A Field Study of Accuracy and Speed of Fast Food Orders When Customers Violate Scripts

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Abstract: A hearing-impaired investigator played a customer and either followed or violated (did not follow) the standard sales script of fast food restaurants when ordering fast food during 18 lunchtime visits to nine fast food chain restaurants. Fast food cashiers took the customer’s (investigator’s) order as quickly, but with significantly fewer errors (p < 0.05), when the customer followed, rather than violated, the scripts. Likewise, many persons with communication disorders, including hearing impairment, may improve the effectiveness of everyday, real world, communication interactions by following scripts.

1. Introduction

Scripts are learned, pre-planned sequences of dialogue, text, or actions designed to facilitate interactions between two or more persons. Speech-language pathologists, for example, often develop and teach social scripts to persons with autism to improve their communication and reduce their anxiety when conversing with others. Likewise, at fast-food restaurants, customers often become anxious and dissatisfied when receiving inaccurate orders. This led fast-food chains to develop selling scripts (e.g., “Six Steps of Window Service” at McDonald’s) that cashiers must consistently and immediately follow when they wait on customers. Specifically, these scripts are designed to improve accuracy and speed of taking orders by narrowing possibilities of what customers say when ordering. Conversely, accuracy and speed are presumed to break down when customers “violate” the cashier’s script. Researchers from business, psychology, speech pathology, and audiology have conducted most studies on scripts in their laboratories. These laboratory studies, unfortunately, may have poorer external validity than field studies because their findings are not as easily generalized to real-world communication. Accordingly, the purpose of our field study was to investigate effects of a customer violating, or not violating, cashiers’ scripts on accuracy and speed of taking orders at actual fast-food restaurants. Our hypotheses were: (1) Cashiers would make fewer errors taking an order (i.e., have better accuracy) when a customer followed versus violated a cashier’s script; and (2) Cashiers would take less time (i.e., have better speed) taking an order when a customer followed versus violated a cashier’s script.

2. Experiment, Results, Discussion, and Significance

Experimental Design

This field study used a within-subject design with one independent variable (i.e., following or violating a cashier’s script) and two dependent variables (i.e., cashiers’ accuracy and speed taking an order).

Procedure

The investigator (Washington) played a customer who was waited on by 18 different, experienced, lunchtime front-counter cashiers. Specifically, on 18 different days he visited the same nine fast-food restaurants in three areas of Wichita. At each restaurant he followed the cashier’s script during one visit and violated the cashier’s script during another visit. The order of following or violating the scripts at the 18 visits to the nine fast food restaurants was randomized. At each restaurant, the investigator tracked the number of errors and speed of the order with a hidden counter and timer.

Results

Investigators used a Wilcoxon Sign-Rank Test to analyze significant differences in both accuracy and speed of cashiers taking orders when the customer followed versus violated the script. As shown in Table 1, cashiers averaged 1.2 more errors taking orders when the customer violated the script than when he followed the script (which was
statistically significant \( p < 0.05 \). Therefore, the first hypothesis about accuracy of taking orders was supported. This may have been because the customer’s responses were more predictable for cashiers when the customer followed the script.

**Table 1.** Range and mean of errors among cashiers taking orders when customer followed or violated script.

<table>
<thead>
<tr>
<th>Errors</th>
<th>Followed Script</th>
<th>Violated Script</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range:</td>
<td>0 – 1 0 - 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean:</td>
<td>0.2 1.4 1.2*</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Significant at \( p < 0.05 \) experiment-wise error rate

In Table 2, it took 3.7 seconds longer taking orders when the customer violated the script than when he followed the script. Therefore, the second hypothesis was not supported. This may have been because the overall lengths of scripts were similar when the customer followed and violated scripts.

**Table 2.** Range and mean of speed among cashiers taking orders when customer followed or violated script.

<table>
<thead>
<tr>
<th>Errors</th>
<th>Followed Script</th>
<th>Violated Script</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range:</td>
<td>15 – 42 secs 10 – 45 secs</td>
<td>10 – 45 secs</td>
<td>3.7 secs*</td>
</tr>
<tr>
<td>Mean:</td>
<td>24.6 secs 28.3 secs 3.7 secs*</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Not Significant at \( p > 0.05 \) experiment-wise error rate

### 3. Conclusion

This field study agreed with limited previous laboratory and field research showing communication can be more effective when both a speaker and listener follow a script. Likewise, during aural rehabilitation, speech-language pathologists and audiologists should have their clients practice following scripts to facilitate the clients taking responsibility during every day communication interactions.