Examples Exam Questions Service Operations (with answers)

1. The manager of a book store wants to evaluate the performance of its service. The book store applies an "encounter dominated by the service organization"- strategy. Provide two main performance indicators for this book store, and show clearly the relationship with this strategy.

Encounter dominated by service organisation (see book 7thed. p. 215; 8th ed. P. 95): often cost focus, strict operating procedures, limit discretion of personnel, no personalized service, learn customer what NOT to expect (McDonald, Tax organisation)

Examples of performance indicators:

- Cost or value of different kinds of supplies to customers
- The number of times that employees do not stick to operating procedures
- Costs of a contact with a customer, e.g. average service times,
- Amount of extra products sold after customer contact
- Customer satisfaction about the personalization of the service

2. *Assume* that a consultancy agency wants to adopt a network strategy as value configuration. Describe two main characteristics of this strategy, and provide an example of a service that the consultancy agency could deliver when adopting this strategy. Show clearly the connection between the network strategy and your example.

Answer:

Value creation logic of a network strategy is connecting customers. Their primary activities are network promotions and contract management, infrastructure operations. They often have a mediating role. Example is: they could develop a service where customers can meet each other and help each other with organizational issues, a forum where questions and answers are posted. The company reflects on these answers and questions and checks the correctness of the information.

3. Propositions:

   Please have a look at these propositions and state if you agree or disagree with a statement, and provide arguments for your choice.

   I. Service organizations that want to compete on quality should couple Front office and Back office.

Agree/disagree: both may be correct

Argumentation:

Agree: couple to deliver personalized service, close contacts, less handovers. Handovers can cause that information about customers is handed over too late, not clear, incomplete etc.

Disagree: if back office has expert services that cannot be delivered through the FO, than keep it decoupled, BO can specialize tasks

II. Scripts for coordinating customer activities are only useful in highly standardized service processes.

Agree/disagree: disagree

Argumentation: You can have very loosely specified scripts as well that are useful in more non-routine processes in which customers do more complex tasks or tasks with high levels of uncertainty.

III. Service organizations that want to compete on costs should develop modular service packages.

Answer:

Modular design means that standardized service modules (and components) are designed, which can be combined in more customized deliveries. However, it's very hard sometimes to 'find' these parts, and besides, there may be need for so much diversity that many different combinations should be made available. However, if you can overcome these problems, it might be a very effective way to reduce costs.

So, both agree and disagree could be answered, and the grading depends on the argumentation.

4. The Student Support Desk is an important front desk of the faculty as organization that provides information to bachelor and master students that should support their learning process. Each day many students have several questions about education and administrative processes (schedules, rules and protocols, grade registration, exam registration, information requirement, etc.). Describe three different tasks customers have in the Student Support Desk, and show for each task how management can control the student in these encounters with the faculty front desk.

Several answers were possible (see slides lecture 5)

Student as a co-producer/student can specify the service: describe exactly what they want and as such specify the service, student brings in information or forms; managerial: structured, pre-defined forms

Student as controller of quality: students can assess the delivery of the service and can advocate this: invite student to evaluate the service, provide feedback,

Student as source of innovation (design engineers): they can come with good ideas to improve and innovate the service; managerial: invite students to provide their expectations, .

5. Service organizations can apply a multi-channel to communicate and to deliver services to customers. Describe how an organisation can reduce customer-induced uncertainty through developing a multi-channel design.

Answer:

- Reducing switching options between channels (low combination)
- Reducing the options to choose for a specific channel, but force customers to make use of a specific channel (low redundancy)

6. The book of F&F describes 8 dimensions how scalability can be increased. Provide three dimensions how scalability can be increased. (4 points)

See book chapter 5 (103-104) 7th ed.) and chapter 2 (p. 46-48; 8th ed.).

- conduct only information or data-transfer services

- allow customers to serve themselves

- let customers serve other customers

- use of more digital asset

7. Suppose an organization wants to stimulate the use of e-mail and the web (Frequently Asked Questions) to provide their core service. Previously they answered most questions in a face-to-face service encounter. In which way does the role of technology in the service encounter change then? Use the terms described in the book to discuss the old and new situation: technology-free encounter, technology assisted service encounter, technology-facilitated encounter, technology-mediated encounter, technology-generated service encounter.

Make sure that your answers shows that you know the meaning of the terms you use.

First: technology-free encounter (direct contact between provider and client, no use of technology) or/and technology assisted encounter (only server makes use of technology).

Now:

Email: technology mediated encounter (no direct contact, both make use of technology to contact each other.

Web: technology-generated encounter (rver at the background. Client communicates by making use of technology.

8. Which new management challenges come to the fore due to this change (see question 7)?

Answer:

- They have to know that customers can (have the capabilities), and will (are motivated) to use this new way of interaction (has to do with reliability, easiness of use)
- Less options to control experienced quality, so additional ways, or new ways of evaluation should be developed)

- Be prepared that other channels are available or assistance should be provided if clients cannot use it.

9. Determine relevant performance dimensions (both qualifiers and order winners) for a restaurant that has adopted a network strategy. This restaurant has put telephones on each table and customers of the restaurant can contact each other by dialling a table number. So, the restaurant does not only serve food and drinks, but also connects customers. Make very transparent how these performance dimensions relate to the strategic positioning of this restaurant, and describe five performance measures that are clear and unambiguous.

   Answer:

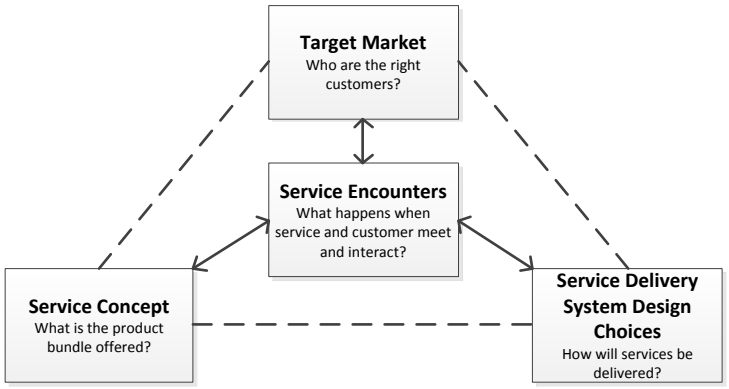
   Qualifiers:

   - High quality food
   - Reliability of phones and contact services
   - Physical environment that should people invite to contact other customers (cosy, pleasant)
   - Quality of personnel in terms of friendly behavior, respectful communication

   Winners:

   - Functionality (really creating nice contacts)
   - Integrity (if people do not want to contact a specific other, keep it like this)

10. Describe the relevant and internally consistent service strategy triad for this restaurant (6 points)



Students need to fill out this figure based on the case description (see tutorial 2 for examples how you should dot his)

11. Managers from large retail shops can “host” different brands. For example, a large retail shop like V&D or the Bijenkorf hosts ladies’ clothing brands like Zara and Esprit in their store. During class we discussed these service supply chain relationships and how they can be managed. Mention four ways how the “buyer” can control the quality of the goods and services that the brands/subcontractors deliver the end-customers:

Purchasing activities: who decides, does what/is responsible for what in purchasing tangible parts of the offering (strategic, tactical, operational)

Inventory: who’s paying for inventory, who is responsible for inventory management?

Distribution activities: from warehouses/plants to shop, and from shop to end customers: e.g. single or shared with other subcontractors?

Demand management and pricing strategy: sale, discount strategies (make formal arrangement about this)

Physical lay out and size shop: make formal arrangement about this

FO staff: who is employer? Training and selecting staff

Service recovery policy: make formal arrangement about this

Monitoring activities and improvement: make formal/informal arrangement about this

12. DEA

    Suppose the faculty plans to benchmark its Master specialisation against each other. It has applied DEA with the following outputs: (1) number of graduations per year, (2) student satisfaction measured in a survey after graduation, (3) average between entry and graduation. The only in input is the budget per year. When DEA LP model for the specialisation Finance is performed, the three specialisations HRM, O&SC and Marketing appear to form its efficiency reference set, i.e. the constraints related to these specialisations have non-zero shadow prices (=opportunity costs). (10 points)

    a. Consider the above information.
       - Explain why more than 2 other specialisations can be in the efficiency reference set.

Answer: There are 3 outputs and one input. Assuming the same level of input, one organisation could perform best for one of the outputs

- What does the above information imply regarding the efficiency ratios (= productivity ratios) of the 4 mentioned specialisations?

Finance<1; HRM, O&SC, Marketing = 1

b. Suppose you are interested in the strong and weak points of a specific specialisation. How can you see from the DEA model solutions on which of the three output variables it performs relatively strong?

The strong variable will get a high coefficient in the objective function when solving the model for the specific specialisation RELATIVE to the same coefficient when solving the model for other specialisations

Example exam questions related to Lead time and Capacity Management for Service Operations

Questions related to Lead Time and Capacity Management will be partially quantitative, partially qualitative. In the exam also a short case description may be given and answers might require examples related to that specific case.

Examples of qualitative Lead Time Management questions:

1) Different reasons for waiting time have been discerned in the lecture slides. One of them is "batching". Give an example of waiting time due to batching for a service process in the hospitality and tourism industry.
2) How can the triage process in emergency care help to reduce the waiting time *perceived* by a patient without reducing the actual waiting time? Give two possible factors.
3) The book gives a classification of arrival processes. What are the assumed characteristics of the arrival process when a G/G/1 queuing model is applied?

Example of a quantitative Lead Time Management question:

4) One of the diagnosed causes of long waiting times in a specific emergency department is that "capacity is increased too late when a high numbers of patient arrivals occur; the response only takes place when the waiting line has already increased strongly". Sketch a throughput diagram with curves for (1) arrivals and (2) completed treatments that could result from this situation.

Examples of qualitative Capacity Management questions:

5) Give an example of the use of a Hub and Spoke layout in an Amusement park and explain how the Hub will normally represent one of the 6 policies for managing supply of capacity (as discerned by F&F).
6) What is meant by *request variability* and what would be a strategy to reduce this variability?

Examples of quantitative Capacity Management questions:

7) F&F model the problem to schedule employees with 2 consecutive days off in an ILP model. The decision variables are
   x_i = number of employees assigned to tour i, where day i begins 2 consecutive days off (e.g. the

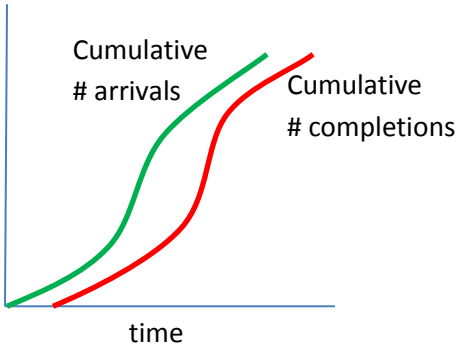
employees assigned to tour 1 have Sunday and Monday off)
How should the requirements constraint for the Tuesday be written in this this model when 7 employees are required on the Tuesday?

8) The price for a full fare ticket at an airline is €900; the discount price is €100. Demand for full fare tickets is Normally distributed with a mean of 100 and a standard deviation of 20. All other tickets can be sold at the discount price. How many tickets should be reserved for full fare passengers according to the basic yield management model? The table below provides the z-values for the standard normal distribution. If the right Z-value is not in the table, use the closest value from the table.

$Z_{0.1}$	Z_{02}	$Z_{0.3}$	$Z_{0.4}$	$Z_{0.5}$	$Z_{0.6}$	$Z_{0.7}$	$Z_{0.8}$	$Z_{0.9}$
-1.28	-0.84	-0.52	-0.25	0	0.25	0.52	0.84	1.28

Answers

1) E.g. a boat tour that leaves as soon as the first boat if fully loaded causes this type of waiting time.
2) (i) by keeping the pre-process wait relatively short (the triage is seen as the first step of the service process) and (ii) by giving certainty on the maximum waiting time that can be expected, given the urgency of the triaged situation.
3) a static process with random arrivals and a constant arrival rate.
4) Increases of the inclination in the completions curve should occur much later than in the arrival curve, i.e. not before there vertical distance has increased strongly, e.g:



5) A central area with restaurants is a good example. *Shared capacity* (pooling effects) in the hub will help to match supply of capacity with demand.
6) Request variability is the variability induced by customers when differences in requests would lead to uneven service times, e.g. a customer at a help desk only asking for the right code, vis-a-vis a customer confronting the help desk with a completely unstructured problem. A policy to reduce this variability would be "limiting service breadth" (e.g. referring customers with unstructured problems to another service).
7) $x_1 + x_4 + x_5 + x_6 + x_7 \geq 7$
8) Cu (lost revenue in case of underestimating high revenue demand) = €900-€100 = $800
   Co (Cost of reserving too many seats for full fare passengers) = €100
   if X is the number of reserved seats for full fare, and d is demand for those seats, then
   P(d<X) should not exceed Cu/(Cu+Co), i.e. P(d<X) ≤ 0.9 so we need $z_{0.9}$ ($z_{0.9}$ = 1.28).
   X = 100 + 1.28 x 20 = 126, so 126 seats should be reserved for full fare passengers.