Teaching Undergraduate Students to Manage Service Production Processes by Scenarios

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Abstract. The paper reviews the outcomes of conducting operation management simulation in a class of Undergraduate students within "Services Marketing Management" course in 2014. A hypothetical call of "service operations" was made delineating services as scenario-driven production processes, drawing attention on the best strategy design and the service process performance itself. A rehearsal of best scenario-driven operation strategy was performed on the grounds of achieving the highest profit result, which contrasted some operations insights on a quantitative and qualitative base of argumentation.

Keywords. servuction, scenarios, simulation, operations management, service industry.

1.Introduction

Teaching Undergraduates to manage service production processes by scenarios become an interesting educational task in the course of Services Marketing Management. Usually students claim that doing marketing of a service is to manage, more or less, its communication mix *for the sake of* the targets, and in reverse. Moreover they think that doing management of a service means to design marketing strategies for running that service in its best performance. But services are naturally determined by their inseparability and simultaneity of their inner processes of production and consumption. Cosequently, managing a service turns into overseeing service synchronization *(by time and mode)* between the consumer and the service provider, and steering service feasibility (*by encounter, or interaction),* considering its conceptual 7P framework. Than an issue in teaching students to manage services becomes "to understand it", rather than "know about it". Likewise product offer, service offer is to be operationalized one, but contrariwise, service itself is a service-, product-dominated, or hybridized band of components that determine its servuction-and-consumption offer.

The purpose of this report is to review the challenge for the students to create the best service offer by generating servuction-consumption pitches and to make prescriptions of how the challenges to be overcome. Hence, using a simulation tool to manage production-consumption processes of a service is a good reasoning scenario-thinking paradigm to be demanded.

2.Defining Services as Scenario-Driven Servuction Processes

The paper leans on the definition of services based on Christian Grönroos's writings [1]. Generally he defines services as processes and activities that are intangible in nature, and more precisely, "service" as a process consisting of series of intangible activities that take place in interactions between the customers and service employees and/or physical goods

and systems of the service provider, which are provided as solutions to the customer problems. That rationale helps him among whole the range of characteristics of services suggested and discussed in the literature, to identify three basic ones: 1) services are processes consisting of activities or a series of activities rather than things; 2) services are produces and consumed simultaneously, and 3) the customer participates in the service production process.

Understanding service management and marketing of services it is critical to realize that the consumption of a service is process consumption rather outcome one, or the customer perceives the service production process as part of the service consumption, but not the outcome of that process, as in traditional marketing of physical goods. Because of that inseparability of the process and the consumption of the service, the production process is delineated as an *open process* and the consumption – as process *consumption*. Then service encounter or customers' interactions with the production process become part of their consumption process, and the consumption of the physical goods included becomes partly process consumption. Hence, the service provider offers a factory-related service element in the solution to the customer problems. Here, considered as a service operations management issue, that interpretation is reposed in the service production process in a restaurant service.

Coined by Pierre Eiglier and Eric Langeard, the term "servuction", combining the terms service and production, describes the service operations system as that part of the service provider's physical environment and goods, which is visible and *open* for processing to customers, contact personnel, and the customer in person. Christopher Levelock expanded that conceptual framework and embraced three overlapping elements: *service operations* (batching, ordering, dining time in a restaurant), where inputs are processed and the elements of the service product are created; *service delivery,* which embraced process consumption and where final "assembly" of those elements take place and the product is delivered to the customer; and *other contact points*, i.e. all points of contact with customers, including advertising, billing, and market research [2].

Defining here services as scenario-driven servuction processes, an assumption of intersecting two disciplines is made. Scenario method and Decision analysis rationales are reffered as management tools for building-up comparable futures that unfold in better service operations. George Wright and George Cairns combine the scenario thinking paradigm and the decision analysis algorithms in a six-stage formal framework to evaluate strategies against decision maker's objectives. Considering that top-down-oriented organizational framework, an articulation of its approach from strategic to operational level management is made here so as to have service production processes strategized, to design alternative strategies and consequently the best performing strategy to be selected [4]. Formulating scenarios on operations level also take place as a context for objective formulation and strategy design, but the very contribution is in the perception of the servuction process as a performance of scenario-driven service operations strategy.

That is why when assuming services as scenario-driven servuction processes we have been taking into account service strategy performance and the service process performance itself – as a simultaneous production and consumption.

3.Simulating Service Performance by Scenario-Driven Operation Strategy

"Operation Management Simulation: Benihana©" is a single-player online simulation tool that help students explore the principles of operations and service management while working through a series of challenges set during a single evening at a busy Benihana restaurant.

Customers start in "the bar area" for drinks and then move into "the dining room" where chefs prepare the food right at the table. Each simulation challenge examines a particular aspect of the restaurant operation.

The teaching plan is to help students systematically unearth the elements of Benihana's profitability, determining how each aspect of the operation contributes to superior financial performance. In the process, students learn how to apply important principles of operations management. Students come to realize terms as throughout capacity, demand variability, capacity utilization and service time apply not only manufacturing environment but also to a service production process. The most important message the simulation conveys to the learners is that effective Operations Management practices can have a powerful impact on a firm's profitability, or the profitability could be the KPI for designing and evaluating scenario-driven servuction strategies. Other KPIs to be analyzed are: capacity, demand rates, cycle time, and throughput in a service operation.

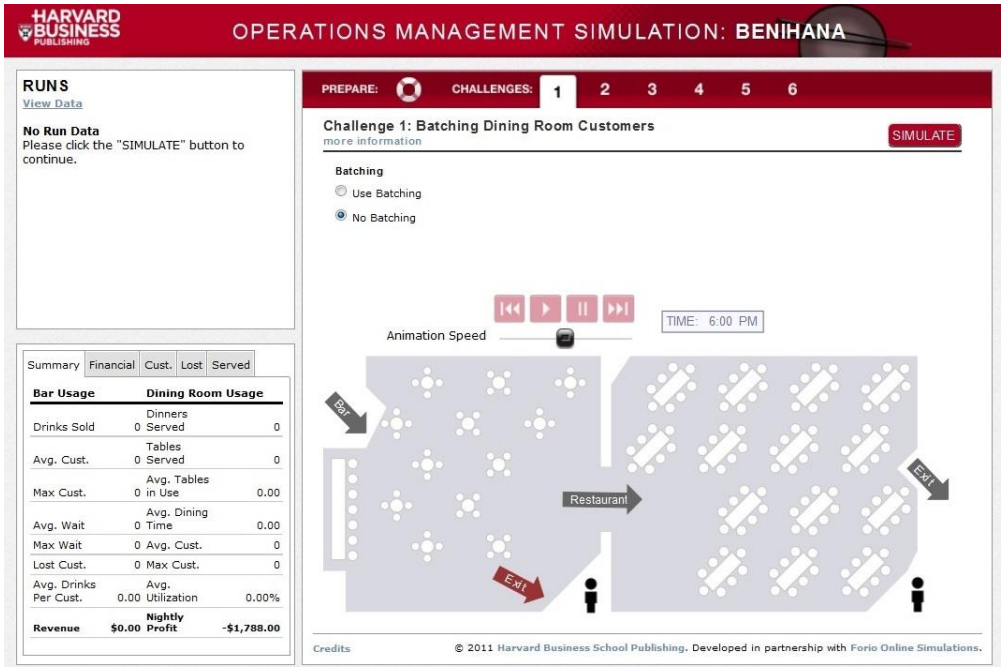

Fig. 1. Interface of "Operation Management Simulation: BenihanaV2.

The simulation is a tool that helps students unlock in a quantitative manner the leverages of Benihana's profitability. It is organized as a series of challenges, each with a different set of options for managing the servuction and consumption. In all of these challenges, the goal is to manage the bar and dining area in order to maximize utilization, throughput, and total profit for the evening.

The specific challenges are [3]: 1) batching dining room customers, which strategy affects throughput; 2) optimally designing the size of the bar for maximum profitability; 3) reducing dining time across the evening; 4) boosting demand with advertising and special programs, or redouble service marketing efforts to affect service production and profitability; 5) scheduling different, more complex forms of batching at different times to have an impact on operations and profitability; and 6) designing best strategy as a combination to maximize profitability.

Throughout the simulation students understand how batching strategies improve throughput and how increasing capacity improves bottlenecks. Students digest the importance of optimizing capacity in an operation in order to minimize or eliminate demand variability (cyclical, stochastic, batch size, and service time). They learn to optimize multiple variables in the service production process and ensure consistency in the overall strategy.

4.Rehearsing Scenario-Driven Service Production Strategies

Teaching how to develop service operation strategies, "Operation Management Simulation: Benihana©" was conducted in a class of undergraduate students within a course of "Services Marketing Management" during the academic 2013/14 year. The outcomes received confirmed that the simulation helped students rehearse their best scenario-driven operation strategies. It was the final Challenge 6 that required students to consider the lessons learned in the previous challenge-stages – form 1 to 5 – and to design a strategy that maximizes utilization, throughput, and total profit for an evening at the restaurant. When designing their best strategy, they made bulk of combinations of the options given in the sub-stages (see Fig. 2) that ought to bring service production process at Benihana to its efficiency and superior performance.

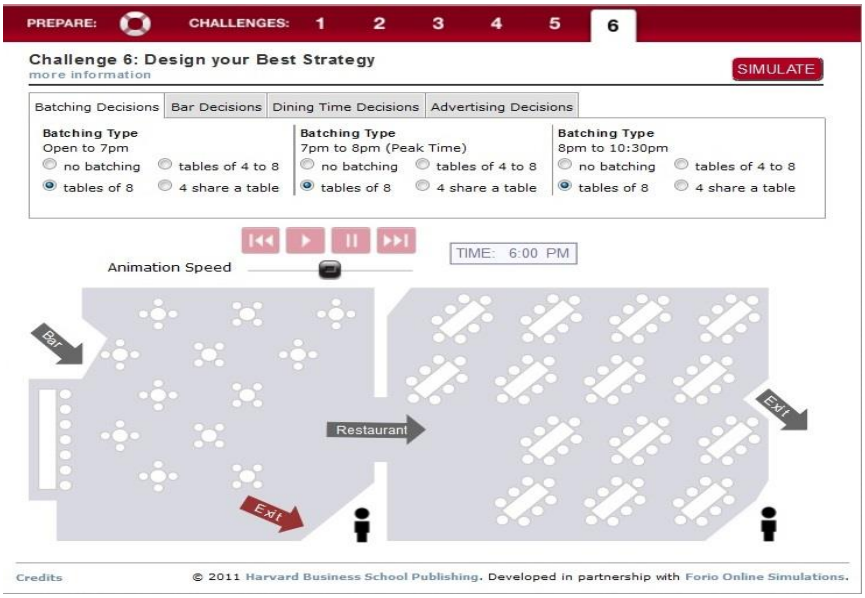

Fig. 2. Simulation Interface of Challenge 6: Design your Best Strategy.

Students systematically unearthed the elements of Benihana's profitability, determining how each aspect of the service production contributes to best financial performance. The highest ranked profitability element students used as litmus for best-

performed servuction process is "profit per night". As an evidence of how "profit" navigates any options' blend for simulating "Best strategy design", here is provided the example of student outcomes after 70 runs along the challenges. Her scenario-driven strategy traced a flow of repeated footprints that she accepts as best-practice service process with superior profit (in her case $622.03 per night). She claimed that the best strategy design for the restaurant is based on (see Table 1): 1) non-batching – neither in the dining room, nor in the bar; 2) inclination to increase numbers of the bar seats and decrease restaurant tables; 3) dining time should be kept short up to 45 minutes, especially in pre-peak and the very peaks; according to the student customers could be allowed to relax during the post-peaks; 4) boosting demand with advertising and special marketing programs should be a privilege but with a normal ad-budget, and on expenses of earlier open time of the restaurant (at 5 pm if the peas is between 7 and 8 pm); and finally 5) if any batching is possible it should be for tables of 8 customers.

Table 1. "The highest profit" scenario-driven service production process.

CHALLENGE											
1	**2**		**3**			**4**			**5**		
Batching dining room customers	**Design the bar**		**Change dining time (minutes)**			**Boost demand with advertising and special programs**			**Use different types of batching at different times**		
	Batching	Bar Seats/ Restaurant tables	Pre-peak	Peak	Post-peak	Ad Budget	Ad Campaign	Opening Time	Pre-peak	Peak	Post-peal
no	no	15/19	45	45	45	None	Awareness	5 pm	no		
yes	yes	55/14	60	60	60	1-2x	Discounts	6 pm	tables of 4 to8		
		87/10	75	75	75	2-3x	Happy hour	7 pm	tables of 8		
						3-4x			4 share a table		

The simulation performed as a tool that helps students understand key operational insights under the paradigm of scenario thinking and decision analyses. The comparison of three executed strategies envisions an important operational insight (see Table 2).

Table 2. Comparison of three challenged highest-profit strategies.

SCENARIO DETAILS (AVERAGE RUN)	**"The highest profit" scenario**	**"The average profit" scenario**	**"The lowest profit" scenario**
User	Zadgorska, Ina		
Challenge	6	6	6
Scenario	9	11	13
KEY RESULTS			
Dinners Served	377.65	297.6	338.05
Drinks Served	295.2	121.4	125.9
Bar Revenue	$442.78	$242.78	$251.75
Dinner Revenue	$3,776.50	$2,976.00	$2,873.42
Total Revenue	$4,219.28	$3,218.78	$3,125.17
Total Costs	$3,597.25	$2,999.54	$3,096.00
Lost Customers	5.75	1.25	1.2
Profit	$622.03	$219.23	$29.17
DECISIONS			
Bar Seats	79	55	55
Batching (Pre-Peak)	Tables of 8	Tables of 8	Tables of 8
Batching (Peak)	Tables of 8	Tables of 8	Tables of 8
Batching (Post-Peak)	Tables of 8	Tables of 4 to 8	Tables of 4 to 8

Dining Time (Pre-Peak)	45 minutes	45 minutes	45 minutes
Dining Time (Peak)	45 minutes	45 minutes	45 minutes
Dining Time (Post-Peak)	50 minutes	45 minutes	45 minutes
Advertising Budget	1.6x	1x	1x
Advertising Campaign	Happy Hour	Awareness	Discount Promotions
Opening Time	5:00 pm	6:00 pm	5:00 pm

The student agrees that the decisions made in any of the three scenarios are built on achieving highest-profit outcomes and that it is generated when boosting the volume of consumption by means of dinners and drinks served within an elongated working day, rather than in keeping low the number of the customer lost. The student turned that observation into a hypothesis that undermines customer-centered boosting demand.

5.Conclusion

The paper reasonably shows that designing best operation strategies for service providers originates in understanding services as scenario-driven servuction processes. Teaching students to design service production processed appears to be an ambiguous task because, from one side, service operation management should have powerful impact on provider's profitability, and, from the other, servuction itself does not exist separately from service consumption where we talk about productivity drivers, i.e. about customer perceived value and service quality. Building up service operation scenarios should not be reduced to quantitative combinations of options on site, but they should be considered as a context for scenario thinking and decision analysis for long term and strategic perspective.

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