KPI
Mini-Series
for School Nutrition Programs

Meals Per Labor Hour (MPLH)

Objective: Calculate Meals Per Labor Hour and apply the information to measure the productivity and production efficiency of the school nutrition program.

Preparation Checklist

Instructions: The following tasks are necessary for presenting the trainings. Keep track of the progress by checking off tasks as they are completed. (Items may vary according to needs of particular lessons.)

Task	Person Responsible	Completion Date	✔
Reserve equipment and gather supplies as needed for use on the day of class (6 weeks prior). Roster of participants attending for instructor Participants' sign-in sheets **Task to do before the training** Print handouts and activities for each participant Print activity answer keys for each participant to pass out at the end of the lesson **List of equipment and supplies needed** Microphone (preferably wireless) Calculators Pens, pencils, note paper, self-adhesive notes, (each table) Chart paper and markers	Instructor		

Objective: Calculate Meals Per Labor Hour and apply the information to measure the productivity and production efficiency of the school nutrition program.

SAY: Hello, everyone. Welcome to today's lesson on Meals Per Labor Hour. Our training will cover calculating Meals Per Labor Hour (MPLH) and how to apply the information in order to measure the productivity and production efficiency of the school nutrition program.

ASK: Can someone tell me what Meals Per Labor Hour is?

DO: Wait for participants to respond.

FEEDBACK: Meals Per Labor Hour (MPLH) is the measure of productivity and production efficiency for school nutrition (SN) programs.

ASK: Why would you want to calculate MPLH in your school?

DO: Wait for participants to respond.

FEEDBACK: MPLH can help determine how many employees or how many scheduled hours per employee are needed daily. The MPLH index is compared with labor because labor is dependent on the type of production. Examples of production systems used in the school nutrition program include conventional, cook-chill, and assembly-serve. Another type of production system used in the school nutrition program is distribution/service systems, which includes satellite, on-site, and combination of the two.

ASK: How often would you calculate Meals Per Labor Hour?

DO: Wait for participants to respond.

FEEDBACK: Meals Per Labor Hour can be calculated weekly, monthly, or annually.

SAY: The MPLH index is calculated on the actual productive, paid labor hours assigned to a site-level school nutrition (SN) program.

MPLH can be determined for a school site by dividing the total meal equivalents for a given time period by the total number of productive paid labor hours for the same time period.

Planned productive labor hours include the amount of labor planned by an SN program for managers/supervisors, kitchen staff, and cashiers. Paid hours for substitutes are included, but not paid hours for sick, personal, or holiday leave.

SAY: The equation to calculate MPLH is as follows:

$$\text{MPLH} = \frac{\text{Number of Meals or Meal Equivalents}}{\text{Number of Planned Productive Labor Hours}}$$

Let's look at an example of how to calculate MPLH. Calculating MPLH can be completed in 3 steps.
  Step 1: Calculate total MEQ for the period.
  Step 2: Calculate total hours of labor paid monthly, including all SN employees and managers/supervisors.
  Step 3: Divide the total MEQ by the total paid labor hours (excluding sick, personal, and holiday pay).

DO: Distribute copies of the **Calculating Meals Per Labor Hour** worksheet. Ask the participants to complete this worksheet.

SAY: Let's complete an activity to see what you have learned. Look at the **Calculating Meals Per Labor Hour** worksheet. You are given a month of district information for a school nutrition program. Calculate the MPLH for the school nutrition program.

DO: Give participants about five (5) minutes to complete the activity. Walk around to help anyone who may have questions or needs help. At the end of the five minutes, go over the answers. Ask for volunteers to give their answers if time allows. Explain how to calculate MPLH if someone does not understand.

Calculating Meals Per Labor Hour

Instructions: Calculate and fill in the table below. When you have completed the calculation in the table, calculate MPLH using 8,465 MEQs. You will have five (5) minutes to complete the activity.

Number of Staff Members That Work the Same Number of Hours Daily	X	Hours Worked Daily	=	Total Hours Worked Daily	X	Days in the Period	=	Total Staff Hours Planned for the Period
1	X	7	=		X	21	=	
3	X	6	=		X	21	=	
2	X	4	=		X	21	=	
6	X	17			X	21	=	

What is the Meals Per Labor Hour? _____

Calculating Meals Per Labor Hour
Answer Key

Instructions: Calculate and fill in the table below. When you have completed the calculation in the table, calculate MPLH using 8,465 MEQs. You will have five (5) minutes to complete the activity.

Number of Staff Members That Work the Same Number of Hours Daily	X	Hours Worked Daily	=	Total Hours Worked Daily	X	Days in the Period	=	Total Staff Hours Planned for the Period
1	X	7	=	7	X	21	=	147
3	X	6	=	18	X	21	=	378
2	X	4	=	8	X	21	=	168
6	X	17		33	X	21	=	693

What is the Meals Per Labor Hour? **12 MPLH**

8,465 ÷ 693 = 12.22 or 12 MPLH

SAY: After MPLH is calculated, you can make a decision regarding staffing. If the evaluation indicates an excess of labor hours and increasing participation is not an alternative, adjustments in labor hours may be necessary. Refer to the handout **Staffing Guidelines for On-Site Production**. This handout can be used as a guideline for staffing needs.

DO: Distribute copies of the handout **Staffing Guidelines for On-Site Production.**
.

Staffing Guidelines for On-Site Production

Number of Meal Equivalents	Meals Per Labor Hour for Low and High Productivity			
	Conventional System MPLH		Convenience System MPLH	
	Low	High	Low	High
Up to 100	8	10	10	12
101 – 150	9	11	11	13
151 – 200	10 – 11	12	12	14
201 – 250	12	14	14	15
251 – 300	13	15	15	16
301 – 400	14	16	16	18
401 – 500	14	17	18	19
501 – 600	15	17	18	19
601 – 700	16	18	19	20
701 – 800	17	19	20	22
801 and up	18	20	21	23

Source: Pannell-Martin, D. & Boettger, J. (2014). *School food & nutrition service management for the 21st century* (6th ed.). Aiken, South Carolina: Author.

- A conventional system is the preparation of some foods from raw ingredients on premises (e.g., using some baked goods, prepared pizza, and washing the dishes).

- A convenience system is using maximum amount of processed foods (e.g., using all baked goods, precooked chicken, ready-to-serve raw fruits and vegetables, portion-packed condiments, and washing only trays and using disposable dinnerware).

SAY: Based on the activity you just completed, look at the method used to determine the number of labor hours needed for the desired productivity level.

- Decide the desired number of MPLH for the district for a month. MPLH can also be calculated for each school site. Assume 14 MPLH is based on the type of meal service offered for the example calculation.
- Divide the total MEQ by the desired number of MPLH to determine the total labor hours needed per month. Divide that number by the number of serving days in a month to determine the number of labor hours needed per day.

Example:

$$\frac{8,465 \text{ (Total MEQs)}}{14 \text{ (Desired MPLH)}} = 604.65 \text{ or } 605 \text{ (Total labor hours needed per month)}$$

$$605 \div 21 = 28.81 \text{ or } 29 \text{ hours per day}$$

ASK: What would you need to do to achieve 14 desired MPLH?

DO: Wait for participants to respond.

FEEDBACK: Currently, the total hours worked daily are 33 hours. To achieve a desired 14 MPLH, you would need to cut the daily hours worked to 29 hours.

ASK: Does anyone have any questions before we continue?

DO: Wait for participants to respond. Answer all questions to the best of your ability. If you do not know the answer, tell the participants that you will need to research the answer and will get back to them.

SAY: The meal count data is captured electronically or manually at the point-of-sale system utilized by SN programs. It can be found in reports such as end-of-day sales reports, edit check worksheets, and/or deposit reports. Labor hours are captured in the school district timekeeping system (time card data, timesheet logs, etc.) or payroll records that can be found at the school business office or the district human resource office.

Calculating MPLH can help to determine how many employees or how many scheduled hours per employee are needed in a single production unit or throughout the district. The MPLH index most effectively compares labor utilization within a system because labor is dependent on the type of production systems (i.e., conventional, cook-chill, and assembly serve) and distribution/service systems (satellite, on-site, and combination) used in a school nutrition program. The MPLH can be used to compare productivity between different school sites.

Explaining the importance of MPLH, how it is calculated, the variables that affect it, and how additional hours can be earned, is very motivating for managers. It allows them to manage their own operations better and gives them a level of control and understanding they might not otherwise have. Effective managers can explain staffing to their employees in clear and understandable terms and can encourage the entire team to work towards a common goal of ensuring adequate meal participation to support adequate labor hours.

ASK: Do you have any questions about Meals Per Labor Hour, its importance, and how to calculate it?

DO: Answer questions to the best of your ability. If there are questions you cannot answer, tell the participants you will find out the answer and get back with them.

SAY: Thank you for participating in today's training. I hope you will take this information back to your school and begin to use it.

References

Institute of Child Nutrition. (2018). *Essential KPIs for school nutrition success*. University, Mississippi: Author.

U.S. Department of Agriculture. (2015). *Professional standards for school nutrition professionals*. https://www.fns.usda.gov/school-meals-professional-standards

U.S. Department of Agriculture, Food and Nutrition Service. (2019). *Food distribution program: Value of donated foods* (July 1, 2019 - June 30, 2020). https://www.fns.usda.gov/usda-fis/fr-081219

U.S. Department of Agriculture, Food and Nutrition Service. (2019). *National school lunch,special milk, and school breakfast programs, national average payments/maximum reimbursement rates*. https://www.federalregister.gov/documents/2019/08/07/2019-16903/national-school-lunch-special-milk-and-school-breakfast-programs-national-average-paymentsmaximum#p-31

INSTITUTE OF *child nutrition*

RESOURCES • TRAINING • RESEARCH

The University of Mississippi
School of Applied Sciences
800-321-3054
www.theicn.org