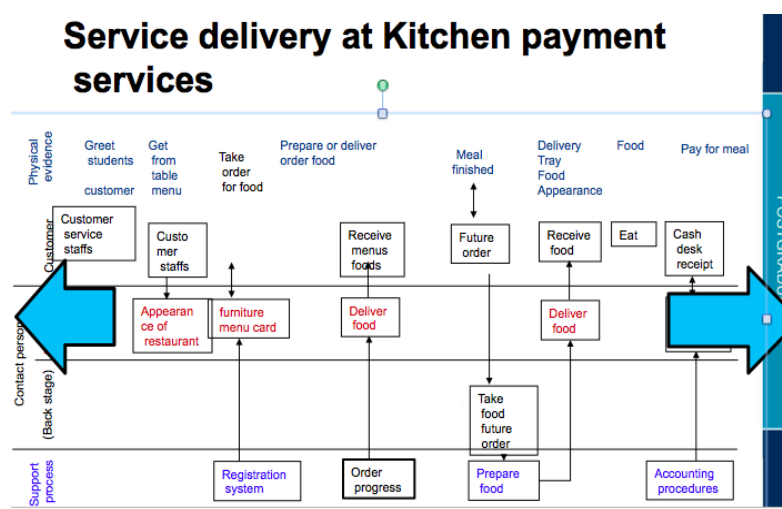


Figure 9: Blue printing for Le, 2017



Finally, physical evidence is the last of the seven Ps in the marketing mix. 4P variables for important concepts and mix marketing decision-making can be identified from the marketing mix (Hoffman, 2009). On the other hand, services marketing adds progress, and physical evidence aspects focus on the internal important concepts of the services (Boom, 1981). More specifically, the consumer can obtain a receipt when they use self-services to purchase things, and this completes all payment self-service progress. On the other hand, depending on the necessity to preserve ungraded interior technology systems, self-service devices can provide reassurance for students (Droege, 2009).

### 5. The services manager development Skills

Use the student's card to pay in the self-service machine in the kitchen based on the prior examination of the new services. Meanwhile, in order to employ the new services in the kitchen, service managers must gain some professional abilities. To become a service manager, you must have strong communication skills and be able to manage and communicate with customers, suppliers, and employees (Mabey, 2006).



**Figure 10:** The service manager development skills (Le, 2007)

As a result, service managers require professional expertise and certain soft skills to help with service work in the organization (Pramuditha, 2012). According to Figure 9, service managers must include good communication skills as well as adaptation skills while implementing new services in the kitchen. When using new services for the first time, for example, at a new service terminal, the end-user customer may not understand the progress and purpose of the service in relation to their expectations (Zeithaml, 2009). As a result, the service manager must acquire some advertising expertise as well as communication abilities. For example, the service manager should consider using appropriate promotional tools and media channels to present new services in progress and how to leverage them to maximize client benefits (Palmer, 2014). Furthermore, depending on these self-service machines, the technology of the machines requires maintenance, innovation, and upgrades. the circumstance Self-service employees must understand the intricacies of the machine during maintenance and upgrades, while service managers must maintain constant communication with the provider and client feedback (Droege, 2009). This is a situational necessity for the services manager's adaptation skill improvement. In the future, I will need to improve my adaptability for service managers. As services progress, new, previously unanticipated situational needs will arise in managing their relationships with customers and suppliers (Wilson, 2012). Meanwhile, training for

present services is required depending on the new offerings. Communication with employees and improving their work efficiency are crucial talents for me. As a result, developing communication skills with employees is essential for service managers. For example, because there are new services to replace more cashiers, the usage of new services means the manager must re-allocate staff work roles in the service process. These cashiers must receive additional skill training in order to meet the needs of customers and provide other services related to new services (Kelly, 2000). To summarize, communication and adaptation abilities are required for service managers to provide good customer service.

## Conclusion

To summarize, our initial objective in the present project was to build new services in the kitchen using a new payment strategy. The current project report examines and draws insights from the interplay of the kitchen and mixing areas with a new payment method for students at the University of Derby in the United Kingdom, using the Servuction Framework. Our project paper, in essence, assesses the new payment systems at the University of the Kitchen using five service features and considers how to build and implement the new services. Furthermore, using service theater models, we identify potential difficulties and develop concepts for real-world kitchen operations services. By undertaking strategy and development work in the university kitchen, we also focus on new services and how to promote them to clients. Use the self-services and support students' cards as payment approaches for the kitchen, the first based on an investigation of five new services and how they affect the kitchen. Furthermore, because of the new service frameworks (Grove, 1983), the payment strategy for new services explains and analyzes how to associate with the client. Furthermore, predict potential difficulties and how to resolve them. The third component employs the marketing mix (7P) to promote new services to customers (Palmer, 2014). Also, provide some key models for analysis for the new self-services machine product, as well as some promotional ideas for students. For the service managers, the final sections of the study focus on how to acquire some information and how to develop communication skills and adaptability in order to maintain strong relationships with customers, suppliers, and staff.

## Reference

- Barnewall, G. and Webster, F. (1973). Marketing Communication: Modern Promotional Strategy. *Journal of Marketing*, 37(2), 120.
- Booms, B.H. and M.J.Bitner (1981) Marketing Strategies and Organisation Structures for services firms, in Donnelly, J.H. and W.R.George eds, *Marketing of services*, Chicago: American Marketing Association, 47-51.
- David, J, and Fiona, E,(2016) *Principles and Practices o Marketing*.8<sup>th</sup> edn. Maidenhead, McGraw-Hill Education.
- Droege,H., Hildebrand, D., Forcada,M.A.H (2009) Innovation in services: present findings and futures pathways, *Journal of services Management*, 20(2), 131-55.
- Grove, Stephen J. and Raymond P. Fisk (1983), " The Dramaturgy of services Exchange: An Analytical Framework for Service Exchange: An Analytical Framework for service marketing," in *Emerging Perspectives on services Marketing*, Leonard L. Berry, Lynn G. Shostack, and Gregory D. Upah, eds., Chicago:American Marketing Association, 45-49.
- Grove, Stephen J. and Raymond P. Fisk, and Joby John(2000), "services as theatre: Guidenlines and Implications," in *handbook of services Marketing and Management*, Teresa A. Swartz and Dawn Iacobucci, eds., Thousand Oaks, CA:Sage Publications,21-35
- Hoffman, K., Bateson, J.E.G., Wood, E.H. and Kenyon, A.J. (2009) *Services marketing: concepts, strategies and cases*, international edition. Andover: Cengage Learning EMEA.
- John,F. and David,J.(2015) *Foundation of marketing*. 5<sup>th</sup> edn. Maidenhead: McGraw-Hill Education.
- Kelly, D. and Storey, C. (2000) New service development: initiation strategies, *International Journal of Service Industry Management*, 11(1), 45-65 (available in UDo).
- Kotler, P. Armstrong, G. Wong, V. and Saunders, J. (2008) *Principles of Marketing*, 5<sup>th</sup> ed, Prentice Hall, Essex.

- Lipsey, R. and Chrystal, A. (2015). *Economics*. 1st ed. OXFORD: OXFORD UNIVERSITY PRESS.
- Mabey, C.(2006)' Management Development Works The Evidence ." *Achieving Management Excellence Research Series 1996-2005*. London:CMI. Maidenhead: Mc Graw Hill.
- Palmer, A. (2014) *Principles of services Marketing*, 7<sup>th</sup> edn., Maidenhead: Mc Graw Hill.
- Pramuditha, C. (2012). *A study on factors of attitude towards using electronic human resource management*. 1st ed.
- Raymond P. Fisk, Stephen J.Grove and Joby John(2014) *Service marketing an interactive Approach*. 4<sup>th</sup>ed. International edition, Canada: Nelson Education, Ltd.
- Robinson,T., Clarke-Hill,C.M and Clarkson,R.(2002), 'Differentiation through services: a perspective from the commodity chemicals sector,' *The services industries journal*, pp149-66.
- Shelton,R.(2009), ' Integrating products and services innovation', *Research Technology Management*, 52,3 (May/June),38-44.
- Wilson, A., V.A.Zeithaml, M.J. Bitner and D.D Gremler(2012) *Services Marketing- Integrating Customer Focus Across the Firm*, 2<sup>nd</sup> European edition,
- Zeithaml, V.A., Bitner, M.J., Gremler, D.D. (2009) *Services marketing: integrating customer focus across the firm*, fifth edition. London: McGraw Hill.

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