

# Meal pre-planning is a cost-effective behavioral strategy that can improve eating habits, reduce food waste and benefit food operators.

This work offers new insights on younger generations' booking habits and their evolution over time.

## A three-year longitudinal study on the use of pre-ordering in a university canteen.

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- ▶ The **canteen** of the **University of Gastronomic Sciences** of Pollenzo (Italy)



- ▶ **946** students (56% F)
- ▶ **65** nationalities (59% Italian)
- ▶ 53% undergraduate
- ▶ 23.8 mean age (SD 3.4)



- ▶ **501** days
- ▶ from February 2017 to December 2019

## Results

Pre-ordering was used at least one time by 97% of the students who consumed lunches at the canteen. The adoption of pre-ordering was highest among graduate female students, who also planned their lunches further in advance and for more consecutive days (Table 1). The overall attendance of the canteen did not seem strongly related on how intensively pre-ordering is used. Most pre-orders were booked within 2 and 3 days of advance, but female subjects were more likely to book with 3 or more days of advance (Fig. 1). Graduate education was positively and significantly associated with planning. Longitudinal analysis showed that a process of familiarization with the pre-ordering system may help to increase its adoption (Fig. 2).

INTRODUCTION OF PRE-ORDERING CAN BE SUCCESSFUL AMONG YOUNG PEOPLE. INDIVIDUALS WITH GOOD ORGANIZATIONAL SKILLS CAN MAKE EXTENSIVE USE OF THIS TOOL, ORDERING MEALS TWO OR MORE DAYS IN ADVANCE AND PLANNING MULTIPLE MEALS AT THE SAME TIME.



## Pre-ordering pros



## Suggestions and warnings

It's important to appropriately communicate not just the "likely" positive effects of pre-ordering on patrons' health but also to stress its role in benefiting the environment.

For people that consider flexibility to be an important aspect of visiting canteens, pre-ordering could be a disincentive to spontaneous or occasional visiting.

It may be difficult to boost the adoption of this tool among elder workers and people who are reluctant to modify their habits.

Operators must pay attention to uncollected orders to avoid unexpected sources of food waste.

Table 1

Descriptive statistics of canteens' orders, by sex and education level of the patrons.

	Number of items <sup>a</sup>	Meal price <sup>b</sup>	Pre-ordered <sup>c</sup>	Mixed <sup>d</sup>	Anticipation <sup>e</sup>	Planning <sup>f</sup>
	median (IQR)	median (IQR)	%	%	median (IQR)	%
<b>Undergraduate</b>						
F	2 (1-2)	8 (6-11)	55.4	7.8	48 (26-75)	20.0
M	2 (2-3)	9 (7-12)	43.1	4.0	44 (26-72)	18.6
<b>Graduate</b>						
F	2 (1-2)	7 (5-9)	69.9	5.5	66 (28-95)	30.7
M	2 (1-2)	9 (6-11)	61.0	3.6	48 (26-87)	23.1

<sup>a</sup> Number of items included in a lunch.

<sup>b</sup> Price paid for a lunch in euros.

<sup>c</sup> Percentage of pre-orders.

<sup>d</sup> Percentage of pre-orders to which a last-minute addition was made.

<sup>e</sup> Distance in hours between the time of pre-ordering and the opening time of the canteen on the menu day.

<sup>f</sup> Percentage of times multiple lunches are planned together while pre-ordering.

Fig. 1

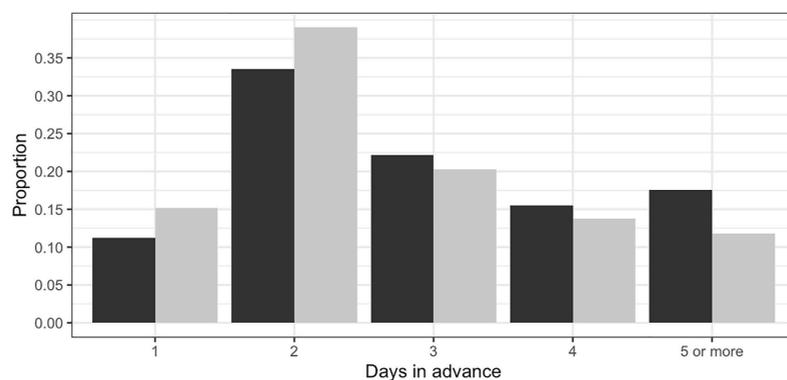
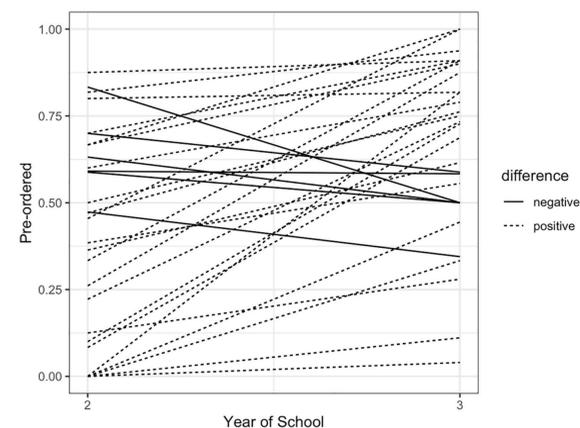


Fig. 2



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