Teaching Note

Inventory Management at the Theme Park

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Critical Incident Overview

Erin is a catering supervisor and is responsible for requisitioning food for all catering events. She is experiencing consistency problems with the warehouse including late delivery, missing food from deliveries, and the delivery of too much food. Erin's summer hospitality internship is half over and she is seeking to understand and solve the process issues her operation has with ordering and receiving the food in a timely manner. She is using this issue to complete as assignment required for her internship. The focus of this critical incident is on the processes involved with inventory management and how it impacts the foodservice operation.

This critical incident would be useful in undergraduate courses focused on hospitality management, foodservice management, and inventory management.

Research Methods

This decision-based critical incident puts students in the shoes of an intern working at large Midwestern theme park. The names of the co-workers in this critical incident are disguised. Otherwise, the critical incident uses original facts, as the critical incident is based on the fieldwork and interviews conducted by one of the co-authors, who was the principal figure.

Learning Outcomes

In completing this assignment, students should be able to:

1. Evaluate an inventory system and determine the implications of poor inventory management.
2. Develop an inventory management plan and understand the relationship between it and an inventory control system within a central warehouse setting.
3. Propose inventory management tools and techniques to improve existing processes.

Discussion Questions

1. Assess the financial, labor, and service situation. How does inventory system inaccuracy in food service operations impact overall efficiency of the Theme Park? (LO 1)
2. What are three specific changes to inventory management and control system for the theme park? Defend your answers. (*LO 2*)
3. How would an improved inventory control system for the theme park benefit the warehouse from an efficiency perspective? Assess the beneficial impacts. (*LO 3*)

Answers to Discussion Questions

1. **Assess the financial, labor, and service situation. How does inventory system inaccuracy in food service operations impact overall efficiency of the Theme Park? (LO 1)**

Whether a foodservice operation is able to operate efficiently is directly related to having appropriate inventory levels on-hand (Dopson & Hayes, 2011). The effectiveness of inventory management systems is directly measurable by how successful a business is in providing high levels of customer service, low inventory investment, maximum throughput and low costs (Ellram, 1996). Whether product is readily available impacts an operation's ability to operate and meet customer expectations. Too-little product leads to menu item run-outs and low customer satisfaction while excess inventory in a foodservice is a direct indicator of waste and spoilage, including theft (Dopson & Hayes, 2011).

Labor:
Proper inventory levels affect labor productivity. When there are product run-outs additional time is needed for obtaining, preparing, cooking, serving, or finding substitute product to meet customer demand. If additional product cannot be obtained or substituted Dopson & Hayes (2011) affirm that loss impacts an employee's ability to maintain their primary purpose, including creating satisfied guests. Gregoire (2013) posits that whether the employee often deals with a positive or negative work situation has the greatest influence on their feelings of employee satisfaction. Preventable organizational problems such as running out of product, finding substitute items, or delivering a negative message to a customer impact employee satisfaction. Additional labor costs are required to handle inventory situations (Dopson & Hayes, 2011) and negative employee morale may transfer to customers via interactions and/or generate higher turnover levels (Gregoire, 2013).

Service:
Albrecht (1993) defines total customer value as a mixture of intangible and tangible experiences that form their perception of the business. Proper inventory levels directly affect both the tangible and intangible parts of the service and value experience. Customers have preconceived opinions of menu items they order, the time it will take to receive them, how the menu items will appear upon delivery, and the way they will be treated by the service staff. Dittmer & Keefe

(2006) posit that a negative experience has occurred most often when expectations are not met or exceeded.

Proper inventory levels allow for the ordered item to be readily available and the production of the finished item to occur using a minimal amount of time. Additionally, staff is able to assemble the finished product that best meets the customer expectations. Finally, service staff is able to focus on their primary functions versus explaining run-outs or substitutions and handling customer issues created by something the organization controls.

In the situation of this theme park financial waste, customer satisfaction, and employee morale are in jeopardy due to inventory issues. Direct financial impacts are present via too much product being delivered to operations and it not being properly accounted for. Customer satisfaction and potential future sales are impacted when what is ordered is not delivered on a timely basis or because of run-outs. Employee morale is impacted because line employees have to deal with unhappy customers due to product not being available or having been substituted.

2. **What are three specific changes to inventory management and control system for the theme park? Defend your answers. (LO 2)**

Erin identifies process control issues among other things that are occurring. What follows is a short summary of answers that would be applicable to what is occurring at the theme park. This list is not completely inclusive. Other student responses may apply.

Hot Shot Double Counting
Separate the recording of hotshot orders from transfer orders. Do this by use of a hotshot form that has different colors and duplicate copies. Record outgoing inventory from a specific color and turn in the specific color hotshot form only when the order is leaving the warehouse. These hotshot sheets are turned in at a dedicated location separate from transfer orders (Ninemeier, 1986).

Inventory Receipt at Operations
Foodservice operation staff or supervisors are required to accept transfer and hotshot orders from warehouse personnel. They are required to inspect and match what was received (Ninemeier, 1986) versus what was ordered. Specifically they will look for:

- Correct product for that location.
- Quantity matches what was ordered.
- Product is delivered appropriately (frozen is still frozen, fresh has no bruises).
- Extra/additional items not on the order form are returned to the warehouse.
- Shortages of items are reported immediately to the supervisor and warehouse.

Deliveries will occur while staff or supervisors are available at the foodservice locations. If substitutes are included, the receiving person must be notified upon arrival.

Order audits (pre-leaving warehouse)
Prior to leaving the warehouse, the employee will perform an audit comparing assembled items versus what was ordered (Ninemeier, 1986). Any substitute items would require a warehouse supervisor's signature and be brought to the attention of the person receiving the order. Upon

completion of the audit the warehouse employee will sign the delivery form stating everything has been accounted for.

Scheduling of Warehouse Staff
Warehouse staff must deliver product while the park is open and staff are present in their operations. But warehouse staff dedicated to picking and assembling orders may work a different schedule. Additionally, having different staff (Ninemeier, 1986) dedicated to transfer sheet and hotshot forms may alleviate cross purposing. Prior to the park opening, staff arrive and assemble orders for delivery to operations. Assembled order are delivered to a specific set of operations at set times from 9:00 to 11:00, prior to busy periods. From 11:00 to 1:30 orders for a different set of operations are assembled, then delivered between 2:00 and 4:00. Delivery zones could be set up so that deliveries occur in specific areas of the park only during set hours and locations (Ninemeier, 1986) can staff for accepting a delivery during a specific time period.

Reconciliation Audits/Inventory
The warehouse may choose to close intermittently to perform inventory audits (Ninemeier, 1986) over their entire facility or specific zones. Additionally, it might be best to perform routine and surprise audits on more expensive inventory items. Routine audits could be scheduled in advance in order to adequately staff. When audits occur, they should be completed by two people (to reduce inaccuracies) and the audit is signed be the staff performing it.
When inaccuracies are found a second team will re-inventory those items. An investigation will begin to seek why there is missing/extra inventory in a specific location.

Timing of Deliveries
Deliveries will occur in the park WHEN someone is available to make sure that what was ordered was received (Ninemeier, 1986). Additionally, transfer deliveries will not occur during peak service times so that staff can focus on customers. More complete information is available under “Inventory receipt at operations” and “Scheduling of warehouse staff” within this question.

Each of the previous answers are relevant to the inventory issues within the theme park because they impact a portion of a large process in a way that generates efficiencies through labor savings, duplication of efforts, process auditing and/or oversight. Theory and practice show that an investment in upfront process development decreases operating costs. Ninemeier (1986) shows that proper process and oversight directly impact operating costs.

3. **How would an improved inventory control system for the theme park benefit the warehouse from an efficiency perspective? Assess the beneficial impacts. (LO 3)**

Inventory Control System is the process of managing inventory in order to meet customer demand at the lowest possible cost and with a minimum of investment (Byoungho, 2004). A successfully implemented inventory control system takes into account such things as purchasing goods based on demand, seasonal variation, changing usage patterns, and pilferage (Ellram, 1996).

Effective inventory management can achieve several goals including: preserving food quality, ensuring freshness, maintaining specifications, controlling quantities of product on-hand, controlling costs, minimum operational space, and limiting product loss (Dopson & Hayes, 2011). When inventory is high, it is harder to keep track of what products are on hand, more storage space is required, money is tied up, to control waste, and opportunity for theft increases.

Managing inventory in the food operations of a Theme Park poses challenges that are not shared by other businesses because of the difficulty of forecasting how many people will actually visit and determining which of the varied operations will be in demand. In addition to the actual cost of acquiring inventory, costs are associated with transporting and storing inventory. These increased costs for a theme park are called carrying costs and may include storage rental, utilities, insurance, cost of shrinkage, cost of obsolescence, cost of wages and benefits for labor to move and count inventory, and opportunity cost - how much more could have earned if the money were spent elsewhere.

Inventory turnover is one effective method for measuring how often food has been ordered, dispersed, and replenished (Dittmer & Keefe, 2006). Inventory turnover is how often a product is completely used over a specific period of time. In order to better use inventory turnover, the warehouse may create par levels for each item or the most commonly used items in inventory. A par level is a set replenishment point (Dopson & Hayes, 2011) that mandates ordering more of a specific item when the quantity available is less than a predetermined point.

By implementing par levels and an inventory turnover analysis, the warehouse would increase efficiency by (Dopson & Hayes, 2011):

- Simplifying ordering by ordering to replenish par levels.
- Reducing food spoilage from not using.
- Reducing the amount of cash in held inventory.
- Reducing labor needed to order, stock, and handle product.
- Minimizing space required for storage of product.
- Reducing opportunities for theft or misplacement.

One of the principle roles of a manager is to maximize value of the assets under their control. An efficient Inventory Control System minimizes the required space, labor, spoilage, product on-hand, and money required to maintain inventory. Byoungho (2004), Ellram (1996), and Dopson & Hayes (2011) all allude to the argument that generating and maximizing efficiencies allows for minimal investment, reduced overhead, less waste, less labor, and amplifying the return of each investment dollar. Utilizing a systems view allows for the diagnosis and understanding interplay of specific parts. By understanding a specific process it allows a manager to minimize negative relational impacts to other parts of the system while fixing or creating efficiencies within that process. Overall, they allow a warehouse to operate efficiently and effectively in the receiving, holding, and disbursement of inventory.

Epilogue

Erin used the warehouse issue for an internship project and shared it with the Foodservice Director and Executive Chef. Both agreed that there were a lot of issues within the warehouse

scope of operations that created inefficiency and problems for foodservice operations throughout the park. Unfortunately, both believed there were more pressing needs that required their attention so they chose to maintain the status quo for the rest of the season.

Erin writes this in her final report to her instructor:

> *The warehouse situation created a lot of chaos and unnecessary headaches for the catering department. There were constant issues for the entire season. I had to learn how to deal with each situation as it occurred. This helped me to develop as a manager and leader because I had to choose how to approach everything and expect things to not be right.*
>
> *I chose to focus on doing what I could to make my staff's days as routine as possible and made sure the customer got everything they ordered to the best of my ability. Doing this caused my food cost to be about 8% higher than it needed to be but in the end my bosses didn't care as long as we were successfully serving the customer.*

Erin attempted to tackle the problem and make a positive difference with the warehouse issues at the theme park. In the end, nothing changed.

References

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