The success of any retail food safety program hinges on personnel that are knowledgeable about their products, equipment and working environment. On-the-job training can be an effective way to teach retail food industry personnel site-specific food safety procedures, but standardized training prior to, or in coordination with on the job training may further decrease the incidence of food borne illness cases observed at the retail level. However, it can be misleading to assume that any food safety training program is effective just because few or no food safety issues have recently occurred, especially in situations involving high employee turnover. Therefore, it is necessary to assess the effectiveness of food safety training on a regular basis in a strategic, unbiased manner. The Provus’ Discrepancy Evaluation Model was used to determine areas of weakness in the food safety training program utilized by the meat departments of a major retail grocery chain and additional on-line training material was developed to augment the perceived deficiencies. Adding this new on-line training component to the already existing food safety education program is expected to decrease the amount of oversight currently needed to assure a safe food environment in the meat department of this grocery chain.