Going forward by looking back: How technology can improve your food service operations

A Touchless Food System Project
Funded By HEERF

McHenry County College
Overview

• Looking back on automat operations
• Importance of Food Service
• Issues Related to Food Service
• Layout
• Vending Machine(s)
  • Training Video
• Payment Options
• Other Advantages
Looking Back to the Automat

• 1st appearance in Berlin 1895

• In 1902, Philadelphia-based Joseph Horn and Frank Hardart opened their first Automat named Horn and Hardart

• By the 1950s, Horn and Hardart operated over 100 locations in New York City alone.
  • 800,000 people ate at a Horn and Hardart Automat each day
  • At the time, it was the world’s largest restaurant chain.
Importance of Food Service

• Food Insecurities
  • Defined as a lack of consistent access to enough food for an active, healthy lifestyle
  • Prior to COVID-19, roughly 10.5% of US Households or 35 million Americans were food insecure.
    • 30% of all college students experienced food insecurity at one point
    • 38% at two-year college
    • 29% at four-year colleges

• Having food on campus is important to student success, retention, and persistence
  • Connectivity
  • Support
  • Going off campus, student may not return and lose out on these opportunities
    • ...[one] study suggests that providing non-academic resources to low-income students may serve to equalize the chances of being retained or persisting
Issues Facing Food Service

• Serving students/employees after closing hours
  • Need better food than typical snacks offered in conventional vending machines

• Post COVID staffing issues
  • Originally our operations were due to close at 4pm
  • Difficulty in staffing forced a 2pm closure

• Profitability
  • Labor costs drive profitability
  • Expectations of prices to be low or even subsidized prevents cost recovery plus margin
  • Even if outsourced, colleges have to subsidize either directly (payment or guaranteed margin) or indirectly (waste, electricity, equipment, maintenance, custodial, etc.)
From This...To....

- Used during COVID and after service hours
- No Staff or Support
- Small and limited selection
- Cash Only...no change back
- Honor System*

*Honor System to a degree, that safe was bolted to the table, if they wanted it, they had to take the table with them as well.

Also, if someone took without paying it was also under surveillance.
• Open 24/7
• Cold food stocked in morning when café opens and periodically during the day
• Hot food stocked after café closes to extend service
• Designed to service evening campus community
• Take pressure off cashier lines for single items during peak times
• Partnered with DMVI
• Added digital menu boards throughout main café as part of the project
Layout

- Non-structural renovation
- 2 security gates installed
- Minimal footprint
- Used under-utilized café space
- ~$65k
Cold Machines – Non Entrée Items

- Provides assortments
  - Sandwiches
  - Desserts
  - Salads
  - Yogurts
  - Fruit
  - Humus
  - Etc.

- Other items as long as packaging fits in bay
Entrée Machines (Cold and Hot)
Hot Machine

• Used to provide heated meals ready to eat
• Same or similar entrée’s served during café open hours
• Option to shut off vending after certain time (3hrs) to preserve food quality
Cold Machine

- Used to provide refrigerated meals
- Will require heating up via microwave
- Similar entrées as the hot VM if able to be refrigerated and reheated without diminishing food quality
- Will remain operational 24/7 due to refrigeration extending shelf life
Smart Phone Control and Access

• Using a Quick Read (QR) scanning app
• Allows interaction to occur via your smart phone
• Allows for a complete touchless transaction
• Android based VM units
Selection and Payment By Phone

Phone view

Drill Down

Pay by Card or Coupon

NFC or Card Swipe

Payment Training Video
Payment Option

• Near Field Connectivity (NFC)
• Electronic Payments Only
  • Smart Card
  • Credit Card
  • Smart Phones
  • E-Wallets
    • NAYAX Prepaid
    • Monyx Wallet
• Cash Not Accepted
Adding Inventory

- Connect keyboard to Android USB
- Press ESC key
- Menu Board displays on VM
Other Advantages of VM/Nayax Systems

• Advertising

• NAYAX Terminal Capabilities
  • Increased activity and financial reporting
  • NAYAX Mobile phone apps
    • Moma (phone access to NAYAX terminals)
    • Monyx Wallet (used for refunds, prepaid cards, etc)
    • Remote/Instant Refunds

• Locker Storage
  • Lockers for food
  • Lockers for non perishable items
Advertising Capability

• All machines capable of placing advertising in the monitors
• Still Images
• Video & Audio clips
• Multiple images can be loaded and rotated for set times
• Internal promotional use or sell space for local advertising
• Recognize everyone’s favorite CFO
Remote Operations

• NAYAX Dashboard
• NAYAX reporting
  • Multiple reporting options
• Remote refund capability
  • Monyx Card
  • Nayax Prepaid Card
  • Back to the credit card used
• VM Inventory levels
• VM status
Locker Storage Options

- **Online orders**
  - Food can be placed in either cold or hot locker for later pickup
  - Code sent to patron to open locker

- **Module lockers can be used for other non perishable item pickup**
  - Bookstore materials after closing hours
  - Board members
Implementation Bugs and Trouble Shooting

- Supply Chain
- Food dispensing properly
- Cell reception/communication
- VM Staying Online
- Business Hours shutoff
- Setting up merchant accounts
- Learning curve of machines
Questions?
Footnotes

- Automat History
  - https://allthatsinteresting.com/automat

- Food Insecurities
  - https://www.healthaffairs.org/do/10.1377/forefront.20220127.264905/#:~:text=According%20to%20the%20most%20recent,in%20the%20previous%2030%20days.
  - https://eric.ed.gov/?id=EJ1260812