

Coordination of Production and Service

THE COORDINATION of production and service is especially important during peak demand times, as it is important to ensure food preparation and service is of the highest quality. The selected foodservice system and abnormal demands due to the season, weather, and special events significantly impacts the coordination of food preparation and service. Peak times require more food, staff, and equipment. Evaluate the foodservice system, the seating capacity, and any peak demands when developing a schedule.



Objective:



Summarize the coordination of foodservice production and service.

Key Terms:



assembly-serve foodservice systems
back of the house
centralized or commissary foodservice systems

circadian rhythm
conventional foodservice systems
front of the house
opportunity cost
peak demand times

ready-prepared foodservice systems
rethermalization
service capacity

Understanding the Coordination of Foodservice Production and Service

Ordering food for the kitchen and preparing it properly are just two steps involved in production and service. Knowing what is involved and how to coordinate the efforts of employees is critical to production and service.

PEAK DEMAND TIMES

Peak demand times—breakfast, lunch, and dinner—are the times at which more customers visit a foodservice; those times require greater production and service capacity by the staff. An interesting aspect of foodservice peak demand times and marketing is opportunity cost.

Opportunity Cost

Opportunity cost is the value of the next best option, which occurs when a resource changes over time. For example, if a family decides to go out to dinner, the family cannot spend that same money to attend a movie. Opportunity cost is a foodservice staple. The cost of using a resource comes from the value of what it could be used for instead. More simply, foodservice marketing seeks to persuade the customer to spend money at the restaurant rather than at a movie. Steven M. Shugan, at the University of Florida, provides an example: In restaurants in which table space is limited during peak hours, coffee (which takes time to consume) often has a higher price because the coffee drinker is occupying space and as a result is “consuming more capacity” (restaurant seating) of the restaurant. During off-peak hours, capacity is reduced, and the opportunity cost is lowered to zero. Therefore, coffee costs less at off-peak times.

In addition to daily peak demands for food and service, peak demands are due to the season.

- ◆ January—New Year’s Day and Super Bowl parties
- ◆ February—Valentine’s Day
- ◆ March—St. Patrick’s Day
- ◆ May—Mother’s Day
- ◆ June—Graduations and weddings
- ◆ November—Thanksgiving and religious holidays
- ◆ December—Christmas, other religious holidays, and New Year’s Eve celebrations



FIGURE 1. In addition to daily peak demands for food and service, peak demands can be due to the season.

Unpredictable events cause blips in peak demand times—increases and decreases in typical patterns. Examples are weather, interest rates, gas prices, special events, and randomness in consumer activity.

Service Capacity

Service capacity is a measure of the foodservice’s ability to deliver quality assistance. For example, a foodservice could ensure greater service capacity by adding more servers and/or kitchen staff to:

- ◆ Ensure shorter wait times for customers
- ◆ Increase the probability of quality service
- ◆ Provide more service to individual customers/tables
- ◆ Provide service to more customers
- ◆ Increase customer satisfaction

Scheduling

Customer demands are greater at peak meal times—breakfast, lunch, and dinner. This translates to increased production and labor demands. Meeting customer demands without overstaffing the foodservice is important when coordinating production and service. Staff schedules are prepared to meet peak and valley demands. For instance, the number of employees per shift may be based on the time of day (e.g., lunch) or the day of the year (e.g., Super Bowl Sunday). Types of food preparation skills vary. For example, labor-intensive food preparation, especially during peak hours, requires more staff. Special menus may require more or different staff (e.g., Kosher, vegetarian, and gluten-free). Vacation and time-off requests should be made well in advance to ensure adequate staff is available.

Circadian Rhythm

Shift schedules consider staff requests and circadian rhythms. A **circadian rhythm** is a daily cycle (24 hours) of biological activity in people, animals, and plants that determines sleep and work patterns of animals (including humans): sleep-wake cycle, body temperature, blood pressure, and hormone release. Sunlight, or the lack thereof, impacts circadian rhythms by telling people when to be awake and when to sleep. A disruption to the sleep-wake cycle can cause problems, such as jet lag. In short, one employee may be better suited to a morning work schedule while another person may be better suited to a later work schedule. In general, mental alertness peaks at 9 a.m. and 9 p.m. Physical strength crests at 11 a.m. and 7 p.m. for most people.

Variables

Schedules may be impacted by the following variables. For instance, an inexperienced employee is often scheduled to work alongside a more experienced worker so the new employee will learn and improve without affecting the quality of service or food. Schedules should be posted well in advance to allow for review in case adjustments are necessary. Also, staff schedules remind staff of upcoming special events. For example, training days should be scheduled in advance so service is not impacted. Keeping a list of standby employees to call at “a moment’s notice” is essential to coordinating production and service staffing. For instance,

if an employee does not report for a peak demand shift, food and service may be of a lower quality than normal. The availability of standby employees is essential to satisfy customer expectations.

FOODSERVICE SYSTEMS

Foodservice system options include conventional, centralized or commissary, ready-prepared, assembly-serve, and combination.

Conventional Foodservice Systems

Conventional foodservice systems are organized methods used to produce, hold, and keep food at appropriate temperatures as well as to serve customers at the same location. The most common foodservice system is conventional. School and university cafeterias and chef- or family-owned restaurants are typically conventional foodservice establishments. Advantages of using this type of system are a high degree of perceived quality and a high degree of flexibility with menu items. Quality control is increased through local purchasing, preparing, serving, and storing. Disadvantages are labor-intensive menus and inconsistent food quality due to the skill level and competency of employees and the available equipment. Higher food costs can be a result of less portion control than premade, preportioned food options. Foodservice systems have fewer food safety controls than other foodservice systems because of the necessity of contracting with separate delivery, food preparation, holding, serving, and storage systems. Supervision of separate systems can be difficult to manage.



FIGURE 2. Conventional foodservice systems depend on a strong communication between the production and service areas to meet customer expectations. These chefs are ready for a server to pick up the seafood salad with stuffed mussels and prawns.

Centralized or Commissary Foodservice Systems

Centralized or commissary foodservice systems are food production facilities—often large—in which food is produced for service in offsite receiving kitchens. Advantages of centralized systems include food preparation that is in one location, so supply costs are minimized by purchasing foods for one location rather than for several smaller operations. These systems increase purchasing power and lower transportation costs. For example, large

orders and transport to a central location tend to be more economical. Potential use of government commodities (e.g., dry milk, cheese, and peanut butter) and menu consistency are benefits. Greater ingredient control is a bonus. Also, pre-weighed or pre-measured ingredients (or products) decrease waste and the disposal of expired or unused product. Disadvantages are a higher initial capital investment for the building and equipment, and the staff must be better trained. Also, the jobs may become monotonous, as an assembly line production is sometimes utilized. Malfunctioning equipment significantly impacts production and the quality of the overall operation. Food transportation costs are significant because large orders are typical. Food is not prepared on site, so the food quality is not as high according to consumer perceptions.



FIGURE 3. Centralized or commissary foodservice systems are large food production facilities in which food is produced for service in offsite receiving kitchens, such as this cafeteria service.

Ready-Prepared Foodservice Systems

Ready-prepared foodservice systems are organized methods used to produce food onsite, hold chilled or frozen foods, and reheat as well as serve onsite. These systems are widely used in hospitals and prisons. Food production can be scheduled at any time. The food can be prepared and stored frozen or chilled for later use. For example, if pizza is served more than once per week, the sauce can be made on the same day for the entire week to reduce labor costs. The foodservice prepares some food from scratch. The fully prepared items only require reheating and portioning.

Ready-prepared foodservice systems offer flexibility in scheduling food preparations. Flexibility eliminates problems associated with the “hills and valleys” of food demand periods. Production can be scheduled at any time during the day or week. There are lower food costs because of the

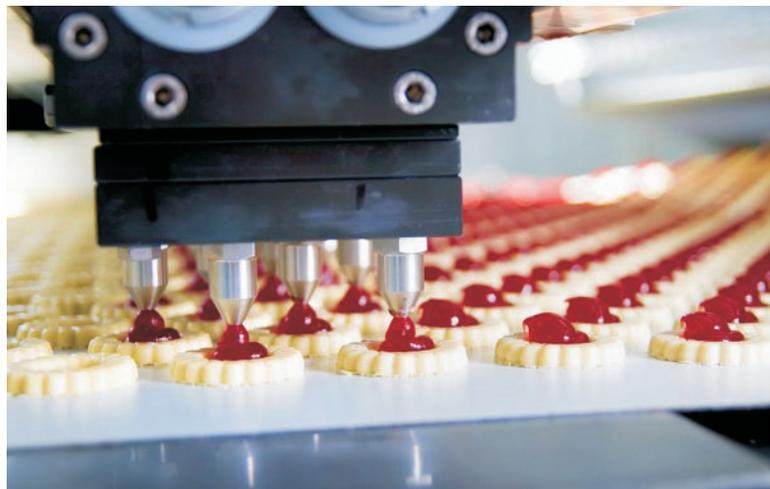


FIGURE 4. Ready-prepared foodservice systems are widely used in hospitals and prisons. Most food is delivered to the foodservice satellite location ready-to-heat and/or ready-to-eat. The receiving kitchen need only open the package and reheat and/or plate the food.

ability to prepare large quantities that are then cooled and stored (refrigerated or frozen) for later rethermalization. **Rethermalization** (regeneration) is the reheating of food to safe service temperatures for consumption. Therefore, food can be prepared in mass quantities weeks or months in advance rather than several times during one day. Rethermalization can be performed via a microwave, a hot water bath, a convection or combination oven, a conduction rethermalization oven, or a thermoconvection rethermalization oven. Disadvantages are the menu may be limited because some items may not reheat or chill and plate well. Also, the initial capital investment for equipment is high. Large quantities are prepared in advance. As a result, this system requires a greater food investment with a slower payback period. A perceived loss of quality exists because the food is rethermalized. In addition, some recipes need to be modified to maintain quality during storage. Increased food safety issues are a concern, too. If there were a foodborne illness outbreak, many more consumers would be affected.



FIGURE 5. A common way to rethermalize food is to reheat the prepared food in a microwave oven.

Assembly-Serve Foodservice Systems

Assembly-serve foodservice systems are methods used to purchase food at the middle to the end of food processing so the food can be stored for later use and eventual service. Traditionally, this has been one of the least common foodservice system types. It is, however, growing in popularity because of its low labor cost and limited equipment advantages. Disadvantages include higher food costs and a limited menu because of suitable premade foods. Also, food must be rethermalized for service, so people perceive it as low quality.



ON THE JOB...

CAREER CONNECTION: Foodservice Manager

To learn more about the duties of a foodservice manager, visit Career One Stop at http://www.careerinfonet.org/occ_rep.asp?nodeid=2&optstatus=000110111&next=occ_rep&jobfam=11&socode=119051&stfips=&level=&id=1&ES=Y&EST=food+service+manager and the Occupational Outlook Handbook at <http://www.bls.gov/ooh/Management/Food-service-managers.htm>.

Combination Systems

Combination systems include a variation and/or combination of the four systems: conventional, centralized, ready-prepared, and assembly-serve. Examples of common combination systems are catering operations and hotel and resort room service.



FIGURE 6. Catering events, such as this summer wedding reception, and hotel room service are common examples of combination foodservice systems. Some food items are cooked from scratch, and some food is purchased ready to serve.

PRODUCTION AND SERVICE SCHEDULES

The **back of the house** is the kitchen staff area of the foodservice where food production occurs. In contrast, the **front of the house** is the service staff area of the foodservice and where diners sit. Each area requires a coordinated production and service schedule.

Scheduling Steps

Various steps are involved in scheduling.

Step #1

The first step is evaluating the foodservice type. It determines where, when, and how the food is prepared and served. For example, a centralized system requires the schedule include holding (keeping the food hot) the food during travel time to the satellite kitchens. Considerations include types of food that withstand cooked transport and staffing to complete food production and transport.

The food production site impacts the type of food that may be prepared. Food items that must be moved require equipment that maintains safe holding temperatures and food quality. The time of day food is prepared must not coincide with peak demand times because peak times require additional staff. Typically, food is prepared during “down times” and is held for later service when the staff workload demands are more consistent. How food is prepared, whether onsite or rethermalized, has an impact on staff and equipment requirements. In addition, the type of food, type of equipment, and staff experience impact the type of food on the menu.

Step #2

The second step is evaluating equipment and space. Adequate equipment makes food preparation easier and requires fewer staff hours and less total time. Inadequate equipment makes food preparation more difficult and requires more staff and time. Equipment status (e.g., mixers are in good repair, but the dishwasher is running below safe minimum temperatures during the rinse cycle) impacts the time frame for food preparation as it relates to service and affects staffing. In addition, customer seating capacity impacts how much food production is possible. Kitchen space, especially holding (hot) and keeping (cold) space, affects production capacity and production timelines. Seating and kitchen capacity also impact staffing requirements.

Step #3

The third step is evaluating staff scheduling. Scheduling for peak demands, special events, and seasonal variations are considered. Anything causing a change in the normal flow of business must be considered in the staffing schedule. Special events—wedding receptions, Mother’s Day, and catered parties—add additional food and beverage inventory, wait staff, and kitchen staff requirements.

Community events and holidays bring added potential customers to the foodservice. Area parades and other special events (e.g., concerts and athletic events) bring added business that requires more staff to meet the increased demand. Typically, community event calendars are considered when setting production and service schedules and vacations.

Posting staff schedules well in advance helps identify any potential changes and/or hiring considerations needed ahead of production and service.

Food Flow

It is important to understand the flow of food when coordinating production and service. Food flows through a 10-step sequence. This process allows for coordination of each step of the process. When working through these steps, decisions about menu selections, staffing, and equipment are made.

- ◆ Menu planning—Menu options are selected based on space, type of foodservice system, available skilled staff, and equipment.
- ◆ Purchasing—Food must be available for the menu options selected. Analysis of available vendors and purveyors as well as locally available foodstuffs impacts the flow of food and the items ordered for delivery.
- ◆ Receiving—Staff and equipment resources must be available to receive and store the merchandise at safe locations and safe temperatures.
- ◆ Storing—Foodstuffs are stored in accordance with food safety and sanitation regulations. Staff must be available to oversee storage, conduct FIFO storage procedures (first in, first out in keeping, holding, and dry storage areas), and document food storage temperatures.

- ◆ Preparing—Peak demand times require that adequate staff is available to prepare and serve menu items. Many items can be prepared ahead of actual cooking time so peak demand times are not negatively affected.
- ◆ Cooking—Trained staff must be available to cook the food in a timely manner to meet peak customer demands and expectations.
- ◆ Holding and keeping—Adequate equipment must be available to store, keep, and hold the foods at appropriate temperatures. Staff must be available to document that food keeping (cold) and holding (hot) temperatures are within safe temperature guidelines.
- ◆ Serving—Adequate numbers of wait staff must be available to serve customers in a timely manner.
- ◆ Cooling—Prepared foods to be served at a later date or time must be cooled and stored at safe temperatures. Trained staff must ensure that food is cooled, covered, labeled, and stored in accordance with food safety codes.
- ◆ Reheating—Trained staff must rethermalize food by using the correct equipment and by reaching safe temperatures in the requisite amount of time.

Summary:



The coordination of production and service involves peak demand times to ensure food preparation and service is of the highest quality. The foodservice system used as well as abnormal demands due to season, weather, and special events significantly impacts the coordination of food preparation and service. Peak times require more foodstuffs, staff, and equipment. Evaluate the foodservice system, the seating capacity, and any peak demands when developing a schedule.

Checking Your Knowledge:



1. List five types of foodservice systems.
2. How do peak demand times impact foodservice establishments?
3. Explain service capacity.
4. Explain opportunity cost.
5. What are three things to consider when creating a production schedule?

Expanding Your Knowledge:



Visit your school cafeteria or another foodservice operation in the area: hotel, hospital, nursing home, childcare center, restaurant, catering business, etc. Interview the foodservice director about duties and tasks when coordinating food production and service. Create a PowerPoint based on what you learned, and share it with your class.

Web Links:



Making a Restaurant Schedule

<http://www.foodservicewarehouse.com/education/restaurant-management-and-operations/how-to-make-a-restaurant-schedule/c28033.aspx>

Charging More During Peak Hours

http://www.huffingtonpost.com/2012/10/11/new-york-city-restaurants_n_1957630.html

Peak/Off-Peak Pricing

<http://www.pricingforprofit.com/pricing-strategy-blog/peak-off-peak-pricing-at-restaurants.htm>

Practices for Employee Scheduling

http://pittsburgh.localfoodservice.com/apps/blog/view_more_detail.cfm?id=45952&catid=8113&ctoken=1815036115