

IMPROVING HEALTHFULNESS OF CATERED EVENTS FOR EMPLOYEES AT A UNIVERSITY

by

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I. INTRODUCTION

WellCats, the employee wellness program at Texas State University, is a program founded upon a theoretical framework that, alongside its employee offerings, engages in various research initiatives aimed at improving employee health, including nutrition research. The overall focus of the program's nutrition research is to improve the healthfulness of foods available on campus to faculty and staff. An analysis of the scientific literature reveals that little research has targeted the food environment in a university setting, and even less has considered the impact of catered foods on the campus food environment. In order to address this gap in the literature, our research team conducted a needs assessment to analyze the current state of the catered food environment at Texas State University. The research described the nutritional quality of foods offered at catered events and meetings and identified factors that influence the foods that are ordered. This thesis builds upon the results of the previous needs assessment and details the planning, design, testing, and improvement of an intervention intended for those who are responsible for ordering foods for catered events.

This document begins with an introduction of the current state of health in the United States, the Socio-Ecological Model (SEM) framework, and the Intervention Mapping (IM) protocol. The usefulness of the SEM and IM in developing workplace interventions is then justified, and both tools are used to theoretically and methodologically connect the teams' previous research with the current project. The relevance and practicality of a video-based intervention is then justified and an overview of video based learning provided. Next, the IM protocol is described in detail. Emphasis is given to the creation of a change objective matrix, identification of relevant theories and methods, and their applications in constructing the intervention. Finally, research specific objectives and methods are detailed, followed by research results and a discussion.

II. LITERATURE REVIEW

Background and Previous Research

Health of the Nation - Where are We Now?

In 2012, almost 50% of American adults (~117 million people) suffered from at least one chronic condition.¹ Approximately 25% (~58.5 million) suffer from more than two.¹ As of 2014, the number of premature deaths among persons aged <80 years in United States was about 1.3 million per year.² In 2015, chronic conditions populated 7 of the 10 top spots for causes of death, and 2 of them – heart disease and cancer – claimed 46% of deaths that year alone.³ That same year, average life expectancy in the United States was 78.8 years.³ The tragedy is clear. These figures reflect that US residents have had their quality of life compromised. Many live for decades with impaired function and mobility, hampered productivity, chronic pain, and the potentially crushing financial burden of symptom and disease management. These chronic illnesses are largely preventable through lifestyle modifications. According to the Centers for Disease Control and Prevention (CDC), the top four behaviors associated with chronic disease risk include living a sedentary lifestyle, consuming a diet of poor nutritional quality, use of tobacco, and excessive alcohol consumption.⁴

Ecological Perspectives and the Socio-Ecological Model

Theoretical insights into the prevalence and persistence of these negative health behaviors can be gained from taking an ecological perspective, defined by McLaren & Hawe as a perspective that focuses on environmental determinants alongside individual determinants of behavior.⁵ Ecological models have arisen that succinctly illustrate these interrelated determinants. One such model is McLeroy's socio-ecological model (SEM).^{6,7} Since its introduction, McLeroy's SEM has served as a helpful framework for researchers and interventionists in health promotion by guiding understanding of the interplay between

personal behavioral determinants and the greater social and physical environments.⁸ The model identifies a hierarchy of influence, which broadens from the individual level to encompass the interpersonal, organizational, community, societal, and supranational levels.

Figure 1 illustrates the levels of influence of the SEM.^{8,9} Briefly, the individual level encompasses the influence of personal knowledge, attitudes, and skills; the interpersonal level addresses family, friends, and social networks; the organizational level integrates the impacts of social institutions and organizations (e.g. companies, universities, local government offices, etc.); the community level accounts for the relationships between organizations (e.g. a college university and the local government); and the societal and supranational levels recognize the effects of shared cultural attitudes, laws, and policies on individual behaviors both on a national and global scale.⁶⁻⁸

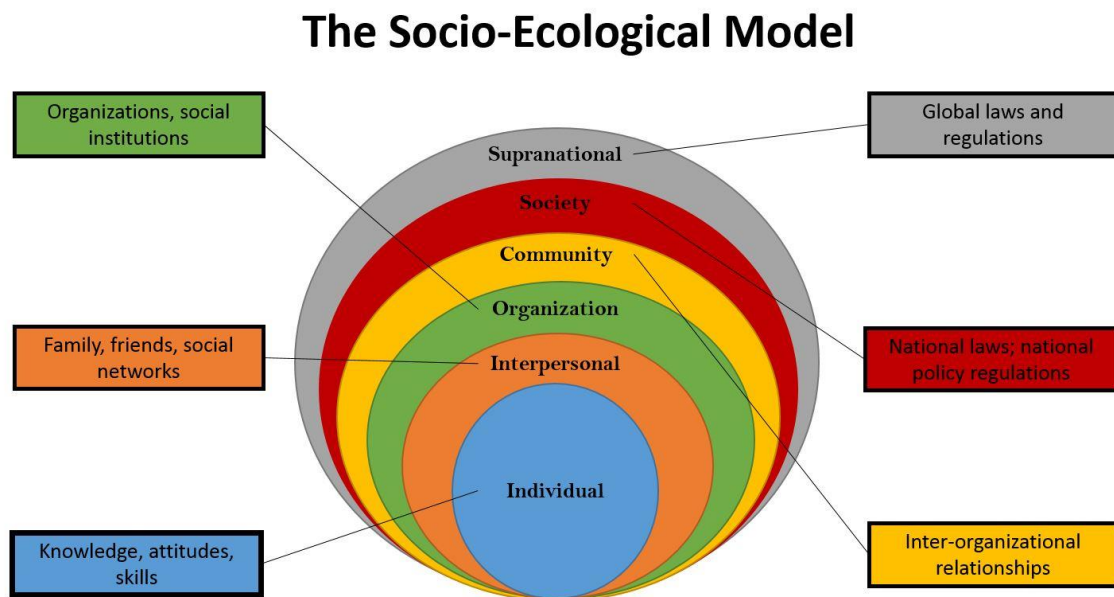


Figure 1: The Socio-Ecological Model^{6,8}

Although individuals may want to adopt healthy behaviors, and may even have the motivation to do so, the powerful external influences illustrated by the SEM can make it nearly

impossible for them to make or maintain changes in their health behaviors. Thus, many get swept up in a mindless journey of environmentally-reinforced negative behaviors that eventually lead to disease. In order to most effectively counter these external challenges, interventions can be designed that not only influence individuals directly but that also influence the environment and systems in which those individuals exist. If implemented successfully, an intervention has greater potential to produce long lasting, positive behavior change when it addresses multiple levels of the SEM.¹⁰ The questions then become how does one plan an effective intervention, and where would interventions be the most effective?

Planning an Effective Intervention

Over the years, while many interventions have been aimed at mitigating negative health behaviors, effectiveness of interventions has been compromised, potentially due to poor planning.^{11,12} Examples of poor planning include (1) targeting a behavior that is not connected to the problem (2) attempting to change determinants that do not actually influence the behavior and (3) attempting to modify a person's behavior without considering critical external influences. An example of targeting the wrong health behavior would be a workplace intervention intended to decrease presenteeism by increasing physical activity and healthy eating habits without addressing mental health, which is a major factor.¹¹⁻¹³ An example of trying to change the wrong determinant would be an intervention aimed at increasing vegetable consumption by increasing knowledge of the health benefits of eating more vegetables instead of teaching practical skills on how to purchase and prepare them.¹¹ An example of ignoring critical environmental influences would be an intervention intended to increase physical activity

in an environment lacking resources to do so (e.g. absence of walking trails, exercise equipment, supportive policies).^{11,12}

Effective interventions can avoid poor planning through adherence to intervention mapping (IM) and its three main criteria, found in Table 1.

Table 1: Main criteria for effective intervention planning¹²

Criteria 1	Identification of the problem and the correct behavioral determinants for intervention.
Criteria 2	Selection of intervention methods appropriate for the determinants identified.
Criteria 3	Proper implementation of the designed intervention

The above criteria encapsulate IM, a guidance framework for systematically applying theory, methods, models, procedures, and applications to the creation of health interventions.

Designed in a step-by-step fashion, IM walks developers of health behavior change programs through the decision-making process of intervention planning, implementation, and evaluation.^{14,15} Intervention Mapping is grounded in three foundational concepts – research, theory, and planning.¹² Research ensures that the program accurately identifies the problem as well as the correct behaviors and determinants the intervention should target (criteria 1).

Theory ensures that program methods are evidence-based and known to effectively modify the targeted behaviors and determinants (criteria 2). Planning ensures that the program design is implemented effectively (criteria 3). Interventions built on this foundation of research, theory, and planning are often grounded not in one, but several theories, and are therefore well-suited to address the complexity of health behaviors. Examples of theories, discussed later, include the Reasoned Action Approach, Communication-Persuasion Matrix, and Social Cognitive Theory, among others.

The IM framework has been successfully used in a vast array of applications, including, but not limited to, increasing effectiveness of hospital discharges, designing online interventions to combat substance abuse, implementing support groups for those with diabetes in rural areas, and creating an intervention that helps parents build positive tooth brushing habits in their children.^{16–19}

Intervention Mapping walks intervention designers through 6 steps, including:^{14,20}

1. Performance of a needs assessment (i.e. problem identification and analysis).
2. Development of change objective matrices using behaviors and determinants identified in the needs assessment.
3. Selection of appropriate theories and methods based on the change objective matrices and translation into practical program applications.
4. Organization of practical program applications into a structured program.
5. Identification of all key players (i.e. implementers, users, supporters, etc.) and their needs at each step of implementation to ensure successful execution and longevity.
6. Development of an evaluation plan to measure program effectiveness.

Completion of all 6 steps results in the production of a “map” for how to design, implement, and evaluate the intervention. Each step of IM informs and directs the subsequent step, and excluding any step can handicap an intervention.^{11,12,14,20,21} For example, without a real, documented and population-specific problem (i.e. without a needs assessment) it is impossible to justify an argument for intervention. A prime example from Ammendolia et al.¹³ illustrates why needs assessments are vital. In the study, Ammedolia et al¹³ used IM to develop a workplace health promotion and wellness program to improve presenteeism at a large international financial services company. While most wellness programs developed without a comprehensive needs assessment might instinctively focus on physical fitness and nutrition, the

needs assessment performed by Ammendolia et al. determined that mental health, particularly depression and stress, were the top two influences on presenteeism. Without the needs assessment, the intervention would very likely have been less successful because it would not have targeted the real problem.¹³

In the context of a university campus catered food environment, a needs assessment is essential in order to (1) obtain evidence that the need for an intervention really exists (2) discern between actual problems versus problems suspected by the researcher and (3) become aware of what an appropriate intervention would look like. For example, answers to questions such as who orders the food, which policies govern food that can be ordered, what barriers are faced by those who order food, and what types and amounts of foods are present at catered events on campus are all needed to inform intervention design. Without addressing such questions, an intervention planner cannot effectively plan the nature and scale of the intervention or identify which evidence-based theories may be critical for success.

To date, most of the research investigating the efficacy of interventions structured around IM have focused on the needs assessment, the intervention design, and the implementation steps of the IM approach. Few studies have reported on long term effectiveness of IM-based interventions, primarily because not enough time has elapsed. For example, in a 2017 review of 22 studies that utilized the IM protocol for health promotion and disease prevention, only 5 of the included studies were randomized controlled trials. In the timeline of IM, this means that these studies had already completed a needs assessment, created change objectives matrices, planned and implemented their intervention, and were reporting outcomes. All 5 RCTs reported significant differences between the IM intervention vs. placebo groups. Significance among these 5 RCTs was also reported for adoption of the IM intervention protocols, with rates of adoption ranging from 9-28%.²² Beyond the RCTs, 7 of the 22 studies (32%) indicated that

program effectiveness measures were planned for implementation in future RCTs. Notably, the review indicated that all 22 studies effectively identified the determinants relevant to intervention adoption and implementation. Taken together, the findings of this systematic review provide supportive evidence for the efficacy of the IM protocol.

The Workplace as a Target for Intervention

A prime location for health intervention is the workplace, categorized in the organizational level of the SEM. There are many justifications for workplace health interventions. First, individuals spend up to one-third of their day in the workplace, rendering employees a 'captive audience'.²³ Second, workplace health interventions have a ripple effect beyond the initial target population. Employees benefit from increased health, which has been associated with increased productivity at work (reduced presenteeism) and fewer sick days taken (reduced absenteeism).^{24,25} These benefits also help the employer, translating into cost savings related to reduced absenteeism and health care costs.^{24,25} Most health-related workplace interventions typically take the form of employee wellness programs (EWPs). Employee wellness programs often have limited success because they frequently focus solely on individual behavior change or one-dimensional environmental changes, usually manifested as physical and nutrition education components.^{8,26–28} An ecological take on EWPs, however, which incorporates models and research-based theories into the initial EWP architecture, can broaden the EWP's reach by creating systemic changes with interventions that affect everyone rather than just those who opt-in.²⁹ An example of such an EWP can be found at Texas State University. Following a review of the literature, a multi-disciplinary team incorporated the SEM, the Culture of Health model, and relevant behavior change theories such as the Social Cognitive Theory and Trans-Theoretical Model of Change into the design of the EWP.²⁹ These evidence-based foundations served to inform interventions undertaken *within* the EWP itself, which serve to

broaden the program's reach and effectiveness. For example, Bezner et al. explored health behavior coaching as a component of the Texas State EWP, reporting significant impact on participants' physical fitness and relevant psychological constructs.³⁰ Other interventions currently underway include (1) intervention design to improve the university culture of health by enhancing supervisor support of employee health behaviors and (2) an educational intervention with food ordering personnel to improve the food environment for faculty and staff on campus – the topic of this thesis.³¹

Relevance to Current Research

The food environment of a workplace can include everything from vending machines to what is served in a cafeteria to what is available for staff meetings and events.^{23,32,33} So far, evidence on food environment interventions in the workplace is scarce and interventions have seldom ventured outside of the aforementioned areas. In all cases, the intervention approach has neglected to include a needs assessment, which, as described in IM, is essential to ensure that the intervention accurately identifies the problems to be addressed.

In the context of catered workplace events, a thorough literature review has revealed that, to date, no intervention research of this type has been conducted. Catered workplace events are unique intervention candidates because worker attendance is often mandatory and thus results in the loss of worker autonomy to choose what they eat. In order to address this gap in the literature, Menge et al.³⁴ performed a needs assessment of the catered food environment at the Texas State University campus for meetings and events. First, through receipt analysis of foods ordered over the previous year, Menge et al.³⁴ established a baseline cross-sectional snapshot of the types and amounts of healthful vs. unhealthful foods present at campus events and meetings. Next, they identified food ordering personnel as the primary target population due to their gateway role as procurers of the foods offered at events and

meetings. Finally, through a series of focus groups with food ordering personnel and the subsequent development, validation, and distribution of the Understanding Food Ordering questionnaire, they identified the major barriers preventing food ordering personnel from ordering more healthful food. These barriers are shown in Table 2.³⁴

Table 2: Barriers to ordering healthful foods at catered events for employees on campus.

Factors	Components
Social support	Supervisors, co-workers
Restrictions on ordering	Policies, vendors, feedback
Personal views about nutrition	Nutrition knowledge

Research conducted by Menge et al.³⁴

The barriers identified by Menge et al.³⁴ can be interpreted through the lens of the SEM in order to gain insight into what an intervention should ideally target. Table 3 illustrates each barriers' classification according to the SEM, with two factors classified under environment and one factor, nutrition knowledge, classified under the individual level.

Table 3: Barriers to ordering healthful food classified according to the SEM³⁴

Factors	Components	SEM Classification
Social support	Supervisors, co-workers	Environmental
Restrictions on ordering	Policies, vendors, feedback	Environmental
Personal views about nutrition	Nutrition knowledge	Individual

The order in which barriers to healthy behaviors are addressed is important. Often with health behavior change, removal of environmental barriers facilitates ease in making a health change.⁷ For example, provision of a free gym membership could make it easier for an individual to engage in exercise through free access to space and equipment. However, if that same

individual lacks knowledge about how to use the equipment or how to perform exercises safely, it is less likely that they will use the free membership. In this example, the effectiveness of removing the environmental barrier depends on first removing the individual barrier. In the same way, when it comes to food ordering, it would be impractical to remove ordering restrictions and build up social support for healthy food ordering when the individuals placing the orders may not know what is healthful and what is not. Therefore, an ideal intervention should include education as a first step to improve the nutrition knowledge of all food ordering personnel. The intervention should also facilitate easy application of that knowledge through, for example, creation of a go-to menu of healthy options available from university approved caterers. While unaddressed in this research, a more comprehensive intervention and excellent subject for future research could also include additional education of authority figures who exert social influence on food ordering individuals.

To facilitate employee training and education, Texas State University currently distributes mandatory online modules that mostly entail paging through a series of slides and answering quiz questions. Considering this status quo, the research team decided to also use an online modality to facilitate distribution and maximize intervention reach. In order to increase effectiveness of and engagement in the intervention, the team used IM to guide the selection of theories, methods, and strategies to create a video-based infotainment module to increase the nutrition knowledge of food ordering personnel.

Video Based Learning

Videos are a growing modality for intervention development due to their many benefits compared with other methodologies. Chiefly, they are far less resource intensive to deliver and thus more cost effective than other methods of intervention.³⁵ The medium also standardizes delivery of intervention information, eliminating the variable of inconsistency that often plagues

interventions utilizing person to person interactions.³⁵ Finally, evidence shows that videos are appreciated and enjoyed by intervention participants and that they are particularly effective in populations with lower education and health literacy.³⁵ This feature makes videos a promising tool for reaching more at-risk groups who often have poorer health behaviors.

To date, much research has compared the effects of the video medium to other mediums such as the written or spoken word in terms of changing health behaviors^{35–39} and enhancing educational outcomes.^{40–43} A systematic review of 28 studies comparing video to other media found that researchers were only able to show a significant impact on health behavior in nine of the studies.³⁵ However, the review called to attention the heterogeneity of study designs, particularly the confounding factor of variability in video design methodology. For example, only eight of the studies reported use of a theory to guide the video creation process.³⁵ Shortly after this systematic review was published, a new RCT compared the effectiveness of text to video in a systematically designed obesity intervention. The intervention design followed the IM protocol and delivered identical information via either strict text or strict video-based formats over 6 months. Outcomes of interest included body mass index (BMI), energy intake, physical activity, and intervention appreciation. The researchers reported that the video intervention was more effective in reduction of energy intake and BMI among participants, whereas the text-based intervention only affected energy intake. Further, the video-based intervention was considered significantly more relatable, useful, and appreciated by participants.^{44,45} Neither intervention significantly affected physical activity. Additional systematic research is needed to determine with certainty whether video is a consistently more effective medium and how enduring its effects may be in the long term.

There is research that has studied the qualities and aspects of what make a video effective^{46–50}, and the findings to date prove to be both consistent across studies and provide

worthwhile guidance. For example, short durations and visual/audio harmony in message communication have been identified across multiple studies. Table 4 provides a summary of emerging hallmarks in effective video design^{46–49}. Koumi includes and expands on the general guidance provided in Table 4 with a set of design principles and specific guidelines for video design. These principles can be found in Table 5.⁵⁰

Table 4: Traits of effective videos⁴⁶⁻⁴⁹

What Makes an Effective Video?			
Ramsay et al. 2012	Guo et al. 2014	Aronson et al. 2013	Brame et al. 2016
Use real situations	Be more personable, less formal	Tailor and target information to the viewing audience	Use conversational language
Keep video short in duration	Keep video short in duration	Allow learner control over speed of content engagement through segmenting	Keep video short in duration
Use one message, presented simply	Alternate between visuals and the presenter (i.e. not just slides with a voiceover)	Reduce extraneous cognitive load by eliminating extraneous information	Simplify the message via Segmenting (i.e. chunking) and Weeding (i.e. elimination of extraneous information)
Show a skill in action rather than just describing it	Be mindful of video style (e.g. lecture vs. tutorial)	Use Signaling to highlight relevant content and reduce cognitive load.	Use Signaling (i.e. visual or audio cues to highlight important information)
Make the video setting relatable	Be enthusiastic with quick speech	Consider expertise of the audience and reduce supporting techniques such as scaffolding as expertise increases.	Speak quickly and with enthusiasm
Support the viewer's ability to conceptualize the information (e.g. via animations, images, etc.	Use real-time drawings or animations over static images (e.g. PowerPoint slides)	Use dual-coding, (pairing of verbal and non-verbal information)	Match modalities (i.e. visuals and audio should communicate the same idea.)

Table 5: Principles and guidelines

Hook	Shock, surprise, delight
	Build suspense, entertain, engross/appetize
Signpost	Set the scene
	Signpost what's coming later
	What's next?
	What to look out for
Stimulate Cognitive Engagement	Pose questions
	Encourage prediction
	Personal relevance to viewer
Enable Constructive Learning	Words not duplicating pictures
	Visual metaphor
	Scaffold construction of knowledge
	Let viewer see the physical context
	Activate existing knowledge
Sensitize	Priming
	Reassure/build confidence
	Personalize the teacher
	Music style & timing by design
	Consistent style
Elucidate	Vary tempo to indicate syntax
	Enhance legibility/audibility
	Maximize cognitive clarity
	Moderate pace, depth, breadth
Reinforce	Repetition (with a new angle)
	Re-exemplify
	Word-image synergy
	Compare/Contrast
Consolidate	Recapitulate
	Summarize key points
	Integrate associated materials

Described by Koumi⁵⁰

Intervention Mapping - From Change Objective Matrix to Practical Application

The Logic Model of Change and Matrix Vocabulary

In order to best leverage Menge et al's³⁴ findings and design an effective intervention, a logic model of change is useful to map the desired effects of the intervention, from changeable objectives to behavior outcomes.⁵¹ See Figure 2 for an example of a logic of change model.

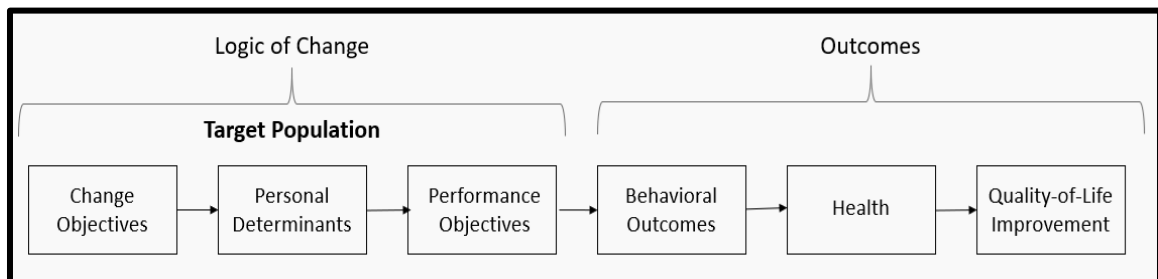


Figure 2: Intervention mapping logic of change model⁵¹

In order to achieve a behavioral outcome, *change objectives*, *personal determinants*, and *performance objectives* need to be identified. These three terms are unique to IM and serve to (1) deconstruct behavioral generalizations into concrete, observable steps (2) determine personal and environmental influences at each observable step, and (3) identify changeable objectives within those influences.⁵¹

To begin, when discussing behavior, it is frequently spoken of in general terms. A relevant example is improving 'dietary intake'. Dietary intake is a construct that does not represent a single changeable behavior. Rather, dietary intake is a construct that represents the outcome of a sequence of sub-behaviors. These sub-behaviors are observable and concrete.⁵¹ See Table 6 for an example of sub-behaviors associated with the dietary action of cooking at home.

Table 6: Example of sub-behaviors for “Cooking a meal at home”

Sub-behavior 1	Make the decision to cook at home.
Sub-behavior 2	Determine recipe/dish to prepare.
Sub-behavior 3	Assess equipment necessary to prepare recipe/dish.
Sub-behavior 4	Assess ingredients currently available.
Sub-behavior 5	Purchase, if necessary, additional ingredients and/or equipment needed to cook at home.
Sub-behavior 6	Prepare dish.

Sub-behaviors are referred to in IM as *performance objectives* - an observable subset of behaviors that together comprise a larger behavior.⁵¹ Performance objectives are expressed via action words (e.g. determine, assess, purchase) and are useful in identifying what specific actions need to occur to achieve a behavioral outcome. Identifying performance objectives involves answering the question, “What does the target audience need to do in order to perform the behavioral outcome?”⁵¹ Logically speaking, if each performance objective is executed, then the overall behavior should also be executed. Conversely, if a performance objective is not completed, the likelihood that the overall behavior will also be completed decreases.

Because performance objectives are independent actions, they also have their own unique personal and environmental influencers.⁵¹ See Table 7 for an example of influences according to specific performance objectives within the behavior “cooking at home”.

Table 7: Unique influences on performance objectives for “cooking at home”

Performance Objectives (PO)	Personal Influences		Environmental Influences	
	Determinants	Related Question	Determinants	Related Question
PO1: Make the decision to cook at home.	Personal Norm	Does the subject typically cook at home, or do they often eat out or prepare convenience items?	Physical Environment	Is the subject's kitchen in a demotivating state (e.g. dirty, ill-equipped)?
			Perceived Norms	Do the subjects' family or friends usually cook at home; do they consider it practical, economic, or a waste of time?
PO2: Determine recipe/dish to be prepared.	Skill	Does the subject have the necessary skills to prepare certain dishes?		
	Self-Efficacy	Does the subject have confidence in their ability to select a recipe they will enjoy or be able to prepare?		
	Knowledge	Does the subject know any recipes or sources to find recipes within their skill level and taste preferences?		

These differing influences (i.e. perceived norms, self-efficacy, skill, etc.) are known in IM as *determinants* and can be both personal and environmental.⁵¹ Identified determinants are always theory-based and, as such, have an extant, searchable body of evidence for associations with various performance objectives. Evidenced-based intervention methods also exist that can be used to influence determinants. Selection of appropriate determinants serves to ground interventions in the literature while allowing room for incorporation of multiple theories.

Mapping relevant determinants to performance objectives improves the ability of intervention researchers to target an intervention's efforts. However, these associations still do not provide concrete targets. Knowing that self-efficacy is related to a subject's ability to choose to cook at home still doesn't answer the question, "What, specifically, needs to change?"⁵¹ Logically, it makes sense that if the subject's self-efficacy improves, then he or she may cook at home more often. But the goal "improve self-efficacy" still lacks specificity because self-efficacy itself is abstract.^{21,51}

All determinants such as self-efficacy, knowledge, skill, etc., are abstract. Each of these determinants function as a collective noun that describes more concrete underlying psychological motivators, such as individual thoughts, perceptions, and emotions.²¹ Intervention Mapping refers collectively to these individual motivators as *beliefs*.⁵¹ For example, the abstract determinant "self-efficacy" might include a belief such as, "I don't think I'm a good cook," which may prevent an individual from choosing to cook at home. An intervention could target this belief by providing the individual with classes to improve cooking skills and thus increase belief in his or her ability to cook. In this way, the specific and concrete nature of beliefs allows the intervention researcher to develop very specific intervention goals by rephrasing beliefs as *change objectives*.^{21,51} For example, the belief, "I don't think I'm a good cook." can be turned into a change objective by rephrasing it as, "I am confident in my ability to cook." This goal then provides insight into specific actions that an intervention can take to bring about effective change. Therefore, change objectives are the true intervention targets of IM, and it follows that if each change objective is achieved, then the associated performance objectives will also be achieved, leading to performance of the overarching behavioral outcome.^{12,21,51}

The Change Objective Matrix

The *change objective matrix* is used to combine change objectives, determinants, and performance objectives into a concise, logical layout that identifies all intervention goals.^{21,51} To create a change objective matrix, performance objectives are first listed in the left column. Second, determinants are listed in the top row. Last, appropriate change objectives are listed in the cells where determinants and performance objectives intersect. The layout of the matrix therefore allows a single determinant to associate with more than one performance objective. It also allows for more than one change objective to be identified for any determinant-performance objective combination. See Table 8 for a sample change objective matrix using information from the “cooking at home” example.

Table 8: Sample change objective matrix for “Cooking at home”

	Self-efficacy	Skill	Personal Norm	Perceived Norm	Knowledge	Physical Environment
PO1: Make the decision to cook at home.			CO1: Subject indicates cooking at home as a more practical, economic, and valuable use of time vs. eating/ordering out.	CO1: Subject is aware that family and friends consider cooking at home as normal and socially acceptable.	CO1: Subject understands the health advantages of cooking at home vs. eating/ordering out. CO2: Subject understands the financial advantages of cooking at home vs. eating/ordering out.	CO1: Subject possesses necessary equipment with which to cook at home.

Table 8. Continued

PO2: Determine recipe/dish to prepare.	CO1: Subject expresses confidence in ability to select a recipe he/she will enjoy. CO2: Subject expresses confidence in ability to read a recipe.	CO1: Subject demonstrates how to read a recipe.			CO1: Subject understands his/her own personal taste preferences. CO2: Subject is aware of where recipes can be found online, etc.	
PO3: Assess equipment necessary to prepare recipe/dish .		CO1: Subject identifies various equipment used during the cooking process.			CO1: Subject is aware of what various cooking equipment is and what they are used for.	
PO4: Assess ingredients currently available at home.		CO1: Subject identifies various staple ingredients .			CO1: Subject is aware of various staple ingredients .	

Table 8. Continued

PO5: Purchase, if necessary, additional ingredients and/or equipment needed to cook at home.					CO1: Subject states locations where needed ingredients can be acquired. CO2: Subject states where needed equipment can be acquired.	CO1: Subject has space to store purchased items.
PO6: Prepare dish.						CO1: Subject's kitchen is clean and well- equipped to cook in.

PO = performance objective; CO = change objective.

Once completed, a change objective matrix can be refined to eliminate weak or less important determinants and change objectives to further focus intervention efforts.^{21,51} In summary, interventions designed according to the IM strategy may greatly enhance their potential for effectiveness through identification of specific, concrete change objectives. Successful targeting of change objectives will positively influence their related determinants and increase the likelihood that the associated performance objectives will be completed. Successful completion of performance objectives will result in execution of the desired behavioral outcome.

Completion of a change objective matrix marks the completion of Step 2 in IM. In Step 3, relevant theories and methods are selected based on the completed matrix. Once selected, the

researchers use the theories and methods as a guide to develop concrete, practical applications.^{12,20,52}

Theory Selection

Because Texas State University provides education online, a video based infotainment module was selected as the modality of intervention. This modality offers insight into which theories might be the most relevant and applicable in both the change objective matrix and module development. Therefore, learning and behavior theories as well as communication and persuasion theories were reviewed in preparation for this third step of the IM protocol.

Reviewed theories include Social Cognitive Theory (SCT), the Reasoned Action Approach (RAA), theories on goal directed behavior, the Trans-Theoretical Model of Health Behavior Change (TTM), Cognitive Learning theory (CLT), theories on information processing, and the Communication-Persuasion Matrix theory (CPM).

Social Cognitive Theory argues that behavior results from distinct paths of agency, including personal experience, observation of those in close proximity, and influences from the environment.^{53,54} Determinants of behavior identified by SCT include self-efficacy, outcome expectations, and perceived norms. Methods to influence these determinants include modeling, tailoring, graded tasks, guided practice, reinforcement, and facilitation.⁵⁴

The Reasoned Action Approach, proposed by Fishbein and Ajzen, views behavior change as a process resulting from a change in an individual's personal beliefs on a subject. Accurate measurement of "salient beliefs", or what IM might term determinants, is crucial in this theory. If one can correctly identify the most relevant beliefs of a target population, then methods intended to shift the population's perspective can be employed to bring about behavior change. Determinants identified by the RAA include subjective norms, attitude, perceived control,

perceived social expectations, and self-efficacy. Methods to influence these determinants include persuasive communication, framing, modeling, and use of arguments.^{51,55}

Theories of goal directed behavior highlight the many aspects of goals, including successful characteristics and effective goal engagement. For example, goals should be characterized by a focus on behavior (e.g. eat 3 servings of fruit every day) rather than a focus on outcomes (e.g. lose weight), and be challenging without being too unrealistic.⁵⁶ The goal striving process of wishing, planning, acting, and evaluating⁵⁷ has shown success in creating behavior change because of its ability to bridge the intention-behavior gap.⁵⁸ Determinants identified by goal directed behavior include skills, habits, and environmental influences. Methods to influence these determinants include feedback, implementation intentions, and cue altering.⁵¹

The Trans-Theoretical Model of Health Behavior Change represents the process of behavior change as a series of stages that each reflect an individual's attitude and actions toward the desired change. The stages include: precontemplation (no intention for change), contemplation (intention for change within 6 months), preparation (intended change within a month, with preparatory actions taken), action (behavior change has been initiated), maintenance (behavior change has been performed for at least 6 months), and termination (zero temptation of relapsing and full confidence in ability to maintain the behavior change).^{51,59,60} Determinants for the TTM vary based on the stage an individual is determined to be in, and can include any of the determinants listed previously. Methods to influence these determinants include self-reevaluation, contingency management, and tailoring.^{51,60}

Cognitive Learning theory views learners as active parties in learning, and focuses on how knowledge is processed, stored, and represented in the mind. This theory has lead to the concepts of short and long term memory, as well as cognitive load, or how much a learner is

able to process and understand at once.^{61,62} Determinants identified by CLT include knowledge and skills. Methods to influence these determinants include chunking, elaboration, advanced organizers, and concept mapping.⁵¹

Theories on information processing include the Semantic Network Theory⁶³ and Mental Model Theory⁶⁴, and focus on how information is perceived, retained, and subsequently retrieved. A central tenant is that the mind is a field of established, interconnected informational nodes and that new information is processed in relation to information already present and must be able to integrate effectively. Thus, these theories provide insight into how to effectively structure and communicate new information so as to avoid dissonance with pre-existing information that might decrease the likelihood of incorporation. Determinants identified by information processing theories include knowledge, skills, perceived norms, and perceived expectations. Methods to influence these determinants include cues, chunking, elaboration, and advance organizers.⁵¹

The Communication-Persuasion Matrix theory by McGuire combines communication steps with communication variables.^{65,66} The steps are considered dependent variables, as they represent the process a message recipient goes through in response to a message. These steps include (1) message presentation (2) attention (3) comprehension (4) yielding (5) retention and (6) behavior, and are listed in the left column of a matrix. The communication variables are considered independent variables since they can be controlled in the process of message construction. They include (1) source (2) message (3) channel (4) receiver and (5) destination, and are listed in the top row of the matrix. The cells are then used to track which aspects of message communication address which variables in the message response.^{65,66} In order for a piece of communication to be considered successful and have an effect, all dependent steps of the matrix must be fulfilled. For example, casting an individual of Hispanic origin to present a

message to a Hispanic audience in Spanish would be included under the source variable and fulfill the message presentation, attention, and comprehension steps of message engagement. Determinants in the CPM, like the TTM, will vary by stage of consideration, and can include many determinants listed previously. Methods to influence these determinants include elaboration, tailoring, strong arguments, and cultural similarity.^{51,66}

Intervention Application

The change objective matrix, theories, behavior change methods, and additional guidelines on effective video creation identified earlier from the literature will form the guiding framework for developing each aspect of the educational module. Aspects will include curriculum, organization, flow, script wording and connotative choices, script argument constructions, style and feel of delivery, duration, on screen learning enhancement techniques, and post-production editing decisions.

Research Objectives

The overall purpose of this thesis is to develop and test whether two resources, including (1) educational videos and (2) catering menus with healthful options, increase the nutrition knowledge of food ordering personnel and the amount of healthful foods ordered for catered events at a large university.

Objective #1: Educational Module

Per IM, develop and apply a change objective matrix to guide the design, development, and creation of a video-based module intended to educate and motivate administrative assistants to order healthful foods for catered events.

We hypothesize that the intervention employing video-based training will increase knowledge of the target users and motivate them by changing attitudes and beliefs toward ordering healthful foods for meetings and events.

Objective #2: Healthful Ordering Menu Resource

Identify and combine healthful menu options from vendor menus into a resource for administrative assistants who order food for catered events at a large university.

We hypothesize that administrative assistants who are provided with the menus will react favorably to its potential utility.

III. METHODS

Overview

All steps of this project's methodology were reviewed and approved by the Texas State University IRB (#2018597) and deemed exempt.

This project intervention included 2 key components, including (i) an educational video module and (ii) a supplemental resource menu highlighting healthy options available from current approved vendors. This Methods section details all aspects of the intervention design, beginning with utilization of focus groups to inform and review our work, continuing through development of each intervention piece, and creation of intervention assessment surveys on knowledge and attitudes of those who order food for campus events for employees.

Focus groups were utilized twice in this work, first to inform the development of both intervention tools to foster relevance and then again to evaluate and review the final intervention tools for acceptability prior to their launch. See Figure 3 for a project methodological logic model.

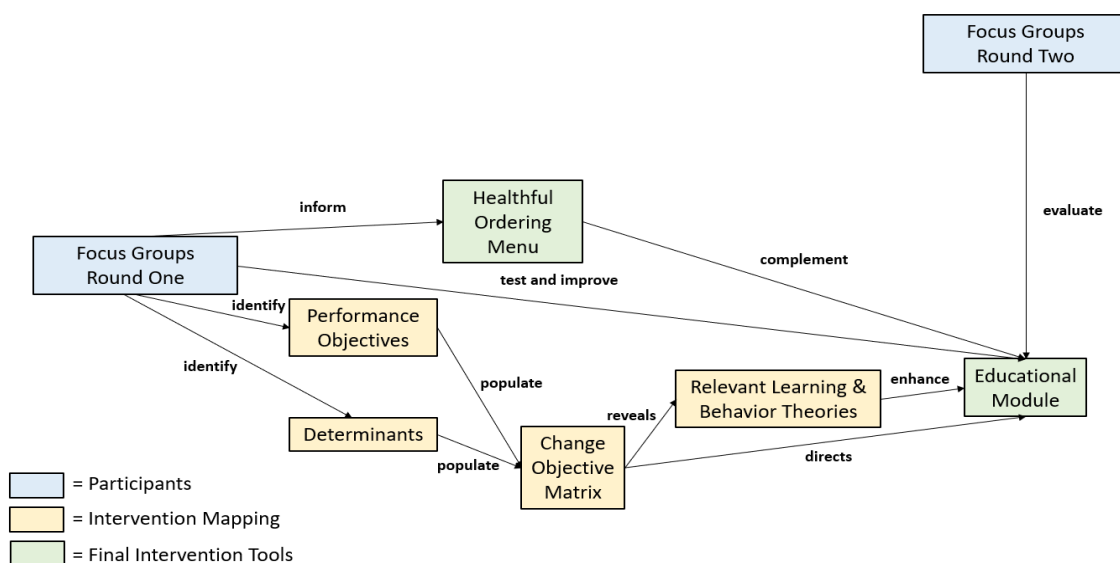


Figure 3: Project methodological logic model

Educational Video Module Part 1: Focus Groups

Two rounds of focus groups populated with Texas State personnel who order foods for catered events for employees were held to (i) inform module and menu development and (ii) assess videos for efficacy, relatability, and areas of improvement. This section details the methods used to recruit focus group participants, develop focus group questioning guides and protocol, themate focus group audio transcripts, and apply focus group findings to build the curriculum for the educational module using Intervention Mapping.

Focus Group Recruitment

Participants for each round of focus groups were recruited from two lists that included university personnel with approval to use university credit cards or P-cards. One list was provided by the Texas State Accounting department in February 2017 and the other list was provided by the Texas State Purchasing department in October 2019. The combined lists included 704 individuals.

For each focus group, the mail merge function in Microsoft Word was used to send identical copies of an e-mail invitation to each individual in the Excel contact list. The e-mail for the first round (included in the Appendix A) provided a brief overview of the research project, and indicated that the purpose was to assist in the development of an educational module. The e-mail also offered two incentives for participation – a WellCats t-shirt, and a freshly cooked, healthy lunch prepared by the focus group moderators. Six focus groups were held with 4-8 participants each, totaling 34 participants.

Recruitment for the second round of focus groups followed the same process as that of the first round. The e-mail invitation (also included in Appendix A) briefly summarized research progress up to that point and extended an invitation to assist in the review of the first two videos for efficacy, relatability, and areas for improvement. Incentives included a pair of

WellCats sunglasses and a pair of WellCats silicone kitchen utensils. Four focus groups were held with 4-8 participants each, totaling 25 participants.

Focus Group Guides & Procedure

The focus group guides were developed with the intent of fostering desired behavior change – ordering more healthful foods for catered events and meetings for faculty and staff. The question guide for the first round was designed to solicit insights on how to make a relevant and content-effective educational module. Sample questions aimed to assess preferred learning styles and qualities that make a training memorable, aspects of current university trainings that they would change and why, as well as specific nutrition information they would need to successfully order more healthful food if it were university policy to do so. The second round was conducted to test the efficacy and relatability of the videos and probe for areas of improvement, so questions inquiring about new information learned, level of personal engagement, ease of understanding, video relatability, practicality, effectiveness, and suggestions for improvement were asked.

Each focus group was conducted by a lead moderator who asked questions to the group and an assistant moderator who took notes using a university laptop. Each focus group lasted approximately one hour. Upon arrival, participants completed an informed consent and brief demographic form which were collected upon completion and placed in a manilla envelope. The consent form included agreement that the focus groups could be audio-recorded. Upon completion of each focus group, an audio-recorded debriefing period took place between the lead and assistant moderator, recapping major themes and discussing the extent of saturation reached up to that point.

Recorded audio of each focus group was then sent to a transcription service. Once the completed transcripts were received, the classic analysis strategy was followed to identify and

code emerging themes.⁶⁷ The first round of focus groups included questions about learning styles, opinions on nutrition knowledge considered imperative to ordering healthier foods, and ideas for supplemental menu design features and contents. The second round of focus groups included questions to elicit feedback on areas for improvement in each intervention video. Both focus group guides are included in the Appendix B.

Thematic of Focus Group Data

The classic analysis strategy⁶⁷ was used to theme all focus group transcripts. The strategy is essentially an iterative bucket or pile system in which expected themes and emerging themes are assigned piles and corresponding comments are added to that pile. Once all comments are sorted, each pile is more deeply probed to determine subthemes.

To begin, each transcript was labeled by focus group number (i.e. FG#1, FG#2, etc.) and each individual comment within the transcripts was numbered using the auto-number tool in Microsoft Word. Finally, each focus group transcript was assigned a unique font to make distinguishing comments simpler once sorting began. This process was followed for both rounds of focus groups.

When theming the first round of focus groups, a pair of researchers sorted each comment from the transcripts and placed them in piles according to which question it answered. Because each question for the first round of focus groups was highly specific and elicited objective, question-specific feedback, emergent themes for the questions taken together did not exist. Instead, each pile was probed for repeated themes which characterized the answers to each question. Next, comments were divided into several sub-piles for each question according to themes identified. Once these sub-piles were created, they were each reviewed again to assess for any additional emergent themes. If both researchers agreed that some comments differed enough to characterize their own unique theme, a new theme pile was

created. Finally, the piles were reviewed a third time to confirm that each comment had been properly assigned. If both researchers agreed that a comment fit another sub-theme better, it was moved. Finally, an Excel spreadsheet was created to document the themes for each question along the top row and their related comments in the far left-hand column. An X was used to indicate to which theme each comment mapped.

For the second round of focus groups, a different approach was taken because comments frequently spoke to multiple questions at a time and often provided abstract feedback that did not always map to specific questions. A pair of researchers read through the transcripts together and assigned each comment a theme according to its content (e.g. message enhancing element, direct knowledge, video 1 specific change, etc.). Once the transcript was read in its entirety, the team printed the transcript and sorted each comment, grouping the similarly themed comments together in piles. Then, the protocol described above for assessment of additional emergent themes and proper pile assignment was followed.

Development of The Change Objective Matrix

Themes derived from the focus groups were used to identify Intervention Mapping *performance objectives* and *determinants* to populate the intervention's change objective matrix. To refresh, *performance objectives* represent subsets of a behavior. For example, choosing a vendor represents a step or subset of the overall behavior of ordering food for a catered event. Another performance objective is recognition of the need to order foods that accommodate dietary restrictions. Intervention Mapping *determinants*, on the other hand, represent an abstract motivator or influencer which acts on a performance objective, such as self-efficacy or perceived norms. For example, one determinant for recognizing the need to accommodate dietary restrictions could be "knowledge" representing understanding of (i) what the dietary restriction is and (ii) what foods should be excluded. Identified *performance*

objectives are listed on the far left-hand column of the matrix and related *determinants* are listed on the top-most row of the matrix. Where each *performance objective* and *determinant* intersected, a *change objective* can be made. The intention of *change objectives* is to describe specific, concrete points of intervention that can be overtly targeted. If each *change objective* is successfully accomplished, then logically each *performance objective* will be accomplished and the resulting behavior change will take place.

Emergent themes from the first round of focus group analysis in tandem with theories of behavior change outlined previously drove the development of IM *performance objectives* and *determinants*. The *change objectives* for this project were then created based on the interactions of *performance objectives* with their *determinants*. Figure 4 presents a portion of the overall change objective matrix created for this project.

		Knowledge	Skills
PO#1	Express the desire to order healthful food	CO#1: Understand the impact and importance of healthful eating.	
PO#2	Engage nutrition knowledge to identify healthful food	CO#1: Understand the categories of food.	CO#1: Distinguish between food categories
		CO#2: Understand MyPlate	CO#2: Apply MyPlate.
		CO#2: Understand the key health differences between whole and processed foods (e.g. added sugars, low fiber, high fat, high sodium).	CO#3: Recognize key health differences between whole and processed foods (e.g. added sugars, low fiber, high fat, high sodium).
		CO#3: Understand nutrition data (e.g. food label).	CO#4: Interpret nutrition data.

Figure 4: Excerpt of the change objective matrix. Color coded according to which video targets which change objective. Red = Video 1; Blue = Video 2; Green = Video 3; PO = performance objective; CO = change objective

Educational Video Module Part 2: Video Development and Creation

The Change Objective Matrix as Video Curriculum

The change objective matrix and relevant behavior change theories served as the framework for the development and execution of all aspects of the intervention videos. The *performance objectives* represented the specific behaviors the intervention sought to change. Therefore, the *performance objectives* served as the overarching curriculum of the module, defining the general topic that each video would cover. Based on our six *performance objectives*,

six videos were developed. See Table 9 for a list of the project's *performance objectives* and descriptions of corresponding videos.

Table 9: Performance objectives with corresponding videos, titles, content details, and design intentions

Performance Objectives	Videos
#1: Express the desire to order healthful food	Video 1 - Introduction – a big picture overview of key metrics related to the work food environment and workforce health, the current state of the campus food environment, and how healthful ordering can positively impact both. Designed to increase the desire to order more healthful foods.
#2: Use nutrition knowledge to identify healthful food	Video 2 - The Whole Food Difference & Video 3 – Processing Key Nutrients. Video 2 focused on understanding the main differences between whole and processed foods (i.e. more healthful vs. less healthful foods) and how to identify them, while Video 3 focused on the key nutrient and health differences between whole and processed foods. Designed to enhance nutrition knowledge and increase ability to identify and select healthful foods.
#3: Select healthful options from vendors	
#4: Select healthful options appropriate for audience/demographic	Video 4 - Dietary Restrictions & Video 5 - Allergens – two videos focused on understanding the most common dietary restrictions (i.e. gluten-free, vegetarian, vegan, pescatarian) and the top 8 food allergens and why consideration of each while ordering is important. Designed to increase viewers ability to select appropriate menu items for their audience.
#5: Order healthful food	Discussed and frequently alluded to throughout each video. Particular emphasis given in Video 1 – Introduction & Video 6 – The HOM 3000. Video 6 designed to increase viewers ability to order more healthful food through use of the accompanying Excel file, a healthful ordering menu created by the researchers.
#6: Answer audience questions effectively based on healthful food ordered	Addressed across all videos by increasing nutrition knowledge, but with specific, scripted modeling in Video 6 – The HOM 3000. All videos designed to increase viewers ability to field audience questions.

Determinants helped indicate which behavioral change method(s) might be the most effective at addressing a specific change objective, thus increasing chances of success. See Table 10 for theories consulted, chosen determinants, specific methods used, and examples of how those methods were applied in the videos.

Table 10: Determinants, theories consulted, methods used, and examples of usage in videos

Theory Consulted	Determinants	Methods Used	Usage in Video
Social Cognitive Theory ⁵⁴	Self-Efficacy Outcome Expectations	Modeling	Main character Bob learning and demonstrating gained knowledge
		Guided Practice	Game show element with guided practice in Videos 2 and 3
		Reinforcement	Recapitulation of main points throughout and at end of videos
Reasoned Action Approach ^{51,55}	Attitudes Self-Efficacy Perceived Barriers Perceived Benefits	Persuasive communication	Intentional use of language and organization of thoughts to emphasize points.
		Modeling	Bob modeling new knowledge and desired behaviors.

Table 10. Continued

		Use of arguments	Arguments tailored to target audience via common connection with the university and prior research done on campus.
Cognitive Learning Theory ^{61,62}	Knowledge	Advanced organizers	Entire series and details of each video laid out at the beginning. Main ideas of each video presented at the beginning of each.
	Skills	Elaboration	Visuals, voice overs, and character interactions all used to elaborate on and demonstrate central points and behaviors.
		Chunking	MyPlate broken down by section in Video 2.

Table 10. Continued

Semantic Network Theory ⁶³ & Mental Model Theory ⁶⁴	Knowledge	Cues	Consistent visual transition cues and musical auditory cues used in Video 4 to enhance attention to following information on specific dietary restrictions.
	Perceived Norms	Advanced organizers	Entire series and details of each video laid out at the beginning. Main ideas of each video presented at the beginning of each.
		Elaboration	Visuals, voice overs, and character interactions all used to elaborate on and demonstrate central points and behaviors.

Table 10. Continued

Communication-Persuasion Matrix Theory ^{65,66}	Varies	Cultural similarity	Office setting, frequent references to TXST, and TXST logo placement throughout
		Strong arguments	Evidence-based sources and data used throughout

Advanced Organizers – outlining of the information to come before any new material is introduced.

Chunking – breaking down large amounts of information into smaller, more manageable pieces.

Cues – visual or auditory components that link to concepts and increase attention, comprehension, or retention.

Finally, *change objectives* associated with specific *performance objectives* became the key educational targets of their respective videos.

To operationalize the matrix, first, each *change objective* was color-coded according to which video would target it (see Figure 2). Then, a new file was created to organize all *change objectives* into columns according to their video number. A sample of this file can be viewed in

Table 11.

Table 11: Change objectives color coded and organized by video

Video 1	Video 2	Video 3
Teach the impact and importance of healthful eating.	Teach the categories of food.	Understand the key health differences between whole and processed foods (e.g. added sugar, low fiber, high fat, high sodium).
Emphasize the importance of healthful eating.	Distinguish between food categories.	Understand nutrition data (e.g. food label).
Highlight that applying nutrition knowledge to food ordering is valuable and applicable.	Provide examples highlighting the qualities of healthful food.	Recognize key health differences between whole and processed foods (e.g. added sugars, low fiber, high fat, high sodium).

Each list of change objectives was used for reference during video design and creation, which is detailed further in the next section.

Design of Module Videos and Creative Considerations

The Vyond (Vyond, San Mateo, CA) animation studio, an approved university software, was used to animate each module video. The lead researcher and an assistant researcher developed an iterative protocol for development of all videos, which included: (i) scripting (ii) script treatment (assigning visual, audio, and directorial cues to script lines) (iii) animating (iv) audio recording, and (v) editing.

Before a video script was developed, the change objectives for the video were first pasted into a new Microsoft Word document for continual reference during scripting. Then, both scripting and script treatment were undertaken simultaneously to ensure harmony and cohesiveness between the script and later animated content. When ideas were particularly complex to convey and the research team could not envision it with agreement, they would move into animation to resolve conflicts. Animation, audio recording, and editing were frequently done together and in an iterative fashion.

Many creative and artistic considerations were also given to the videos, anchored in pedagogic video design principles chiefly informed by Koumi⁵⁰. Koumi's framework principles and specific guidelines are outlined in Table 12, along with how the research team adapted each within and across videos. Also, in accordance with literature findings, videos were kept as close to six-minutes as possible.^{46–48}

Table 12: Video design principles, guidelines, and specific video applications

Principle Name	Guideline(s)	Specific Video Applications
Hook	Shock, surprise, delight	Video 3 opens with continuation of game show from Video 2; Video 5 opens with a mystery to solve.
	Build suspense, entertain, engross/appetize	Continual narrative across all videos. Characters are cute and fun to observe.
Signpost	Set the scene	Introduction to video contents always given.
	Signpost what's coming later	Video 1 outlines entire module.
	What's next?	Each video ends with what's coming up next.
	What to look out for	Pre-assessments preview what viewers should look out for in the video.
Stimulate Cognitive Engagement	Pose questions	Video 2 and 3 implement an interactive game show.
	Encourage prediction	Game show element encourages prediction.
	Personal relevance to viewer	Main character plays the same role as the viewer.
Enable Constructive Learning	Words not duplicating pictures	Efforts made to avoid duplication of words and images.
	Visual metaphor	Guiding images used convey concepts along with audio.
	Scaffold construction of knowledge	Videos ordered in order to build on prior knowledge.
	Let viewer see the physical context	Largely irrelevant in this project
	Activate existing knowledge	Extant food knowledge referenced before introducing new frameworks.
Sensitize	Priming	Mention of contents to be learned at beginning of videos.
	Reassure/build confidence	Language of characters and narration meticulously crafted to avoid negativity and judgement. Characters designed to be encouraging and uplifting.

Table 12. Continued

	Personalize the teacher	Teacher characters consistent throughout all videos. Teacher characters are colleagues of the main character rather than superiors.
	Music style & timing by design	Music deliberately chosen to fit the style and feel of each video and meticulously edited for proper entrance/exits, volume, and presence or absence.
	Consistent style	Consistency in color, music, environment, transitions, characters, etc. given mind in each video and across videos.
Elucidate	Vary tempo to indicate syntax	Videos exhibit a different pace based on content.
	Enhance legibility/audibility	External microphone used to record clear audio, proper contrast and size given to on screen text.
	Maximize cognitive clarity	One continual narrative utilized across all videos to highly contextualize content.
	Moderate pace, depth, breadth	Division of video content innately forced variation in pace, depth and breadth. Videos 2 and 3 purposely designed to be broad in scope and then more detailed.
Reinforce	Repetition (with a new angle)	Key points repeated multiple times throughout videos, often with the new angle of application to food ordering.
	Re-exemplify	New examples, ways to apply, and consideration of content in the context of ordering used in each video.
	Word-image synergy	Images designed to complement the script and enhance understanding.
	Compare/Contrast	Colors, character mood, content, etc. experience contrast across videos.

Table 12. Continued

Consolidate	Recapitulate	Each video ends with an overt recapitulation coupled with a consistent soundtrack that cues the video ending.
	Summarize key points	Each video summarizes key points at the end.
	Integrate associated materials	Video 6 integrates the healthful menu included with the module.

⁵⁰Koumi J. Expert's Corner. *Journal of Visual Literacy*. 2013;32(2):85-114.

Videos were saved in .mp4 format. Audio was recorded using a Blue Snowball microphone, and audio files were saved in an .mp3 format. The finalized videos were uploaded to the lead researcher's personal YouTube™ account as "private" in order to generate unique URLs that could be accessed only by study participants.

Supplemental Resource Menu Part 1: Creating the Healthfulness Grading Tool

Gathering Catering Menus

In May 2019, the Texas State Auxiliary Services website (<https://www.auxiliaryservices.txstate.edu/services/dining/catererlist.html>) was accessed to obtain an official list of vendors approved for providing catered meals and snacks on the university campus. Each vendor's website was then visited to assess the availability of a catering menu. If a catering menu was available online, an electronic copy was saved for reference and a physical copy was made. If catering menus were not available online, the vendor was physically visited by researchers and physical catering menus were collected, if available. If a catering

menu was not available for a specific vendor, the entire vendor menu was treated as the catering menu.

Creating the Healthfulness Grading Scale

To assess the healthfulness of catering menu options, an objective system of grading was required. The evidence-based Dietary Guidelines for Americans (DGA) clearly identify the foods that form the foundation of a health promoting diet – whole vegetables, fruits, lean meats, whole grains, legumes, nuts and seeds. The DGA also highlights foods and food components that should be reduced or limited – red and processed meats, refined carbohydrates, saturated and trans fats, sodium, and added sugar. (DGA, 2015). This objective, evidence-based information was used as the foundation for a letter grading framework to score menu items.

The original protocol to determine letter grades included multiple steps: (i) begin with the premise that the grade for each item is an 'A' (ii) add or deduct letter grades based on the total count of DGA recommendations violated or met, and (iii) employ a cut-off system where the highest attainable grade is an 'A' and the lowest is an 'F'.

Grading of each menu item strictly according to the original protocol was not always possible, as many menu items either did not include enough information about ingredients to allow a reasonable assessment, or an unhealthful ingredient formed the bulk of a dish. The protocol was adjusted to account for these cases. For example, when a menu item contained only one or two ingredients (e.g. sweet tea), the grading became 'all or nothing' and the menu item received either an 'A' or an 'F'. On the other hand, if a menu item contained three to four ingredients it was assessed according to the original protocol, with expert insight from the research team applied to address unusually skewed grades. In the case where an unhealthful ingredient made up the majority of a menu item (e.g. standard pancakes), the item was graded

according to the original protocol but with the premise that the grade for these menu items was an 'F' instead of an 'A'.

Table 13 illustrates how each DGA recommendation was interpreted and applied to menu grading.

Table 13: Linking Dietary Guidelines for Americans recommendations to letter grade determinations

DGA Recommendation	Interpretation for Menu Grading	Letter Grade Determination
Consume lean meats	Lean, white meats present	Plus 1 letter grade
Limit red or processed meat	Red or processed meat present	Minus 1 letter grade
Consume whole grains and legumes	Whole grains, legumes, or whole wheat items present	Plus 1 letter grade
Limit refined carbohydrates	Refined carbohydrates present	Minus 1 letter grade
Consume nuts and seeds	Nuts or seeds present	Plus 1 letter grade
Limit saturated/trans fats	High saturated fat ingredient used	Minus 1 letter grade
	Menu entrée fried	Minus 1 letter grade
Limit added sugar	Added sugar ingredient used	Minus 1 letter grade
Consume fruits and vegetables	Vegetable as garnish or less than one serving equivalent present	Minus 1 letter grade
	Two or more vegetables or at least one serving equivalent present	Plus 1 letter grade

Although sodium is included in the DGA, it was excluded from the grading system because it was impossible to determine the sodium content of a menu item without access to the recipe. Additionally, in order to accommodate for certain menu items utilizing a fruit or a vegetable as a garnish or in amounts that equal less than one serving (e.g. a lettuce leaf, slice of tomato, and slice of onion on burgers) at least two vegetables or the reasonable equivalent of one serving had to be present in the menu item to gain a letter grade.

Development of a Logic Tree for Assigning Grades

To operationalize this grading framework, Qualtrics (Qualtrics, Provo, UT, Version 052019) was used to build a logic tree. Qualtrics' Skip Logic function allowed for the usage of unique lines of questioning to assess the wide variety of menu items represented across the 33

vendor menus. The operationalization of the grading protocol was designed to be an objective method of assessment that could be equally applied to each menu item and produce consistent grading results.

Using the typical food headings/groupings of vendor menus as a guide, the logic tree was built to first determine in which section each menu item was found (e.g. breakfast, appetizer, entrée, dessert, beverage). Once this was determined, a second question further defined the menu item (e.g. What kind of beverage is it?). Once the menu item was defined, yes/no questions inquired about ingredients related to the DGA recommendations from Table 1. For example, if a menu item was defined as a smoothie/shake, a question would ask, “Does the smoothie/shake include any of the following: ice cream, added sugar (e.g. agave, honey, juice), or half and half/heavy cream?”. If yes, a follow up question asked which of the listed ingredient(s) were included. For example, “Which of the following ingredients are included in the smoothie/shake? Please select all that apply.” At this point, as more than one answer is possible, skip logic was coupled with duplication of the follow-up question in order to create unique logic branches. Each follow-up question was duplicated according to the number of possible answers that existed for the previous question. Then skip logic was applied to make sure that each possible answer tracked to its own unique copy of the follow-up question. Each logic branch was maintained via this method of question duplication coupled with skip logic. The end point of each logic branch was a unique letter grade. A visual example of this method is shown in Figure 5.

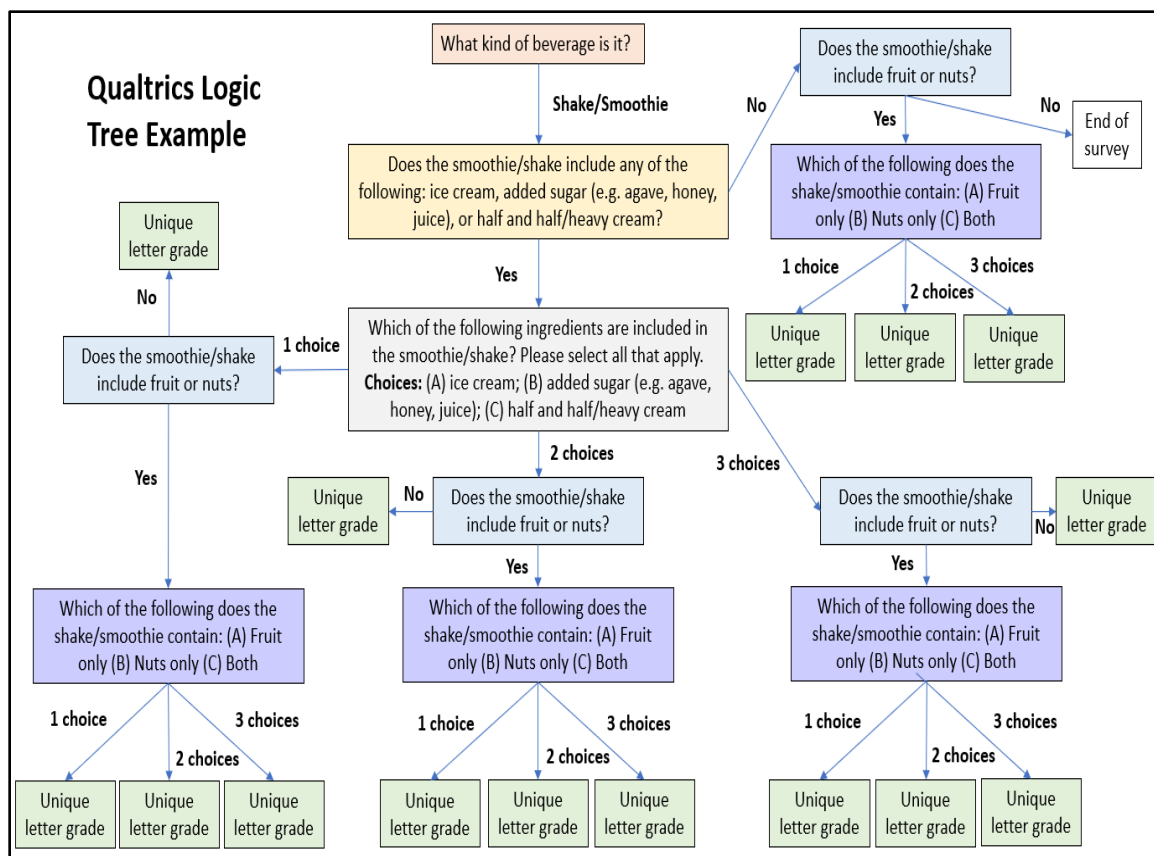


Figure 5: Scoring a smoothie: Qualtrics logic tree example.

Supplemental Resource Menu Part 2: Assembling the Healthful Ordering Menu 3000

Justification for Use of Microsoft Excel

The factors considered to make the Healthful Ordering Menu 3000 (HOM 3000) user-friendly for the target audience were informed by (i) focus group input (ii) the predominant software used by the university, and (iii) necessity to make a large document easily navigable and accessible across multiple platforms and devices.

Focus group participants agreed that a document that could be filtered would be an ideal menu design. With this in mind, the research team decided that Microsoft Excel, as part of the university-wide subscription to Office 365, was uniquely equipped for this task due to its ability to sort and filter spreadsheets based on personalized column titles. Further, Excel is also

able to produce custom filters that make it possible to search for a cell of interest based on specific criteria. Finally, because Office 365 is compatible across Windows and Mac computers as well as mobile devices, creating the HOM 3000 with Microsoft Excel was determined to be the best option.

HOM 3000 Design Features and Contents

Menu design features and menu contents were derived from the first round of focus group input as described in Education Video Module Part 1: Focus Groups. Preferred design features shared by participants included: (i) grouping/filtering (ii) an integrated platform for feedback and review and (iii) pictures of menu items. Preferred menu content included (i) extensive vendor options, including vendors not on the approved vendors list (ii) allergen information (iii) symbols denoting dietary restrictions (e.g. vegan, vegetarian, gluten-free) (iv) menu item prices and (v) calorie counts.

Sorting and filtering were included in the menu through use of Microsoft Excel, as detailed in the above section. A platform for feedback and review of the menu was not included due to time constraints. Many catering menus did not include images of the menu items, and great variability in image quality was present in menus that did include pictures. For this reason, pictures were not included in the final HOM 3000. Table 14 lists the specific content included in the final version of the HOM 3000.

Table 14: Contents of the finalized HOM 3000

Final HOM 3000 Contents
Restaurant names
Menu item names
Menu item letter grades
Calories (when available)
Prices
Number served per menu item (when available)
Menu item classification (i.e. breakfast, appetizer, lunch, dinner, side, beverage, dessert)
Dietary restrictions met by individual menu items (i.e. gluten-free, vegan, vegetarian)
Allergens included in individual menu items (i.e. milk, wheat, eggs, tree nuts, fish, shellfish, peanuts, soy)

Menu Organization

As shown in Table 15, the HOM 3000 was organized in four distinct groups in a left to right format, including Basics, Menu Item Classification, Dietary Restrictions, and Allergens. Each group was color-coded for ease of viewing. Table 15 lists the column titles included in each group of the menu and demonstrates the color-coding used.

Table 15: HOM 3000 groups and corresponding Excel column titles

Group 1 Basics	Group 2 Menu Item Classification	Group 3 Dietary Restrictions	Group 4 Allergens
Restaurant Name	Breakfast	Vegan	Dairy
Menu Item Name	Appetizer	Vegetarian	Wheat
Menu Item Letter Grade	Lunch	Gluten-free	Egg
Calories	Dinner		Tree Nuts
Price	Side		Fish
Servings	Beverage		Shellfish
	Snack		Peanuts
	Dessert		Soy

An X was used as needed in groups 2, 3, and 4 to denote a menu item's classification, which dietary restriction(s) it meets, and which allergens it includes.

Development of Module Evaluation and Final Distribution

Module Assessment Surveys

A pre- and post- test model was used to assess the effectiveness of each video in addressing its individual change objectives. Each pair of assessments contained identical questions that were based directly on the video's change objectives. Knowledge-specific questions were asked using a multiple choice or "select all that apply" format, while attitude/belief-related questions were framed using a 5-point Likert scale model ranging from Strongly Disagree to Strongly Agree. All knowledge questions were asked in succession, as were all Likert scale questions. Additional Likert scale questions were added to each post-assessment to gather additional descriptive data from participants regarding their impressions of the usefulness of the videos and module as a whole and how it could be improved in future iterations. All assessments were created using Qualtrics.

Module Distribution

Finalized videos were uploaded to the lead researcher's personal YouTube channel and listed as "private" in order to generate unique URLs that could only be used by study participants and easily accessed anywhere, on any device. These links can be found in Appendix E. Unique Qualtrics URLs were also generated for each assessment. A PDF training guide was created, which lead the participants through the entire module, with each set of URLs organized in the following fashion: (i) pre-assessment (ii) video (iii) post-assessment. The training guide can be found in Appendix D.

The module was announced via a teaser e-mail sent via Outlook mail merge one week before launching the module. The teaser e-mail can be found in Appendix C and included a brief update on research progress, the need for study participants, date of the launch, and incentives for participation. The official launch was executed using the free trial version of MapiLab's

(https://www.mapilab.com/outlook/mail_merge/) Outlook Add-In named “Mail Merge Toolkit”.

The expanded toolkit allows for attachment files to be included in a mail merge. The launch e-mail included reiteration of incentives as well as language that participation was voluntary and could be revoked at any time. The message included the PDF training guide and the Healthful Ordering Menu 3000 Excel file as attachments. The launch e-mail was sent to the Excel list of 704 contacts mentioned previously.

Data Cleaning and Statistical Analysis

Raw data from each of the 13 Qualtrics surveys (demographic survey + six pairs of pre- and post-assessments) were exported to Microsoft Excel and then merged into a single Excel sheet. Next, the lead researcher created a codebook to guide the coding of the raw data, which can be found in Appendix F. Each knowledge-based question was coded as either “1” for correct or “0” for incorrect. The 5-point Likert scale questions were scored with “1” indicating “Strongly Disagree” and “5” indicating “Strongly Agree”. Each question column was duplicated so that one column included the raw data and one column included the coded version of that same data. The lead researcher independently coded all 13 surveys and then sent the document and codebook to another research team member for review. Once both researchers had reviewed and confirmed that all data were accurately coded, participants who did not complete all 13 surveys were removed from the dataset. Initially, 124 participants started the training but 78 were removed because they did not finish. Overall, 46 participants completed the entire training module.

Next, all descriptive data (e.g. the demographic data) as well as questions which did not appear in both pre- and post- assessments for each video were removed from the pre- and post-comparison. This produced a data set with 6 pairs of identical pre- and post- assessments. Each pair of assessments contained knowledge-based questions and Likert scale questions about

attitudes and beliefs. To analyze these data, average scores for each type of question were calculated. For example, if a survey contained five Likert-scale questions, the coded scores for all five questions were added together and then divided by five to produce an average score. The same was done for the knowledge-based questions. This method produced before and after average scores for knowledge-based questions and Likert-scale questions for each video.

Next, all individual question columns were removed from the dataset so that only the average scores remained. The cleaned dataset included 24 columns for each participant, with 4 columns per video, reflecting pre- and post- knowledge and Likert scores.

The dataset was then imported into SPSS. Paired-sample t-tests were conducted to compare knowledge and degree of agreement with statements regarding attitudes and beliefs toward each video's primary topic on healthful ordering before and after watching each training video.

IV. RESULTS

A summary of participant demographics can be found in Table 16.

Table 16: Summary of key demographics ($n=46$)

Gender	Percent	Age	Range	Race	Percent	Education	Percent
Female	84.8%	Range	28 - 68	White	67.4%	Bachelor's degree	41.3%
Male	13%			Hispanic	26.1%	Graduate degree	26.1%
Prefer not to reply	2.2%			Black	2.2%	Some college	28.3%
				Prefer not to reply	4.3%	High school graduate	4.3%

Knowledge

Among administrative assistants who completed the training module, there was a significant difference in knowledge scores before watching the first video ($M = .439$, $SD = .1612$) and after watching the first video ($M = .852$, $SD = .1859$); $t(45) = -12.253$, $p < .001$ (See Table 17). There were also significant differences in knowledge scores before ($M = .763$, $SD = .097$) and after the second video ($M = .928$, $SD = .073$); $t(45) = -8.941$, $p < .001$, before ($M = .692$, $SD = .129$) and after the fourth video ($M = .798$, $SD = .121$); $t(45) = -5.472$, $p < .001$, and before ($M = .841$, $SD = .118$) and after the fifth video ($M = .970$, $SD = .055$); $t(45) = -7.231$, $p < .001$. No significant difference was found in the knowledge scores before the third video ($M = .784$, $SD = .141$) and after the third video ($M = .802$, $SD = .124$); $t(45) = -1.098$, $p = .278$.

Table 17: Knowledge scores before and after watching videos ($n=46$)

	Before		After		Before - After		Paired-samples t- test	
Video	Mean	SD	Mean	SD	Mean	95% CI	t	p
1	.439	.1612	.852	.1859	-0.413	[-0.481, -0.345]	-12.253	.000
2	.763	.097	.928	.073	-0.166	[-0.203, -0.128]	-8.941	.000
3	.784	.141	.802	.124	-0.018	[-0.051, 0.015]	-1.098	.278
4	.692	.129	.798	.121	-0.106	[-0.145, -0.067]	-5.472	.000
5	.841	.118	.970	.055	-0.128	[-0.164, -0.093]	-7.231	.000

Attitudes

Among administrative assistants who completed the training module, there was a significant difference in attitude toward healthful ordering before watching the first video ($M = 3.962$, $SD = .544$) and after watching the first video ($M = 4.314$, $SD = .626$); $t(45) = -4.419$, $p < .001$ (See Table 18). There were also significant differences in attitude before ($M = 4.043$, $SD = .708$) and after the second video ($M = 4.552$, $SD = .687$); $t(45) = -3.825$, $p < .001$, before ($M = 4.048$, $SD = .666$) and after the third video ($M = 4.478$, $SD = .686$); $t(45) = -6.348$, $p < .001$, before ($M = 4.022$, $SD = .721$) and after the fourth video ($M = 4.647$, $SD = .379$); $t(45) = -7.660$, $p < .001$, before ($M = 3.967$, $SD = .479$) and after the fifth video ($M = 4.755$, $SD = .306$); $t(45) = -10.969$, $p < .001$, and before ($M = 4.444$, $SD = .342$) and after the sixth video ($M = 4.570$, $SD = .338$); $t(45) = -3.067$, $p < .005$.

Table 18: Likert agreement scores before and after watching the videos ($n=46$)

Video	Before		After		Before - After		Paired-samples t-test	
	Mean	SD	Mean	SD	Mean	95% CI	t	P
1	3.962	.544	4.314	.626	-0.352	[-0.512, -0.191]	-4.419	.000
2	4.043	.708	4.552	.687	-0.509	[-0.777, -0.241]	-3.825	.000
3	4.048	.666	4.478	.686	-0.430	[-0.567, -0.294]	-6.348	.000
4	4.022	.721	4.647	.379	-0.625	[-0.789, -0.461]	-7.660	.000
5	3.967	.479	4.755	.306	-0.788	[-0.933, -0.643]	-10.969	.000
6	4.444	.342	4.570	.338	-0.126	[-0.208, -0.043]	-3.067	.004

Specific assessment questions asked are too numerous to list, but notable examples include the following: after viewing the first training video, which details the relationship between the food environment at work and the health of the workforce, participants' agreement with statements such as the following increased:

- Having more healthful foods at meetings and events will improve productivity in my workplace.

- Being offered healthy foods and beverages at work is important in maintaining the health of employees.
- I am interested in gaining knowledge about nutrition that I can apply to my food ordering.

After watching the third video, which addresses specific nutritional differences between whole and processed foods (i.e. processed foods usually have more sodium and sugar and less fiber), participants more accurately identified which nutrients were more likely to be found in high or low amounts given specific food examples. This type of nutrition knowledge can directly translate to food ordering as most menus do not include nutrition information but instead provide lists of ingredients included in a dish.

V. DISCUSSION

This research is the first of its kind to address the catered food environment of a large university institution and contributes a significant entry to the literature to begin filling this gap. This study targeted the nutrition knowledge and the attitudes/beliefs toward a healthful food environment at work of those in charge of ordering foods for catered events and meetings for faculty and staff while also providing resources to facilitate healthful food ordering. Individual health behavior change was not the focus of this study. Instead, the behavioral targets were (i) the ability and (ii) the willingness of individuals who order food for the university to order more healthful items for meetings and events. These unique behavioral targets, if effectively changed, may benefit not only the individual making choices, but also employees across campus.

Personnel who order food are a unique population because they represent an overt point of influence in the context of foods provided at mandatory events and meetings. Their influence can best be understood through the lens of the SEM (see Figure 1).^{6,7} Indeed, the nutrition knowledge and attitudes/beliefs toward nutrition and health of each individual within this population affects their food ordering choices; however, these individuals are not the only ones who experience the consequences of their choices when attendance at meetings or events is mandatory. In this unique context, the personal choices of personnel who are in charge of ordering food actually substitute for the personal choices of those in attendance, stripping attendees of their food selection autonomy. This example highlights how the individual level of the SEM can directly influence the organizational level.

This study was fortunate enough to be based on a well-executed needs assessment conducted by Menge et al.³⁴, positioning this project to continue applying Intervention Mapping as a guiding framework, which facilitated filling important gaps in the literature.^{34,51} A systematic and comprehensive approach to intervention design is often lacking in studies that address food

environments, which often make single point changes in the availability of foods (e.g. vending machines, cafeteria offerings)^{23,32,33}. These interventions tend not to affect behavior in the long term and indeed may not be addressing the real problems. Application of IM throughout this study ensured that a main barrier (i.e. personal views about nutrition³⁴) was being directly addressed.

Based on our findings, video education seems to be a very promising methodology for affecting change. Many studies support this assertion and have shown efficacy³⁶⁻⁴³ but systematic reviews suggest instead that the literature is discordant, possibly due in part to the lack of consistency among studies.³⁵ Consideration of the factors that contribute to these mixed results is warranted. It is worth noting that studies comparing video education to other mediums such as text usually have a theory or two informing their video content but lack a methodological or evidence-based framework for consistent and comprehensive video design.³⁶⁻⁴³ Repeated lack of methodological approach to video design across studies makes it difficult to improve the design of future interventions and may hinder the potential of video as a robust educational tool. Our study is unique in that the IM framework was applied to each element of the training video design process. As might be expected, the application of IM did make the entire process of video creation longer and more complex. Beyond the extensive research required just to develop audience-relevant curriculum and content, additional research was required to identify and apply video design guidelines that could enhance the intrinsic quality of each video in such a way as to give off an air of quasi-professionality.⁵⁰ Extensive consideration had to be given to elements beyond content, including overarching narrative, character design, auditory quality and vocal tone, casting, visual appeal and harmony with each script, and much more. Expertise had to be built with both the chosen animation and sound-editing softwares. The process of evidence-based video design is not simple, time sparing, or easy, but it is absolutely necessary to

allow for reproducible methods that can inform future studies and give video-based nutrition education the best chance at being effective. Indeed, the results of using of Intervention Mapping in this study proved to be well worth the effort. This intervention was highly effective at accomplishing its goals of improving nutrition knowledge and attitudes/beliefs toward a more healthful food environment at work.

This study includes limitations and strengths. One limitation is that the sample size was small. Another limitation is that the subjects were self-selected. In this case, self-selection may have led to a sample representing those who already had a vested interest in nutrition and health. Such a small, self-selected sample is not generalizable across the university. However, the results of this study suggest that even if this is the case, a vested interest in health does not necessarily guarantee nutrition knowledge or agreeable attitudes and beliefs toward a more healthful food environment.

Strengths of this study include use of IM evidence-based guidelines to develop high quality videos and the use of focus groups to make informed and relevant choices for intervention content. Another strength was the use of a strong theoretical foundation which included the SEM and other behavior change theories.

Future research may involve university-wide adoption and implementation of the training module developed for this research project, making it mandatory training for all personnel who receive approval to use university credit cards. Repeating Menge et al's receipt analysis approach would be an objective measure of the efficacy of this training.

Other arms of research could involve upkeep, refinement, and improvement of the healthful ordering tool, potentially developing a standardized protocol that could allow other institutions to create similar tools for their workplaces. Ventures in this area could likely be undertaken through the Texas State employee wellness program as an established institution with university

support or as part of the nutrition curriculum within the School of Family and Consumer Sciences.

APPENDIX SECTION

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APPENDIX A: FOCUS GROUP INVITATION E-MAILS

Focus Group Round One Invitation

Improving Healthfulness of Catered Events for Employees at a University (Part 2 of a research project at Texas State)

<<<This email message is an approved request for participation in research that has been approved by the Texas State Institutional Review Board (IRB #5316).>>>

«GreetingLine»

You may have heard from us before! Last year, in Part 1 of our study (Lindsey Rambo's thesis project), we invited those who order food for campus events for employees to:

- participate in focus groups about ordering food; and/or
- take a survey about influences on ordering food.

If you participated in anyway, we thank you deeply, because without your help, this research could not continue.

Our research has successfully reached its next stage (Part 2), and we again ask for your assistance.

1. If you are limited on time but can spare 5-10 minutes, please complete the following very short survey: [Vendors Used for Ordering](#)
2. If you have more time, will you complete the survey **AND** also participate in a brainstorming focus group to help us design an educational module that can help improve foods offered on campus? If so, please respond to this email with **YES** and indicate your preferred time (see below).

In the focus groups, we will talk about:

1. What nutrition-related information should be included in an educational module.
2. How this information can be most effectively presented (e.g. written, video, voice-over PPT, etc.).
3. What could help improve this module (e.g. quick reference nutrition knowledge guides, consolidated list of healthy vendor options, etc.).

To compensate you for your time if you join a focus group, you will receive a WellCats t-shirt as well as a home-made lunch during the focus group, which will include:

- Quinoa, Garbanzo, and Spinach Salad with Smoked Paprika Dressing
- Chipotle Portobello Oven Fajitas
- Savory Roasted Vegetables
- Strawberries n' Cream Chia Pudding
- Skewered Fruit

The focus groups will be held at the following times in Family and Consumer Sciences (FCS) 285:

- ❖ Tuesday, July 10th - 12PM – 1PM
- ❖ Thursday, July 12th – 12PM – 1PM
- ❖ Monday, July 16th – 12PM – 1PM
- ❖ Tuesday, July 17th – 12PM – 1PM

If you would like to participate, please reply **YES** to this e-mail with your preferred focus group date. Thank you in advance!

To participate in this research or ask questions about this research please contact us at the following:

J.R. Oliver, Graduate Assistant

Dr. Sylvia Crixell, RD, Nutrition Professor |
Interim Director School of FCS

Phone: 210-286-6532

Phone: 512-245-2155

Email: jro41@txstate.edu

Email: scrixell@txstate.edu

This project 2018597 was approved by the Texas State IRB on June 5, 2018.

Pertinent questions or concerns about the research, research participants' rights, and/or research- related injuries to participants should be directed to the IRB chair, Dr. Denise Gobert 512- 245-8351 – (dgobert@txstate.edu) or to Monica Gonzales, IRB Regulatory Manager 512-245-2334 - mail to: (meg201@txstate.edu).

Sincerely,

Lead Researcher

J.R. Oliver, B.M., B.S.

M.S. Candidate in Human Nutrition

Supervising Professor & Interim Director, School of Family & Consumer Sciences

Sylvia Crixell, PhD, RD

Professor, Nutrition and Foods

Focus Group Round Two Invitation

Improving Healthfulness of Catered Events for Employees at a University (Part 2 of a research project at Texas State)

<<<This email message is an approved request for participation in research that has been approved by the Texas State Institutional Review Board (IRB #5316).>>>

«GreetingLine»

Last year you may have heard from us concerning focus groups to help brain-storm an educational module to help improve foods offered on campus. If you participated in one of those focus groups, thank you very much for your invaluable insights! If you did not get an opportunity to participate in one of the previous focus groups, you have another opportunity coming up! The educational module has been completed and we need beta-testers!

In these focus groups, you will view the educational videos and be asked to provide feedback that will help us improve the quality and effectiveness of the videos before moving forward with the intervention.

In order to compensate you for your time if you participate in a focus group, you will receive a WellCats water bottle and 3-piece silicon utensil set! The focus groups will be held on the following dates and times in Family and Consumer Sciences (FCS) Room 285:

❖ *June dates to be inserted here*

If you would like to participate, please reply **YES** to this e-mail with your preferred focus group date. Thank you in advance!

To participate in this research or ask questions about this research please contact us at the following:

J.R. Oliver, Graduate Assistant

Dr. Sylvia Crixell, RD, Nutrition Professor |
Interim Director School of FCS

Phone: 210-286-6532

Phone: 512-245-2155

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Sincerely,

Lead Researcher

J.R. Oliver, B.M., B.S.
M.S. Candidate in Human Nutrition

Supervising Professor & Interim Director, School of Family & Consumer Sciences

Sylvia Crixell, PhD, RD
Professor, Nutrition and Foods

APPENDIX B: FOCUS GROUP QUESTIONS

Focus Group Round One Questions

Introduction: This focus group aims to support an intervention to improve the nutritional quality of foods offered at catered events on campus. We have learned so much from our previous research, including that there are many barriers to ordering healthy food. Moving forward, we would like help. One way is to create an educational module. Another is to provide menus. We plan to talk about both of these today. Let's start with learning.

Module Delivery (25 minutes)

1. When you want to learn something new, just on your own for fun, how do you go about it?
2. What about the methods you use makes the information memorable?
3. When you have to learn something new for your job, how do you go about it?
4. Do you like anything about TXST training modules?
5. Is there anything you dislike about TXST training modules?
6. How would change them?
7. Would you like a video based module?
 - a. How would you like it to look? How long? Style? (e.g. funny, serious, etc.)

Module Content/Menus (25 minutes)

1. Hypothetically, if improving the nutrition of ordered foods were a mandated task for the Fall, what would you need in order to be successful? (if nutrition, health, or menus do not come up, the below probes will be used.)
 - a. Probe for nutrition knowledge: What would you need to learn about nutrition to order more healthful foods?
 - b. Probe for health: What would you need to learn about nutrition and health in general to support ordering?
2. We're planning on working with vendors to create menus that identify healthy options for catering. How would you like those menus to look?

Focus Group Round Two Questions

Introduction: This focus group aims to test and gather critical feedback on the content and effectiveness of each intervention video. We will first view each video before engaging in a round of verbal feedback followed by written feedback using the guide provided. We ask that you be as thorough and honest as possible in both assessments.

Questions on Video Content (7 minutes)

1. Did you find the content of this video practical?
2. Did you find the content of this video easy to understand?
3. Given the topic of the video, do you feel like any important content was missing?
4. If you could add, remove, or otherwise change any of the content in this video, what would it be and why?

Questions on Video Effectiveness (7 minutes)

1. Did you learn something new through viewing this video?
2. Did the video hold your attention? Why or why not?
3. Did you feel like the video was memorable? Why or why not?
4. What was the most enjoyable aspect of this video?
5. What was the most uninteresting aspect of this video?
6. If you could choose one aspect about this video's presentation to change, what would it be and why?
7. Would you share this video with a friend? Why or why not?

APPENDIX C. THE HEALTHFUL ORDERING KICKSTARTER LAUNCH E-MAILS

Pre-Launch Teaser E-mail

Be Part of Our Research Launch: Improving Healthfulness of Catered Events for Employees at a University

Greetings from the [WellCats](#) Nutrition Research Team!

We are reaching out to you as a person who orders foods and beverages for meetings and events for Texas State employees. *(Note – if you no longer fulfill this role, please let us know and provide the contact for someone who does.)*

The purpose of this email is to tell you about a fun and engaging video-based training on ordering healthful foods for meetings and events.

This training, the [Healthful Ordering Kickstarter](#), will begin **Monday, March 2nd, 2020**.

Be on the lookout for an email invitation from us on that date.

Here is what you can expect if you agree to participate.

- Complete the training: Over the course of the week, watch 6 videos (average length of 7 minutes) and answer questions before and after. The questions beforehand will give you an idea of what to look for in each video.
- Eligibility for Incentives: All participants who complete the training by **Friday, March 6th, 2020** will be entered into a drawing for an Amazon gift card.
- Resources: You will receive (1) a printable PDF summary handout for each video upon training completion, and (2) a powerful Excel-based ordering tool specific to our university that will help you order from approved vendors while taking dietary considerations in mind.

Important note: the videos are ADA-compliant, with optional subtitles.

Please join us on **Monday, March 2nd, 2020** as we roll out this first of its kind training exclusive to Texas State University! The service you provide in ordering is incredibly important and appreciated. Thank you!

Sincerely,

The WellCats Nutrition Research Team

Official Launch E-mail

Join Our Launch Today!

Improving Healthfulness of Catered Events for Employees at a University

Hello again from the [WellCats](#) Nutrition Research Team! You have been invited to complete this training because you order foods and beverages for Texas State events and meetings for employees. (Note – if you no longer fulfill this role, please let us know and provide the contact for someone who does.) As WellCats researchers, we aim to improve the health of employees by increasing healthful foods at meetings and events. To our knowledge, no similar study has ever been done!

This training asks about demographic information (for data analysis), followed by the 6 training modules (pre-questions, video, post-questions).

Attached is a PDF file which **will serve as your guide** through the Healthful Ordering Kickstarter training. Here is what you can expect from this training if you decide to participate:

Training Completion: Watch 6 videos (average length of 7 minutes) and answer questions before and after. The questions beforehand will give you an idea of what to look for in each video. We expect the entire training to only take about one hour to complete.

Incentives: One question in the demographics section will ask for your e-mail address so we can enter your name into a drawing for Amazon gift cards. All participants who complete the training by **Friday, March 6th, 2020** will be eligible for the drawing.

Resources: Attached to this e-mail, you will also find a powerful Excel-based ordering tool specific to our university that will help you order from approved vendors while keeping dietary considerations and food allergies in mind. We kindly ask that you **do not open** it until prompted to do so in the training. Following training completion, you will also receive a follow-up e-mail with printable PDF summaries of each training video.

Confidentiality: Your answers will not be shared with anyone. Instead, all results will be combined so that no individuals will be identified in any publications or statements about the results of this research. The information you provide on this survey will in no way affect your employment with the university.

Voluntary. It is important for you to understand that participation is absolutely voluntary. If you choose not to participate, simply delete this e-mail. Also, you may choose to stop the training at any point.

Please Help Spread the Word: If you know anyone who orders food for events, please feel free to forward this email – we appreciate it!



This 6-part training is facilitated through a series of online surveys and YouTube videos which are ADA compliant with optional subtitles. To begin, simply open and keep available the attached PDF file. Click on the first link under Part 1: Introduction – Pre-Assessment to begin. Once you have completed the pre-assessment, return to the PDF to continue to the video and post-assessment, then to the next part of the training.

This study has been reviewed by Texas State University Institutional Review Board (IRB; 2018597) and is exempt.

If you have any questions about this training/research study, contact Dr. Sylvia Crixell (Nutrition professor) at sh07@txstate.edu, 512-789-6695.

You are also invited to contact Monica Gonzalez, IRB Regulatory Manager, Research Integrity and Compliance at meg201@txstate.edu, 512-245-2314.

APPENDIX D. THE HEALTHFUL ORDERING KICKSTARTER TRAINING MODULE PDF



TEXAS STATE
UNIVERSITY
The rising STAR of Texas

The Healthful Ordering Kickstarter Training Module

Before Beginning:

Demographic Information Survey: [Click Here](#)

Part 1: Introduction

Pre-Assessment: [Click Here](#)
Video: [Introduction](#)
Post-Assessment: [Click Here](#)

Part 2: The Whole Food Difference

Pre-Assessment: [Click Here](#)
Video: [The Whole Food Difference](#)
Post-Assessment: [Click Here](#)

Part 3: Processing Key Nutrients

Pre-Assessment: [Click Here](#)
Video: [Processing Key Nutrients](#)
Post-Assessment: [Click Here](#)

Part 4: Dietary Restrictions

Pre-Assessment: [Click Here](#)
Video: [Dietary Restrictions](#)
Post-Assessment: [Click Here](#)


Part 5: Allergens

Pre-Assessment: [Click Here](#)
Video: [Allergens](#)
Post-Assessment: [Click Here](#)

Part 6: The Healthful Ordering Menu 3000



Pre-Assessment: [Click Here](#)
Video (Windows Users): [The Healthful Ordering Menu 3000 - Windows](#)
Video (Mac Users): [The Healthful Ordering Menu 3000 - Mac](#)
Post-Assessment: [Click Here](#)

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WELLCATS
Live. Work. Be Well.

Dr. Sylvia Crisall
Supervising Professor
scrisall@txstata.edu



APPENDIX E: THE HEALTHFUL ORDERING KICKSTARTER YOUTUBE LINKS

Video 1: Introduction: <https://www.youtube.com/watch?v=QC5u4yClc5E>

Video 2: The Whole Food Difference: <https://www.youtube.com/watch?v=hTuXg3iWZvg>

Video 3: Processing Key Nutrients: <https://www.youtube.com/watch?v=d7J8q9KTjuM>

Video 4: Dietary Restrictions: <https://www.youtube.com/watch?v=cesHi-POci8>

Video 5: Allergens: <https://www.youtube.com/watch?v=Jw7NPwwkbuc>

Video 6 (Windows): The Healthful Ordering Menu 3000:

<https://www.youtube.com/watch?v=NWQciTAeySQ>

Video 6 (Mac): The Healthful Ordering Menu 3000:

<https://www.youtube.com/watch?v=1bleemZensM>

Healthful Ordering Kickstarter Codebook

Demographics Survey

ID Numbers:

ID numbers anonymize the participant and keep all information for a single participant in the same row.

ID numbers will consist of three number places counting up from 001.

Ex. 001, 002, 003, etc.

Unique Codes:

999 = no answer

888 = question skipped based on survey logic

777 = nonsense answer / corrupted data

Question 1: What is your Department/University unit?

Code: Department

Logic: The most specific office/school answer was chosen (Ex. Office of the President / Office of Equity and Inclusion → Office of Equity and Inclusion)

1 = Office of the Vice President for University Advancement

2 = Accounting

3 = Housing and Residential Life

4 = Curriculum & Instruction

5 = Academic Affairs

6 = School of Family and Consumer Sciences

7 = University Library

8 = School of Criminal Justice

9 = International Student and Scholar Services

10 = Transportation

11 = Retention Management and Planning

12 = Information Technology

13 = Department of Philosophy

14 = Student Learning Assistance Center

15 = Office of Equity and Inclusion

16 = Mathworks

17 = The Graduate College

18 = Respiratory Care

19 = College of Liberal Arts

20 = Parking Services

21 = History

22 = Center for International Studies

23 = Auxiliary Services

24 = Biology

25 = Anthropology
26 = Center for P-16 Initiatives
27 = Upward Bound
28 = Campus Recreation
29 = Geography
30 = Student Diversity and Inclusion
31 = School of Music
32 = Child Development Center
33 = Office of Special Projects
34 = Mathematics
35 = Office of the Vice President for Information Technology
36 = Student Health Center
37 = STAR Park
38 = School of Social Work
39 = Enrollment Management and Marketing
40 = College of Fine Arts and Communication
41 = College of Applied Arts
42 = Athletic Academic Center
43 = World Languages and Literatures
44 = Office of Educator Preparation
45 = University Police Department
46 = Education Abroad
47 = ALERRT
48 = LBJ Student Center
49 = Career Services
50 = The Meadows Center for Water and the Environment
51 = McCoy College of Business
52 = University College
53 = Department of Marketing
54 = College of Education
55 = Athletics
56 = COSE/VPAA
57 = Nursing
58 = Facilities
59 = Institutional Research
60 = Alumni Relations
61 = Aerospace Studies
62 = Physics
63 = Student Business Services
64 = Office of Research and Sponsored Programs
65 = Department of Art and Design
66 = Office of the Vice President for Finance
67 = Finance and Support Services Planning
68 = College of Health Professions
69 = Texas Justice Court Training Center
70 = Political Science
71 = Theater and Dance
72 = Vice President of Student Affairs

73 = Department of Housing and Residential Life
74 = Department of Physical Therapy
75 = Human Resources
76 = Edwards Aquifer Research and Data Center
77 = Curriculum and Instruction
78 = The University Star
79 = College of Science and Engineering

Question 2: How did you hear about this training? Please select all that apply.

Code: HeardFromCoWorker

1 = Yes
2 = No

Code: HeardFromMyDean

1 = Yes
2 = No

Code: HeardFromMyDepartmentDirector/Chair

1 = Yes
2 = No

Code: HeardFromDirectEmailInvite

1 = Yes
2 = No

Code: HeardFromLindseyFocusGroup

1 = Yes
2 = No

Code: HeardFromLindseySurvey

1 = Yes
2 = No

Code: HeardFromJRFocusGroup

1 = Yes
2 = No

Code: HeardFromOther

1 = Yes
2 = No

Question 3: E-mail Address

Code: DEMONetID

Question 4: How long have you been employed at Texas State?

Code: EmploymentLength

1 = Less than 1 year
2 = 1-5 years

- 3 = 6-10 years
- 4 = 10+ years

Question 5: How long have you been responsible for ordering food for events and meetings?

Code: TimeResponsibleForOrdering

- 1 = Less than 1 year
- 2 = 1-5 years
- 3 = 6-10 years
- 4 = 10+ years

Question 6: How often do you order food for Texas State events and meetings?

Code: OrderFrequency

- 1 = Less than once a month
- 2 = Once a month
- 3 = Twice a month
- 4 = Once a week or more

Question 7: How many food orders do you typically place each month?

Code: OrdersPerMonth

- 1 = Less than 5
- 2 = 6-10
- 3 = 11-20
- 4 = More than 20

Question 8: How many food orders do you typically place each semester?

Code: OrdersPerSemester

- 1 = Less than 5
- 2 = 6-10
- 3 = 11-20
- 4 = More than 20

Question 9: What groups of individuals do you typically order for? (Check all that apply)

Code: OrderForStudents

- 1 = Yes
- 2 = No

Code: OrderForStaff

- 1 = Yes
- 2 = No

Code: OrderForFaculty

- 1 = Yes
- 2 = No

Code: OrderForExtrinsicIndividuals

- 1 = Yes
- 2 = No

Code: OrderForOther

1 = Yes

2 = No

Question 10: Select group sizes that you commonly order for. Select all that apply.

Code: GroupSizeLessThan10

1 = Yes

2 = No

Code: GroupSize10to25

1 = Yes

2 = No

Code: GroupSize26to50

1 = Yes

2 = No

Code: GroupSize51to75

1 = Yes

2 = No

Code: GroupSize76to100

1 = Yes

2 = No

Code: GroupSizeMoreThan100

1 = Yes

2 = No

Question 11: Which meal/snack type do you order the most?

Code: MealTypeMostOrdered

1 = Breakfast

2 = Lunch

3 = Dinner

4 = Snacks

5 = No one particular meal/snack type

Question 12: Please select your gender.

Code: Gender

1 = Male

2 = Female

3 = Gender non-conforming

4 = Prefer not to reply

Question 13: Are you of Hispanic/Latino/Spanish origin?

Code: RaceHispanic

1 = Yes

2 = No

3 = Prefer not to reply

Question 14: How would best describe yourself?

Code: RaceNonHispanic

- 1 = American Indian or Alaska Native
- 2 = Asian
- 3 = Black or African Americans
- 4 = Native Hawaiian or Other Pacific Islander
- 5 = White

Question 15: What is your age (in years)

Code: Age

- 1 = Less than 25

Question 16: What is the highest level of education have you attained, to date?

Code: Education

- 1 = High school graduate
- 2 = Some college
- 3 = Bachelor's degree
- 4 = Graduate degree

Question 17: Are you a current member of WellCats?

Code: WCMembershipStatus

- 1 = Yes
- 2 = No
- 3 = No, but plan to be
- 4 = No, and don't plan to be
- 5 = I have never heard of WellCats

Question 18: Have long have you participated in WellCats?

Code: WCLengthOfParticipation

- 1 = This is my first year
- 2 = One year
- 3 = More than one year

Question 19: As a member of WellCats, why did you join? (check all that apply)

19A To enhance my nutrition knowledge

Code: WReasonNutrition

- 1 = Yes
- 2 = No

19B To jump start my health goals

Code: WReasonHealthGoals

- 1 = Yes
- 2 = No

19C To take advantage of WellCats exercise classes

Code: WReasonExerciseClasses

1 = Yes

2 = No

19D Because I had coworkers encouraging me

Code: WReasonCoworkers

1 = Yes

2 = No

19E Other (please specify)

Code: WReasonOther

1 = Yes

2 = No

Question 20 = Which programs offered through WellCats have you participated in? (Check all that apply)

20A Cooking classes

Code: WCParticipationCooking

20B Exercise classes

Code: WCParticipationExercise

20C WellCats Educational Series (formerly Lunch and Learn) presentations

Code: WCParticipationEducation

20D Nutrition consultations

Code: WCParticipationConsultations

20E None of these

Code: WCParticipationNone

Question 21: Before we get started, please rank the degree to which you find the following to be challenging when you order:

21A Pleasing coworkers

Code: OrderChallengesPleasingCoworkers

1 = Not challenging

2 = Somewhat challenging

3 = Very challenging

21B Pleasing supervisors

Code: OrderChallengesPleasingSupervisors

1 = Not challenging

2 = Somewhat challenging

3 = Very challenging

21C Limited vendor choices

Code: OrderChallengesVendorChoices

1 = Not challenging

2 = Somewhat challenging

3 = Very challenging

21D Dealing with allergies

Code: OrderChallengesAllergies

1 = Not challenging

2 = Somewhat challenging

3 = Very challenging

21E Dealing with dietary restrictions

Code: OrderChallengesDietaryRestrictions

1 = Not challenging

2 = Somewhat challenging

3 = Very challenging

21F Dealing with food preferences

Code: OrderChallengesFoodPreferences

1 = Not challenging

2 = Somewhat challenging

3 = Very challenging

Question 22: Do any other big issues about ordering come to mind? Please describe.

Code: OtherBigIssues

Video 1 Pre-Assessment

IP Address:

Code: V1PREIPAddress

Question 1: Please enter your NetID

Code: V1PRENetID

Question 2: What does presenteeism mean?

Code: V1PREWhatIsPresenteeism

A = Being physically and mentally present at work

B = Not being physically or mentally present at work

C = Being physically present but not mentally present at work

D = Not being physically present but being mentally present at work

1 = Correct

0 = Incorrect

Question 3: What does absenteeism mean?

Code: V1PREWhatIsAbsenteeism

A = Being physically present at work

B = Being mentally present at work

C = Not being physically present at work

D = Not being mentally present at work

1 = Correct

0 = Incorrect

Question 4: How many events at Texas State offer sugar sweetened beverages (e.g. sodas, sweet tea, juice)?

Code: V1PREEventsOfferingSSBs

A = $\frac{1}{4}$

B = $\frac{1}{3}$

C = $\frac{1}{2}$

D = $\frac{2}{3}$

1 = Correct

0 = Incorrect

Question 5: How many events offer desserts at Texas State?

Code: V1PREEventsOfferingDesserts

A = $\frac{1}{4}$

B = $\frac{1}{3}$

C = $\frac{1}{2}$

D = $\frac{2}{3}$

1 = Correct

0 = Incorrect

Question 6: How many events offer unhealthful side items like chips?

Code: V1PREEventsOfferingSideItems

A = $\frac{1}{4}$

B = $\frac{1}{3}$

C = $\frac{1}{2}$

D = $\frac{2}{3}$

1 = Correct

0 = Incorrect

Question 7: Absenteeism is defined as not being physically present at work, or missing days of work. Knowing this, how would you rate the following statement?

Having more healthful foods at meetings and events will decrease absenteeism in my workplace.

Code: V1PREHealthfulFoodWillDecreaseAbsenteeism

5 = Strongly agree

4 = Somewhat agree

3 = Neither agree nor disagree

2 = Somewhat disagree

1 = Strongly disagree

Question 8: Presenteeism is defined as being physically present at work but not fully mentally present. Knowing this, how would you rate the following statement?

Having more healthful foods at meetings and events will decrease presenteeism in my workplace.

Code: V1PREHealthfulFoodWillDecreasePresenteeism

5 = Strongly agree

4 = Somewhat agree

3 = Neither agree nor disagree

2 = Somewhat disagree

1 = Strongly disagree

Question 9: Having more healthful foods at meetings and events will improve productivity in my workplace.

Code: V1PREHealthfulFoodWillImproveProductivity

5 = Strongly agree

4 = Somewhat agree

3 = Neither agree nor disagree

2 = Somewhat disagree

1 = Strongly disagree

Question 10: Being offered healthy foods and beverages at work is important in maintaining the health of employees.

Code: V1PREHealthfulFoodAtWorkMaintainsHealth

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 11: For those who order foods and beverages for events and meetings, having an accurate understanding of nutrition is important.

Code: V1PRENutritionKnowledgeIsImportantWhenOrdering

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 12: I am interested in gaining knowledge about nutrition that I can apply to my food ordering.

Code: V1PREPersonalDesireToGainKnowledgeForHealthfulOrdering

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 13: If a person who orders food for meetings and events has a desire to select healthful foods, it is more likely that healthful foods will be ordered.

Code: V1PREDesireForHealthfulFoodLeadsToHealthfulFoodOrdered

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 14: My supervisor is supportive of ordering more healthful foods for the office.

Code: V1PRESupervisorSupportsHealthfulOrdering

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 15: My co-workers are supportive of ordering more healthful foods for the office.

Code: V1PRECoWorkersSupportHealthfulOrdering

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 16: I have had the desire to order healthy food for meetings and events.

Code: V1PREPersonalSupportForHealthfulOrdering

5 = Strongly agree

4 = Somewhat agree

3 = Neither agree nor disagree

2 = Somewhat disagree

1 = Strongly disagree

Question 17: My personal taste preferences for food influences the healthfulness of the foods I order.

Code: V1PRETastePreferencesInfluenceFoodsOrdered

5 = Strongly agree

4 = Somewhat agree

3 = Neither agree nor disagree

2 = Somewhat disagree

1 = Strongly disagree

Question 18: My personal views on the healthfulness of foods influences what I order.

Code: V1PREPersonalViewsInfluenceFoodsOrdered

5 = Strongly agree

4 = Somewhat agree

3 = Neither agree nor disagree

2 = Somewhat disagree

1 = Strongly disagree

Question 19: I want to order more healthful food for my workplace.

Code: V1PREPresonalDesireToOrderHealthfulFood

5 = Strongly agree

4 = Somewhat agree

3 = Neither agree nor disagree

2 = Somewhat disagree

1 = Strongly disagree

Question 20: I am confident that I can successfully order healthful food for meetings or events.

Code: V1PREPersonalConfidenceOrderingHealthfulFoods

5 = Strongly agree

4 = Somewhat agree

3 = Neither agree nor disagree

2 = Somewhat disagree

1 = Strongly disagree

Video 1 Post-Assessment

IP Address:

Code: V1POSTIPAddress

Question 1: Please enter your NetID

Code: V1POSTNetID

Question 2: What does presenteeism mean?

Code: V1POSTWhatIsPresenteeism

A = Being physically and mentally present at work

B = Not being physically or mentally present at work

C = Being physically present but not mentally present at work

D = Not being physically present but being mentally present at work

1= Correct

0 = Incorrect

Question 3: What does absenteeism mean?

Code: V1POSTWhatIsAbsenteeism

A = Being physically present at work

B = Being mentally present at work

C = Not being physically present at work

D = Not being mentally present at work

1= Correct

0 = Incorrect

Question 4: How many events at Texas State offer sugar sweetened beverages (e.g. sodas, sweet tea, juice)?

Code: V1POSTEventsOfferingSSBs

A = $\frac{1}{4}$

B = $\frac{1}{3}$

C = $\frac{1}{2}$

D = $\frac{2}{3}$

1= Correct

0 = Incorrect

Question 5: How many events offer desserts at Texas State?

Code: V1POSTEventsOfferingDesserts

A = $\frac{1}{4}$

B = $\frac{1}{3}$

C = $\frac{1}{2}$

D = $\frac{2}{3}$

1= Correct

0 = Incorrect

Question 6: How many events offer unhealthful side items like chips?

Code: V1POSTEventsOfferingSideItems

A = $\frac{1}{4}$

B = $\frac{1}{3}$

C = $\frac{1}{2}$

D = $\frac{2}{3}$

1 = Correct

0 = Incorrect

Question 7: Absenteeism is defined as not being physically present at work, or missing days of work. Knowing this, how would you rate the following statement?

Having more healthful foods at meetings and events will decrease absenteeism in my workplace.

Code: V1POSTHealthfulFoodWillDecreaseAbsenteeism

5 = Strongly agree

4 = Somewhat agree

3 = Neither agree nor disagree

2 = Somewhat disagree

1 = Strongly disagree

Question 8: Presenteeism is defined as being physically present at work but not fully mentally present. Knowing this, how would you rate the following statement?

Having more healthful foods at meetings and events will decrease presenteeism in my workplace.

Code: V1POSTHealthfulFoodWillDecreasePresenteeism

5 = Strongly agree

4 = Somewhat agree

3 = Neither agree nor disagree

2 = Somewhat disagree

1 = Strongly disagree

Question 9: Having more healthful foods at meetings and events will improve productivity in my workplace.

Code: V1POSTHealthfulFoodWillImproveProductivity

5 = Strongly agree

4 = Somewhat agree

3 = Neither agree nor disagree

2 = Somewhat disagree

1 = Strongly disagree

Question 10: Being offered healthy foods and beverages at work is important in maintaining the health of employees.

Code: V1POSTHealthfulFoodAtWorkMaintainsHealth

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 11: For those who order foods and beverages for events and meetings, having an accurate understanding of nutrition is important.

Code: V1POSTNutritionKnowledgeIsImportantWhenOrdering

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 12: I am interested in gaining knowledge about nutrition that I can apply to my food ordering.

Code: V1POSTPersonalDesireToGainKnowledgeForHealthfulOrdering

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 1 = Somewhat disagree
- ` = Strongly disagree

Question 13: If a person who orders food for meetings and events has a desire to select healthful foods, it is more likely that healthful foods will be ordered.

Code: V1POSTDesireForHealthfulFoodLeadsToHealthfulFoodOrdered

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 14: My personal taste preferences for food influences the healthfulness of the foods I order.

Code: V1POSTTastePreferencesInfluenceFoodsOrdered

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 15: My personal views on the healthfulness of foods influences what I order.

Code: V1POSTPersonalViewsInfluenceFoodsOrdered

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree

- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 16: I want to order more healthful food for my workplace.

Code: V1POSTPresonalDesireToOrderHealthfulFood

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 17: I am confident that I can successfully order healthful food for meetings or events.

Code: V1POSTPersonalConfidenceOrderingHealthfulFoods

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 18: Ordering more healthful food will affect health and work performance outcomes (i.e. increase productivity, reduced absenteeism/presenteeism)

Code: V1POSTHealthfulFoodWillAffectHealthAndWorkOutcomes

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 19: The information provided in this video was useful to me, personally.

Code: V1POSTVideoInfoPersonallyUseful

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 20: I think the information provided in this video will be useful to others.

Code: V1POSTVideoInfoUsefulToOthers

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 21: I plan to use the information provided in this video when ordering in the future.

Code: V1POSTWillPersonallyUseVideoInfoWhenOrdering

- 5 = Strongly agree
- 4 = Somewhat agree

3 = Neither agree nor disagree
2 = Somewhat disagree
1 = Strongly disagree

Video 2 Pre-Assessment

Question 1: Please enter your NetID

Code: V2PRENetID

Question 2: Which of the following foods would generate the greatest feelings of satiety (i.e. physical fullness)?

Code: V2PREIdentifyGreatestSatiety

A = One bag of chips

B = One cup of juice

C = One cup of rice

D = One medium cookie

1= Correct

0 = Incorrect

Question 3: The defining characteristics of processed foods include all of the following except:

Code: V2PREIdentifyProcessedFoodCharacteristics

A = More shelf stable

B = More nutrients

C = More palatable

D = Less filling

1= Correct

0 = Incorrect

Question 4: Identify the following foods as either whole or processed.

Code: V2PREApples

A = Whole

B = Processed

1= Correct

0 = Incorrect

Code: V2PREWhiteBread

A = Whole

B = Processed

1= Correct

0 = Incorrect

Code: V2PREWholeWheatPasta

A = Whole

B = Processed

1= Correct

0 = Incorrect

Code: V2PREBrownRice

A = Whole

B = Processed

1= Correct

0 = Incorrect

Code: V2PREAppleJuice

A = Whole

B = Processed

1= Correct

0 = Incorrect

Code: V2PREWhiteRice

A = Whole

B = Processed

1= Correct

0 = Incorrect

Question 5: Which of the following lists includes all of the MyPlate categories?

Code: V2PREIdentifyMyPlateCategories

A = Fruits, Vegetables, Grains, Protein, Dairy

B = Fruits, Vegetables, Meat, Dairy, Fats and Sweets

C = Fruits, Vegetables, Breads, Milk, Meat & Beans

D = Fruit, Vegetables, Grains, Milk, Meat & Beans

1= Correct

0 = Incorrect

Question 6: Which MyPlate category is missing from this breakfast: Cereal, eggs, blueberries, milk

Code: V2PREIdentifyMissingMyPlateCategory

A = Fruits

B = Vegetables

C = Protein

D = Grains

E = Dairy

1= Correct

0 = Incorrect

Question 7: Please click on this image link. What is the biggest change that can be made to make this meal more healthful?

Code: V2PREIdentifyMostHealthfullImprovement

A = Add another vegetable

B = Exchange the meat for a different kind of meat

C = Exchange the bun for a whole wheat bun

D = Add a dressing

1= Correct

0 = Incorrect

Question 8: What percentage of events and meetings on campus include whole grains?

Code: V2PREPercentageEventsWholeGrains

A = 5%

B = 14%

C = 22%

D = 35%

E = 43%

1= Correct

0 = Incorrect

Question 9: What percentage of events and meetings on campus include more than 3 MyPlate categories?

Code: V2PREPercentageEventsOver3Categories

A = 15%

B = 30%

C = 45%

D = 60%

1= Correct

0 = Incorrect

Question 10: I can confidently explain the difference between whole and processed foods.

Code: V2PREConfidenceWholeVsProcessedDifference

5 = Strongly agree

4 = Somewhat agree

3 = Neither agree nor disagree

2 = Somewhat disagree

1 = Strongly disagree

Question 11: I am confident that I can identify processed vs. whole foods when ordering.

Code: V2PREConfidenceIdentifyingWholeVsProcessedOrdering

5 = Strongly agree

4 = Somewhat agree

3 = Neither agree nor disagree

2 = Somewhat disagree

1 = Strongly disagree

Question 12: I have the necessary knowledge to choose foods that comprise a healthy meal when ordering.

Code: V2PREKnowledgeOfHealthfulMealComposition

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 13: I am confident in my ability to apply MyPlate when ordering food for an event or meeting.

Code: V2PREConfidenceMyPlateApplicationToOrdering

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 14: Ordering healthy foods can have a positive impact on health.

Code: V2PREBeliefHealthfulFoodAndHealthImpact

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Video 2 Post-Assessment

Question 1: Please enter your NetID

Code: V2POSTNetID

Question 2: Which of the following foods would generate the greatest feelings of satiety (i.e. physical fullness)?

Code: V2POSTIdentifyGreatestSatiety

A = One bag of chips

B = One cup of juice

C = One cup of rice

D = One medium cookie

1= Correct

0 = Incorrect

Question 3: The defining characteristics of processed foods include all of the following except:

Code: V2POSTIdentifyProcessedFoodCharacteristics

A = More shelf stable

B = More nutrients

C = More palatable

D = Less filling

1= Correct

0 = Incorrect

Question 4: Identify the following foods as either whole or processed.

Code: V2POSTApples

A = Whole

B = Processed

1= Correct

0 = Incorrect

Code: V2POSTWhiteBread

A = Whole

B = Processed

1= Correct

0 = Incorrect

Code: V2POSTWholeWheatPasta

A = Whole

B = Processed

1= Correct

0 = Incorrect

Code: V2POSTBrownRice

A = Whole

B = Processed

1= Correct

0 = Incorrect

Code: V2POSTAppleJuice

A = Whole

B = Processed

1= Correct

0 = Incorrect

Code: V2POSTWhiteRice

A = Whole

B = Processed

1= Correct

0 = Incorrect

Question 5: Which of the following lists includes all of the MyPlate categories?

Code: V2POSTIdentifyMyPlateCategories

A = Fruits, Vegetables, Grains, Protein, Dairy

B = Fruits, Vegetables, Meat, Dairy, Fats and Sweets

C = Fruits, Vegetables, Breads, Milk, Meat & Beans

D = Fruit, Vegetables, Grains, Milk, Meat & Beans

1= Correct

0 = Incorrect

Question 6: Which MyPlate category is missing from this breakfast: Cereal, eggs, blueberries, milk

Code: V2POSTIdentifyMissingMyPlateCategory

A = Fruits

B = Vegetables

C = Protein

D = Grains

E = Dairy

1= Correct

0 = Incorrect

Question 7: Please click on this image link. What is the biggest change that can be made to make this meal more healthful?

Code: V2POSTIdentifyMostHealthfullImprovement

A = Add another vegetable

B = Exchange the meat for a different kind of meat

C = Exchange the bun for a whole wheat bun

D = Add a dressing

1= Correct

0 = Incorrect

Question 8: What percentage of events and meetings on campus include whole grains?

Code: V2POSTPercentageEventsWholeGrains

A = 5%

B = 14%

C = 22%

D = 35%

E = 43%

1= Correct

0 = Incorrect

Question 9: What percentage of events and meetings on campus include more than 3 MyPlate categories?

Code: V2POSTPercentageEventsOver3Categories

A = 15%

B = 30%

C = 45%

D = 60%

1= Correct

0 = Incorrect

Question 10: I can confidently explain the difference between whole and processed foods.

Code: V2POSTConfidenceWholeVsProcessedDifference

5 = Strongly agree

4 = Somewhat agree

3 = Neither agree nor disagree

2 = Somewhat disagree

1 = Strongly disagree

Question 11: I am confident that I can identify processed vs. whole foods when ordering.

Code: V2POSTConfidenceIdentifyingWholeVsProcessedOrdering

5 = Strongly agree

4 = Somewhat agree

3 = Neither agree nor disagree

2 = Somewhat disagree

1 = Strongly disagree

Question 12: I have the necessary knowledge to choose foods that comprise a healthy meal when ordering.

Code: V2POSTKnowledgeOfHealthfulMealComposition

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 13: I am confident in my ability to apply MyPlate when ordering food for an event or meeting.

Code: V2POSTConfidenceMyPlateApplicationToOrdering

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 14: Ordering healthy foods can have a positive impact on health.

Code: V2POSTBeliefHealthfulFoodAndHealthImpact

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 15: The examples provided throughout the video improved my ability to recognize foods that comprise a healthy plate.

Code: V2POSTExamplesImprovedAbilityToIdentifyHealthfulFoods

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 16: The game show element of the video improved my ability to identify whole vs. processed foods.

Code: V2POSTGameShowWholeVsProcessedIdentification

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 17: The game show element of the video improved my ability to apply MyPlate.

Code: V2POSTGameShowMyplateImprovement

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 18: The information provided in this video was useful to me, personally.

Code: V2POSTVideoInfoPersonallyUseful

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 19: I think the information provided in this video will be useful to others.

Code: V2POSTVideoInfoUsefulToOthers

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 20: I plan to use the information provided in this video when ordering in the future.

Code: V2POSTWillPersonallyUseVideoInfoWhenOrdering

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Video 3 Pre-Assessment

Question 1: Please enter your NetID

Code: V3PRENetID

Question 2: When compared to whole foods, processed foods contain more of all the following except:

Code: V3PREComparingWholeAndProcessed

A = Added sugar

B = Fat

C = Fiber

D = Sodium

1 = Correct

0 = Incorrect

Question 3: Based on the nutrition label linked here, identify the food as either whole or processed

Code: V3PRELabelIdentification

A = Whole

B = Processed

C = Don't know

1 = Correct

0 = Incorrect

Question 4A: For each menu item shown, select all nutrients (i.e. sodium, fat, added sugar, fiber) likely found in very high amounts - Sodium

Code: V3PREVeryHighSodiumDessertTray

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V3PREVeryHighSodiumPizza

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V3PREVeryHighSodiumBakeryBox

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V3PREVeryHighSodiumWholeWheatBread

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V3PREVeryHighSodiumSweetTea

A = Yes

B = No

1 = Correct

0 = Incorrect

Question 4B: For each menu item shown, select all nutrients (i.e. sodium, fat, added sugar, fiber) likely found in very high amounts – Fat

Code: V3PREVeryHighFatDessertTray

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V3PREVeryHighFatPizza

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V3PREVeryHighFatBakeryBox

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V3PREVeryHighFatWholeWheatBread

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V3PREVeryHighFatSweetTea

A = Yes

B = No

1 = Correct
0 = Incorrect

Question 4C: For each menu item shown, select all nutrients (i.e. sodium, fat, added sugar, fiber) likely found in very high amounts – Added Sugar

Code: V3PREVeryHighAddedSugarDessertTray

A = Yes

B = No

1 = Correct
0 = Incorrect

Code: V3PREVeryHighAddedSugarPizza

A = Yes

B = No

1 = Correct
0 = Incorrect

Code: V3PREVeryHighAddedSugarBakeryBox

A = Yes

B = No

1 = Correct
0 = Incorrect

Code: V3PREVeryHighAddedSugarWholeWheatBread

A = Yes

B = No

1 = Correct
0 = Incorrect

Code: V3PREVeryHighAddedSugarSweetTea

A = Yes

B = No

1 = Correct
0 = Incorrect

Question 4D: For each menu item shown, select all nutrients (i.e. sodium, fat, added sugar, fiber) likely found in very high amounts – Fiber

Code: V3PREVeryHighFiberDessertTray

A = Yes

B = No

1 = Correct
0 = Incorrect

Code: V3PREVeryHighFiberPizza

A = Yes

B = No

1 = Correct
0 = Incorrect

Code: V3PREVeryHighFiberBakeryBox

A = Yes

B = No

1 = Correct
0 = Incorrect

Code: V3PREVeryHighFiberWholeWheatBread

A = Yes

B = No

1 = Correct
0 = Incorrect

Code: V3PREVeryHighFiberSweetTea

A = Yes

B = No

1 = Correct
0 = Incorrect

Question 5A: For each menu item shown, select all nutrients (i.e. sodium, fat, added sugar, fiber) likely found in very low amounts - Sodium

Code: V3PREVeryLowSodiumThreeBeanSalad

A = Yes

B = No

1 = Correct
0 = Incorrect

Code: V3PREVeryLowSodiumFruitTray

A = Yes

B = No

1 = Correct
0 = Incorrect

Code: V3PREVeryLowSodiumUnsweetTea

A = Yes

B = No

1 = Correct
0 = Incorrect

Code: V3PREVeryLowSodiumDonuts

A = Yes

B = No

1 = Correct
0 = Incorrect

Code: V3PREVeryLowSodiumMacAndCheese

A = Yes

B = No

1 = Correct
0 = Incorrect

Question 5B: For each menu item shown, select all nutrients (i.e. sodium, fat, added sugar, fiber) likely found in very low amounts - Fat

Code: V3PREVeryLowFatThreeBeanSalad

A = Yes

B = No

1 = Correct
0 = Incorrect

Code: V3PREVeryLowFatFruitTray

A = Yes

B = No

1 = Correct
0 = Incorrect

Code: V3PREVeryLowFatUnsweetTea

A = Yes

B = No

1 = Correct
0 = Incorrect

Code: V3PREVeryLowFatDonuts

A = Yes

B = No

1 = Correct
0 = Incorrect

Code: V3PREVeryLowFatMacAndCheese

A = Yes

B = No

1 = Correct

0 = Incorrect

Question 5C: For each menu item shown, select all nutrients (i.e. sodium, fat, added sugar, fiber) likely found in very low amounts – Added Sugar

Code: V3PREVeryLowAddedSugarThreeBeanSalad

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V3PREVeryLowAddedSugarFruitTray

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V3PREVeryLowAddedSugarUnsweetTea

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V3PREVeryLowAddedSugarDonuts

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V3PREVeryLowAddedSugarMacAndCheese

A = Yes

B = No

1 = Correct

0 = Incorrect

Question 5D: For each menu item shown, select all nutrients (i.e. sodium, fat, added sugar, fiber) likely found in very low amounts - Fiber

Code: V3PREVeryLowFiberThreeBeanSalad

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V3PREVeryLowFiberFruitTray

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V3PREVeryLowFiberUnsweetTea

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V3PREVeryLowFiberDonuts

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V3PREVeryLowFiberMacAndCheese

A = Yes

B = No

1 = Correct

0 = Incorrect

Question 6: I can confidently apply nutrition information from food labels and menus to make informed ordering choices.

Code: V3PREApplyFoodLabelInfoToOrdering

5 = Strongly agree

4 = Somewhat agree

3 = Neither agree nor disagree

2 = Somewhat disagree

1 = Strongly disagree

Question 7: I am confident in my ability to recognize the key nutrient differences between whole and processed foods.

Code: V3PREKnowNutrientDifferenceWholeVsProcessed

5 = Strongly agree

4 = Somewhat agree

- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 8: I can confidently identify whether a food item is more or less healthful based on the nutrition label.

Code: V3PREIdentifyHealthfulnessWithNutritionLabel

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 9: Knowing the key nutrient differences between healthful and unhealthful foods will improve my ability to recognize healthful options when ordering.

Code: V3PRENutrientKnowledgeImprovesOrderingAbility

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 10: Knowing the key nutrient differences between healthful and unhealthful foods will improve my ability to communicate more effectively with others about the foods I order.

Code: V3PRENutrientKnowledgeImprovesCommunication

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Video 3 Post-Assessment

Question 1: Please enter your NetID

Code: V3POSTNetID

Question 2: When compared to whole foods, processed foods contain more of all the following except:

Code: V3POSTComparingWholeAndProcessed

A = Added sugar

B = Fat

C = Fiber

D = Sodium

1 = Correct

0 = Incorrect

Question 3: Based on the nutrition label linked here, identify the food as either whole or processed

Code: V3POSTLabelIdentification

A = Whole

B = Processed

C = Don't know

1 = Correct

0 = Incorrect

Question 4A: For each menu item shown, select all nutrients (i.e. sodium, fat, added sugar, fiber) likely found in very high amounts - Sodium

Code: V3POSTVeryHighSodiumDessertTray

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V3POSTVeryHighSodiumPizza

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V3POSTVeryHighSodiumBakeryBox

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V3POSTVeryHighSodiumWholeWheatBread

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V3POSTVeryHighSodiumSweetTea

A = Yes

B = No

1 = Correct

0 = Incorrect

Question 4B: For each menu item shown, select all nutrients (i.e. sodium, fat, added sugar, fiber) likely found in very high amounts – Fat

Code: V3POSTVeryHighFatDessertTray

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V3POSTVeryHighFatPizza

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V3POSTVeryHighFatBakeryBox

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V3POSTVeryHighFatWholeWheatBread

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V3POSTVeryHighFatSweetTea

A = Yes

B = No

1 = Correct
0 = Incorrect

Question 4C: For each menu item shown, select all nutrients (i.e. sodium, fat, added sugar, fiber) likely found in very high amounts – Added Sugar

Code: V3POSTVeryHighAddedSugarDessertTray

A = Yes

B = No

1 = Correct
0 = Incorrect

Code: V3POSTVeryHighAddedSugarPizza

A = Yes

B = No

1 = Correct
0 = Incorrect

Code: V3POSTVeryHighAddedSugarBakeryBox

A = Yes

B = No

1 = Correct
0 = Incorrect

Code: V3POSTVeryHighAddedSugarWholeWheatBread

A = Yes

B = No

1 = Correct
0 = Incorrect

Code: V3POSTVeryHighAddedSugarSweetTea

A = Yes

B = No

1 = Correct
0 = Incorrect

Question 4D: For each menu item shown, select all nutrients (i.e. sodium, fat, added sugar, fiber) likely found in very high amounts – Fiber

Code: V3POSTVeryHighFiberDessertTray

A = Yes

B = No

1 = Correct
0 = Incorrect

Code: V3POSTVeryHighFiberPizza

A = Yes

B = No

1 = Correct
0 = Incorrect

Code: V3POSTVeryHighFiberBakeryBox

A = Yes

B = No

1 = Correct
0 = Incorrect

Code: V3POSTVeryHighFiberWholeWheatBread

A = Yes

B = No

1 = Correct
0 = Incorrect

Code: V3POSTVeryHighFiberSweetTea

A = Yes

B = No

1 = Correct
0 = Incorrect

Question 5A: For each menu item shown, select all nutrients (i.e. sodium, fat, added sugar, fiber) likely found in very low amounts - Sodium

Code: V3POSTVeryLowSodiumThreeBeanSalad

A = Yes

B = No

1 = Correct
0 = Incorrect

Code: V3POSTVeryLowSodiumFruitTray

A = Yes

B = No

1 = Correct
0 = Incorrect

Code: V3POSTVeryLowSodiumUnsweetTea

A = Yes

B = No

1 = Correct
0 = Incorrect

Code: V3POSTVeryLowSodiumDonuts

A = Yes

B = No

1 = Correct
0 = Incorrect

Code: V3POSTVeryLowSodiumMacAndCheese

A = Yes

B = No

1 = Correct
0 = Incorrect

Question 5B: For each menu item shown, select all nutrients (i.e. sodium, fat, added sugar, fiber) likely found in very low amounts - Fat

Code: V3POSTVeryLowFatThreeBeanSalad

A = Yes

B = No

1 = Correct
0 = Incorrect

Code: V3POSTVeryLowFatFruitTray

A = Yes

B = No

1 = Correct
0 = Incorrect

Code: V3POSTVeryLowFatUnsweetTea

A = Yes

B = No

1 = Correct
0 = Incorrect

Code: V3POSTVeryLowFatDonuts

A = Yes

B = No

1 = Correct
0 = Incorrect

Code: V3POSTVeryLowFatMacAndCheese

A = Yes

B = No

1 = Correct

0 = Incorrect

Question 5C: For each menu item shown, select all nutrients (i.e. sodium, fat, added sugar, fiber) likely found in very low amounts – Added Sugar

Code: V3POSTVeryLowAddedSugarThreeBeanSalad

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V3POSTVeryLowAddedSugarFruitTray

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V3POSTVeryLowAddedSugarUnsweetTea

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V3POSTVeryLowAddedSugarDonuts

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V3POSTVeryLowAddedSugarMacAndCheese

A = Yes

B = No

1 = Correct

0 = Incorrect

Question 5D: For each menu item shown, select all nutrients (i.e. sodium, fat, added sugar, fiber) likely found in very low amounts - Fiber

Code: V3POSTVeryLowFiberThreeBeanSalad

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V3POSTVeryLowFiberFruitTray

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V3POSTVeryLowFiberUnsweetTea

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V3POSTVeryLowFiberDonuts

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V3POSTVeryLowFiberMacAndCheese

A = Yes

B = No

1 = Correct

0 = Incorrect

Question 6: I can confidently apply nutrition information from food labels and menus to make informed ordering choices.

Code: V3POSTApplyFoodLabelInfoToOrdering

5 = Strongly agree

4 = Somewhat agree

3 = Neither agree nor disagree

2 = Somewhat disagree

1 = Strongly disagree

Question 7: I am confident in my ability to recognize the key nutrient differences between whole and processed foods.

Code: V3POSTKnowNutrientDifferenceWholeVsProcessed

5 = Strongly agree

4 = Somewhat agree

- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 8: I can confidently identify whether a food item is more or less healthful based on the nutrition label.

Code: V3POSTIdentifyHealthfulnessWithNutritionLabel

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 9: Knowing the key nutrient differences between healthful and unhealthful foods will improve my ability to recognize healthful options when ordering.

Code: V3POSTNutrientKnowledgeImprovesOrderingAbility

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 10: Knowing the key nutrient differences between healthful and unhealthful foods will improve my ability to communicate more effectively with others about the foods I order.

Code: V3POSTNutrientKnowledgeImprovesCommunication

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 11: This video helped me understand key nutrient differences between whole and processed foods more than I did before.

Code: V3POSTVideoImprovedNutrientKnowledge

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 12: The information provided in this video was useful to me, personally.

Code: V3POSTVideoInfoPersonallyUseful

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 13: I think the information provided in this video will be useful to others.

Code: V3POSTFoodInfoUsefulToOthers

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 14: I plan to use the information provided in this video when ordering in the future.

Code: V3POSTWillPersonallyUseInfoWhenOrdering

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Video 4 Pre-Assessment

Question 1: Please enter your NetID

Code: V4PRENetID

Question 2: An inclusive food environment includes consideration of those with dietary restrictions.

Code: V4PREInclusiveIncludesDRs

5 = Strongly agree

4 = Somewhat agree

3 = Neither agree nor disagree

2 = Somewhat disagree

1 = Strongly disagree

Question 3: I am confident that I can recognize and select menu items that are appropriate for those who are gluten-free.

Code: V4PRECanRecognizeGFItems

5 = Strongly agree

4 = Somewhat agree

3 = Neither agree nor disagree

2 = Somewhat disagree

1 = Strongly disagree

Question 4: I am confident that I can recognize and select menu items that are appropriate for vegetarians (including lacto and ovo variations).

Code: V4PRECanRecognizeVegetarianItems

5 = Strongly agree

4 = Somewhat agree

3 = Neither agree nor disagree

2 = Somewhat disagree

1 = Strongly disagree

Question 5: I am confident that I can recognize and select menu items that are appropriate for vegans.

Code: V4PRECanRecognizeVeganItems

5 = Strongly agree

4 = Somewhat agree

3 = Neither agree nor disagree

2 = Somewhat disagree

1 = Strongly disagree

Question 6: I am confident that I can recognize and select menu items that are appropriate for pescatarians.

Code: V4PRECanRecognizePescatarianItems

5 = Strongly agree

4 = Somewhat agree

3 = Neither agree nor disagree

- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 7: I have a responsibility to consider those with personal and religious dietary restrictions when ordering foods.

Code: V4PREResponsibilityToConsiderDR

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 8: It is important to consider the dietary restrictions of others when ordering, even if the foods ordered as a result may make some people uncomfortable.

Code: V4PREConsiderDRDespiteFoodDiscomfort

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 9: It is important to include foods that accommodate dietary restrictions when ordering.

Code: V4PREIncludeFoodForDR

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 10: Those following a gluten-free diet avoid the following:

Code: V4PREGFAvoids

- A = Meat only
- B = Meat, fish, and other seafood
- C = Meat, fish, other seafood, dairy, eggs
- D = Wheat-containing products**
- E = Meat and eggs only
- F = Meat and dairy only

- 1 = Correct
- 0 = Incorrect

Question 11: Those following a vegan diet avoid the following:

Code: V4PREVeganAvoids

- A = Meat only
- B = Meat, fish, and other seafood
- C = Meat, fish, other seafood, dairy, eggs**
- D = Wheat-containing products

E = Meat and eggs only
F = Meat and dairy only

1 = Correct
0 = Incorrect

Question 12: Those following a lacto-vegetarian diet avoid the following:

Code: V4PRELacto-VegAvoids

A = Meat only
B = Meat, fish, and other seafood
C = Meat, fish, other seafood, dairy, eggs
D = Wheat-containing products
E = Meat and eggs only
F = Meat and dairy only

1 = Correct
0 = Incorrect

Question 13: Those following a pescatarian diet avoid the following:

Code: V4PREPescatarianAvoids

A = Meat only
B = Meat, fish, and other seafood
C = Meat, fish, other seafood, dairy, eggs
D = Wheat-containing products
E = Meat and eggs only
F = Meat and dairy only

1 = Correct
0 = Incorrect

Question 14: Those following a standard vegetarian diet avoid the following:

Code: V4PREStandardVegetarianAvoids

A = Meat only
B = Meat, fish, and other seafood
C = Meat, fish, other seafood, dairy, eggs
D = Wheat-containing products
E = Meat and eggs only
F = Meat and dairy only

1 = Correct
0 = Incorrect

Question 15: Those following an ovo-vegetarian diet avoid the following:

Code: V4PREOvovegetarianAvoids

A = Meat only
B = Meat, fish, and other seafood
C = Meat, fish, other seafood, dairy, eggs
D = Wheat-containing products

E = Meat and eggs only
F = Meat and dairy only

1 = Correct
0 = Incorrect

Question 16: Gluten is a(n) _____ found in _____.

Code: V4PREWhatIsGluten

A = Carbohydrate; grain-based products
B = Protein; wheat
C = Harmful chemical; most processed foods
D = antioxidant; bread

1 = Correct
0 = Incorrect

Question 17: Due to the complexities of halal and kosher religious dietary restrictions, it is best to:

Code: V4PREHalalAndKosher

A = simply tell the restaurant that the order has to be halal or kosher
B = ask the attendee with the religious restriction to provide their own food
C = trust that food ordered for other dietary restrictions will be suitable for halal or kosher restrictions
D = ask the restaurant ahead of time if they can appropriately accommodate halal and kosher requests

1 = Correct
0 = Incorrect

Question 18A: Select the corresponding dietary restriction(s) that each menu item would be appropriate for. Select all that apply. – Street tacos

Code: V4PRETacosGF

A = Yes
B = No

1 = Correct
0 = Incorrect

Code: V4PRETacosVegan

A = Yes
B = No

1 = Correct
0 = Incorrect

Code: V4PRETacosVegetarian

A = Yes
B = No

1 = Correct
0 = Incorrect

Code: V4PRETacosPesc

A = Yes

B = No

1 = Correct
0 = Incorrect

Question 18B: Select the corresponding dietary restriction(s) that each menu item would be appropriate for. Select all that apply. – Pasta

Code: V4PREPastaGF

A = Yes

B = No

1 = Correct
0 = Incorrect

Code: V4PREPastaVegan

A = Yes

B = No

1 = Correct
0 = Incorrect

Code: V4PREPastaVegetarian

A = Yes

B = No

1 = Correct
0 = Incorrect

Code: V4PREPastaPesc

A = Yes

B = No

1 = Correct
0 = Incorrect

Question 18C: Select the corresponding dietary restriction(s) that each menu item would be appropriate for. Select all that apply. – Lentils & Rice

Code: V4PRELentilRiceGF

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V4PRELentilRiceVegan

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V4PRELentilRiceVegetarian

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V4PRELentilRicePesc

A = Yes

B = No

1 = Correct

0 = Incorrect

Question 18D: Select the corresponding dietary restriction(s) that each menu item would be appropriate for. Select all that apply. – Noodles & Shrimp

Code: V4PRENoodlesShrimpGF

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V4PRENoodlesShrimpVegan

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V4PRENoodlesShrimpVegetarian

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V4PRENoodlesShrimpPesc

A = Yes

B = No

1 = Correct

0 = Incorrect

Question 19: Rice, barley, and corn tortillas are appropriate substitutions for which dietary restriction?

Code: V4PREGFSubs

1 = Gluten-free

2 = Vegetarian

3 = Vegan

4 = Pescatarian

Question 20: Beans, tofu, and quinoa are appropriate substitutions for which dietary restriction(s)? Choose all that apply.

Code: V4PREProteinSubsGF

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V4PREProteinSubsVegan

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V4PREProteinSubsVegetarian

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V4PREProteinSubsPesc

A = Yes

B = No

1 = Correct

0 = Incorrect

Question 21: Beans, tofu, and quinoa are _____ substitutions for vegetarians and vegans and meet the _____ needs of the diet.

Code: V4PREProteinSubstitutions

1 = meat; fat

2 = grain; carbohydrate

3 = meat; protein

4 = vegetable; iron

1 = Correct

0 = Incorrect

Question 22: For a vegan, would a large garden salad topped with grilled vegetables and avocado dressing be sufficient? Why or why not? Explain.

Code: V4PRESaladForVegans

Video 4 Post-Assessment

Question 1: Please enter your NetID

Code: V4POSTNetID

Question 2: An inclusive food environment includes consideration of those with dietary restrictions.

Code: V4POSTInclusiveIncludesDRs

5 = Strongly agree

4 = Somewhat agree

3 = Neither agree nor disagree

2 = Somewhat disagree

1 = Strongly disagree

Question 3: I am confident that I can recognize and select menu items that are appropriate for those who are gluten-free.

Code: V4POSTCanRecognizeGFItems

5 = Strongly agree

4 = Somewhat agree

3 = Neither agree nor disagree

2 = Somewhat disagree

1 = Strongly disagree

Question 4: I am confident that I can recognize and select menu items that are appropriate for vegetarians (including lacto and ovo variations).

Code: V4POSTCanRecognizeVegetarianItems

5 = Strongly agree

4 = Somewhat agree

3 = Neither agree nor disagree

2 = Somewhat disagree

1 = Strongly disagree

Question 5: I am confident that I can recognize and select menu items that are appropriate for vegans.

Code: V4POSTCanRecognizeVeganItems

5 = Strongly agree

4 = Somewhat agree

3 = Neither agree nor disagree

2 = Somewhat disagree

1 = Strongly disagree

Question 6: I am confident that I can recognize and select menu items that are appropriate for pescatarians.

Code: V4POSTCanRecognizePescatarianItems

5 = Strongly agree

4 = Somewhat agree

3 = Neither agree nor disagree

- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 7: I have a responsibility to consider those with personal and religious dietary restrictions when ordering foods.

Code: V4POSTResponsibilityToConsiderDR

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 8: It is important to consider the dietary restrictions of others when ordering, even if the foods ordered as a result may make some people uncomfortable.

Code: V4POSTConsiderDRDespiteFoodDiscomfort

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 9: It is important to include foods that accommodate dietary restrictions when ordering.

Code: V4POSTIncludeFoodForDR

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 10: This video helped me understand dietary restrictions more than I did before.

Code: V4POSTVideoImprovedDRKnowledge

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 11: The information provided in this video was useful to me, personally.

Code: V4POSTVideoInfoPersonallyUseful

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 12: I think the information provided in this video will be useful to others.

Code: V4POSTFoodInfoUsefulToOthers

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 13: I plan to use the information provided in this video when ordering in the future.

Code: V4POSTWillPersonallyUseInfoWhenOrdering

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 14: In your own words, please describe the main take home messages of this video.

Code: V4POSTTakeHomeMessages

Question 15: Those following a gluten-free diet avoid the following:

Code: V4POSTGFAvoids

- A = Meat only
- B = Meat, fish, and other seafood
- C = Meat, fish, other seafood, dairy, eggs
- D = Wheat-containing products**
- E = Meat and eggs only
- F = Meat and dairy only

- 1 = Correct
- 0 = Incorrect

Question 16: Those following a vegan diet avoid the following:

Code: V4POSTVeganAvoids

- A = Meat only
- B = Meat, fish, and other seafood
- C = Meat, fish, other seafood, dairy, eggs**
- D = Wheat-containing products
- E = Meat and eggs only
- F = Meat and dairy only

- 1 = Correct
- 0 = Incorrect

Question 17: Those following a lacto-vegetarian diet avoid the following:

Code: V4POSTLacto-VegAvoids

- A = Meat only
- B = Meat, fish, and other seafood
- C = Meat, fish, other seafood, dairy, eggs
- D = Wheat-containing products
- E = Meat and eggs only**

F = Meat and dairy only

1 = Correct

0 = Incorrect

Question 18: Those following a pescatarian diet avoid the following:

Code: V4POSTPescatarianAvoids

A = Meat only

B = Meat, fish, and other seafood

C = Meat, fish, other seafood, dairy, eggs

D = Wheat-containing products

E = Meat and eggs only

F = Meat and dairy only

1 = Correct

0 = Incorrect

Question 19: Those following a standard vegetarian diet avoid the following:

Code: V4POSTStandardVegetarianAvoids

A = Meat only

B = Meat, fish, and other seafood

C = Meat, fish, other seafood, dairy, eggs

D = Wheat-containing products

E = Meat and eggs only

F = Meat and dairy only

1 = Correct

0 = Incorrect

Question 20: Those following an ovo-vegetarian diet avoid the following:

Code: V4POSTOvovegetarianAvoids

A = Meat only

B = Meat, fish, and other seafood

C = Meat, fish, other seafood, dairy, eggs

D = Wheat-containing products

E = Meat and eggs only

F = Meat and dairy only

1 = Correct

0 = Incorrect

Question 21: Gluten is a(n) _____ found in _____.

Code: V4POSTWhatIsGluten

A = Carbohydrate; grain-based products

B = Protein; wheat

C = Harmful chemical; most processed foods

D = antioxidant; bread

1 = Correct
0 = Incorrect

Question 22: Due to the complexities of halal and kosher religious dietary restrictions, it is best to:

Code: V4POSTHalalAndKosher

A = simply tell the restaurant that the order has to be halal or kosher

B = ask the attendee with the religious restriction to provide their own food

C = trust that food ordered for other dietary restrictions will be suitable for halal or kosher restrictions

D = ask the restaurant ahead of time if they can appropriately accommodate halal and kosher requests

1 = Correct
0 = Incorrect

Question 23A: Select the corresponding dietary restriction(s) that each menu item would be appropriate for. Select all that apply. – Street tacos

Code: V4POSTTacosGF

A = Yes

B = No

1 = Correct
0 = Incorrect

Code: V4POSTTacosVegan

A = Yes

B = No

1 = Correct
0 = Incorrect

Code: V4POSTTacosVegetarian

A = Yes

B = No

1 = Correct
0 = Incorrect

Code: V4POSTTacosPesc

A = Yes

B = No

1 = Correct
0 = Incorrect

Question 23B: Select the corresponding dietary restriction(s) that each menu item would be appropriate for. Select all that apply. – Pasta

Code: V4POSTPastaGF

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V4POSTPastaVegan

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V4POSTPastaVegetarian

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V4POSTPastaPesc

A = Yes

B = No

1 = Correct

0 = Incorrect

Question 23C: Select the corresponding dietary restriction(s) that each menu item would be appropriate for. Select all that apply. – Lentils & Rice

Code: V4POSTLentilRiceGF

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V4POSTLentilRiceVegan

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V4POSTLentilRiceVegetarian

A = Yes

B = No

1 = Correct
0 = Incorrect

Code: V4POSTLentilRicePesc

A = Yes

B = No

1 = Correct
0 = Incorrect

Question 23D: Select the corresponding dietary restriction(s) that each menu item would be appropriate for. Select all that apply. – Noodles & Shrimp

Code: V4POSTNoodlesShrimpGF

A = Yes

B = No

1 = Correct
0 = Incorrect

Code: V4POSTNoodlesShrimpVegan

A = Yes

B = No

1 = Correct
0 = Incorrect

Code: V4POSTNoodlesShrimpVegetarian

A = Yes

B = No

1 = Correct
0 = Incorrect

Code: V4POSTNoodlesShrimpPesc

A = Yes

B = No

1 = Correct
0 = Incorrect

Question 24: Rice, barley, and corn tortillas are appropriate substitutions for which dietary restriction?

Code: V4POSTGFSubs

1 = Gluten-free

2 = Vegetarian

3 = Vegan

4 = Pescatarian

Question 25: Beans, tofu, and quinoa are appropriate substitutions for which dietary restriction(s)? Choose all that apply.

Code: V4POSTProteinSubsGF

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V4POSTProteinSubsVegan

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V4POSTProteinSubsVegetarian

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V4POSTProteinSubsPesc

A = Yes

B = No

1 = Correct

0 = Incorrect

Question 26: Beans, tofu, and quinoa are _____ substitutions for vegetarians and vegans and meet the _____ needs of the diet.

Code: V4POSTProteinSubstitutions

1 = meat; fat

2 = grain; carbohydrate

3 = meat; protein

4 = vegetable; iron

1 = Correct

0 = Incorrect

Question 27: For a vegan, would a large garden salad topped with grilled vegetables and avocado dressing be sufficient? Why or why not? Explain.

Code: V4POSTSaladForVegans

Video 5 Pre-Assessment

Question 1: Please enter your NetID.

Code: V5PRENetID

Question 2: I know the top 8 most common food allergens.

Code: V5PREKnowTop8

5 = Strongly agree

4 = Somewhat agree

3 = Neither agree nor disagree

2 = Somewhat disagree

1 = Strongly disagree

Question 3: I know the range of reactions to food allergens.

Code: V5PREKnowRangeOfReactions

5 = Strongly agree

4 = Somewhat agree

3 = Neither agree nor disagree

2 = Somewhat disagree

1 = Strongly disagree

Question 4: I am confident that I can order food appropriate for those with food allergies.

Code: V5PREAllergyOrderConfidence

5 = Strongly agree

4 = Somewhat agree

3 = Neither agree nor disagree

2 = Somewhat disagree

1 = Strongly disagree

Question 5: All food allergies need to be treated with the same level of care.

Code: V5PRETreatAllergiesEqual

5 = Strongly agree

4 = Somewhat agree

3 = Neither agree nor disagree

2 = Somewhat disagree

1 = Strongly disagree

Question 6: It is important to include foods that accommodate food allergies when ordering.

Code: V5PREAllergyOrderImportant

5 = Strongly agree

4 = Somewhat agree

3 = Neither agree nor disagree

2 = Somewhat disagree

1 = Strongly disagree

Question 7: Ordering food appropriate for those with food allergies will prevent adverse reactions.

Code: V5PREOrderWellPreventReaction

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 8: An inclusive food environment includes consideration of those with food allergies.

Code: V5PREAllergyInclusive

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 9: I am aware of the allergies of the people I usually order for.

Code: V5PREAllergyAwareness

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 10: It is important to consider the food allergies of others when ordering, even if the foods presented may make some people uncomfortable.

Code: V5PREAllergyOrderingDespiteDiscomfort

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 11: From the following list, select the top 8 food allergens.

Code: V5PRETop8Sesame

A = Yes

B = No

- 1 = Correct
- 0 = Incorrect

Code: V5PRETop8Eggs

A = Yes

B = No

- 1 = Correct
- 0 = Incorrect

Code: V5PRETop8Milk

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V5PRETop8Kiwi

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V5PRETop8Oats

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V5PRETop8TreeNuts

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V5PRETop8Celery

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V5PRETop8Fish

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V5PRETop8Soy

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V5PRETop8Wheat

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V5PRETop8Mango

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V5PRETop8Shellfish

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V5PRETop8Lentils

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V5PRETop8SunflowerSeeds

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V5PRETop8Peanuts

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V5PRETop8Spices

A = Yes

B = No

1 = Correct

0 = Incorrect

Question 12: Which of the following is not one of the top 8 food allergens?

Code: V5PRENotTop8

A = Soy

B = Shellfish

C = Sesame

D = Wheat

E = Eggs

F = Peanuts

G = Tree Nuts

H = Milk

I = Fish

1 = Correct

0 = Incorrect

Question 13: Symptoms of food allergy reactions include all of the following except:

Code: V5PRENotAnAllergySymptom

A = Minor discomfort

B = Itchiness

C = Drowsiness

D = Death

E = Vomiting

1 = Correct

0 = Incorrect

Video 5 Post-Assessment

Question 1: Please enter your NetID.

Code: V5POSTNetID

Question 2: I know the top 8 most common food allergens.

Code: V5POSTKnowTop8

5 = Strongly agree

4 = Somewhat agree

3 = Neither agree nor disagree

2 = Somewhat disagree

1 = Strongly disagree

Question 3: I know the range of reactions to food allergens.

Code: V5POSTKnowRangeOfReactions

5 = Strongly agree

4 = Somewhat agree

3 = Neither agree nor disagree

2 = Somewhat disagree

1 = Strongly disagree

Question 4: I am confident that I can order food appropriate for those with food allergies.

Code: V5POSTAllergyOrderConfidence

5 = Strongly agree

4 = Somewhat agree

3 = Neither agree nor disagree

2 = Somewhat disagree

1 = Strongly disagree

Question 5: All food allergies need to be treated with the same level of care.

Code: V5POSTTreatAllergiesEqual

5 = Strongly agree

4 = Somewhat agree

3 = Neither agree nor disagree

2 = Somewhat disagree

1 = Strongly disagree

Question 6: It is important to include foods that accommodate food allergies when ordering.

Code: V5POSTAllergyOrderImportant

5 = Strongly agree

4 = Somewhat agree

3 = Neither agree nor disagree

2 = Somewhat disagree

1 = Strongly disagree

Question 7: Ordering food appropriate for those with food allergies will prevent adverse reactions.

Code: V5POSTOrderWellPreventReaction

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 8: An inclusive food environment includes consideration of those with food allergies.

Code: V5POSTAllergyInclusive

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 9: It is important to consider the food allergies of others when ordering, even if the foods presented may make some people uncomfortable.

Code: V5POSTAllergyOrderingDespiteDiscomfort

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 10: This video helped me understand food allergies more than I did before.

Code: V5POSTAllergyAwareness

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 11: The information provided in this video was useful to me, personally.

Code: V5POSTVideoInfoPersonallyUseful

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 12: I think the information provided in this video will be useful to others.

Code: V5POSTVideoInfoUsefulToOthers

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 13: I plan to use the information provided in this video when ordering in the future.

Code: V5POSTWillPersonallyUseInfoWhenOrdering

5 = Strongly agree

4 = Somewhat agree

3 = Neither agree nor disagree

2 = Somewhat disagree

1 = Strongly disagree

Question 14: From the following list, select the top 8 food allergens.

Code: V5POSTTop8Sesame

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V5POSTTop8Eggs

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V5POSTTop8Milk

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V5POSTTop8Kiwi

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V5POSTTop8Oats

A = Yes

B = No

1 = Correct

0 = Incorrect

Code: V5POSTTop8TreeNuts

A = Yes

B = No

1 = Correct
0 = Incorrect

Code: V5POSTTop8Celery

A = Yes

B = No

1 = Correct
0 = Incorrect

Code: V5POSTTop8Fish

A = Yes

B = No

1 = Correct
0 = Incorrect

Code: V5POSTTop8Soy

A = Yes

B = No

1 = Correct
0 = Incorrect

Code: V5POSTTop8Wheat

A = Yes

B = No

1 = Correct
0 = Incorrect

Code: V5POSTTop8Mango

A = Yes

B = No

1 = Correct
0 = Incorrect

Code: V5POSTTop8Shellfish

A = Yes

B = No

1 = Correct
0 = Incorrect

Code: V5POSTTop8Lentils

A = Yes

B = No

1 = Correct
0 = Incorrect

Code: V5POSTTop8SunflowerSeeds

A = Yes

B = No

1 = Correct
0 = Incorrect

Code: V5POSTTop8Peanuts

A = Yes

B = No

1 = Correct
0 = Incorrect

Code: V5POSTTop8Spices

A = Yes

B = No

1 = Correct
0 = Incorrect

Question 15: Which of the following is not one of the top 8 food allergens?

Code: V5POSTNotTop8

A = Soy

B = Shellfish

C = Sesame

D = Wheat

E = Eggs

F = Peanuts

G = Tree Nuts

H = Milk

I = Fish

1 = Correct
0 = Incorrect

Question 16: Symptoms of food allergy reactions include all of the following except:

Code: V5POSTNotAnAllergySymptom

A = Minor discomfort

B = Itchiness

C = Drowsiness

D = Death

E = Vomiting

1 = Correct
0 = Incorrect

Video 6 Pre-Assessment

Question 1: Please enter your NetID

Code: V6PRENetID

Question 2: The nutrition knowledge shared through this training is a valuable and applicable asset in improving the health of university employees.

Code: V6PRETrainKnowledgeValuable

5 = Strongly agree

4 = Somewhat agree

3 = Neither agree nor disagree

2 = Somewhat disagree

1 = Strongly disagree

Question 3: In my experience to date, healthful vendor options have been difficult to find.

Code: V6PREHealthyVendorDifficult

5 = Strongly agree

4 = Somewhat agree

3 = Neither agree nor disagree

2 = Somewhat disagree

1 = Strongly disagree

Question 4: In my experience to date, healthful menu items have been difficult to find.

Code: V6PREHealthyMenusDifficult

5 = Strongly agree

4 = Somewhat agree

3 = Neither agree nor disagree

2 = Somewhat disagree

1 = Strongly disagree

Question 5: Healthful food ordering is a worthwhile endeavor even if it won't be accepted by all.

Code: V6PREHealthyOrderingIsWorthwhile

5 = Strongly agree

4 = Somewhat agree

3 = Neither agree nor disagree

2 = Somewhat disagree

1 = Strongly disagree

Question 6: If the process was easier, I would be happy to prioritize ordering healthful food for meetings and events.

Code: V6PREDesireToPrioritize

5 = Strongly agree

4 = Somewhat agree

3 = Neither agree nor disagree

2 = Somewhat disagree

1 = Strongly disagree

Question 7: I am confident in my ability to respectfully answer questions about changes to food that is ordered.

Code: V6PRECanAnswerOnFoodChanges

5 = Strongly agree

4 = Somewhat agree

3 = Neither agree nor disagree

2 = Somewhat disagree

1 = Strongly disagree

Question 8: I am confident that I can satisfactorily answer coworker questions about food that I order.

Code: V6PRECanAnswerCoWorkers

5 = Strongly agree

4 = Somewhat agree

3 = Neither agree nor disagree

2 = Somewhat disagree

1 = Strongly disagree

Question 9: I don't expect all attendees to react positively when I provide answers about healthful ordering choices.

Code: V6PREDonExpectPostiveReactions

5 = Strongly agree

4 = Somewhat agree

3 = Neither agree nor disagree

2 = Somewhat disagree

1 = Strongly disagree

Question 10: I intend to answer any questions I receive about the food I order to the best of my ability.

Code: V6PREWillAnswer?sBestAsPossible

5 = Strongly agree

4 = Somewhat agree

3 = Neither agree nor disagree

2 = Somewhat disagree

1 = Strongly disagree

Video 6 Post-Assessment

Question 1: Please enter your NetID

Code: V6POSTNetID

Question 2: The nutrition knowledge shared through this training is a valuable and applicable asset in improving the health of university employees.

Code: V6POSTTrainKnowledgeValuable

5 = Strongly agree

4 = Somewhat agree

3 = Neither agree nor disagree

2 = Somewhat disagree

1 = Strongly disagree

Question 3: In my experience to date, healthful vendor options have been difficult to find.

Code: V6POSTHealthyVendorDifficult

5 = Strongly agree

4 = Somewhat agree

3 = Neither agree nor disagree

2 = Somewhat disagree

1 = Strongly disagree

Question 4: In my experience to date, healthful menu items have been difficult to find.

Code: V6POSTHealthyMenusDifficult

5 = Strongly agree

4 = Somewhat agree

3 = Neither agree nor disagree

2 = Somewhat disagree

1 = Strongly disagree

Question 5: Healthful food ordering is a worthwhile endeavor even if it won't be accepted by all.

Code: V6POSTHealthyOrderingIsWorthwhile

5 = Strongly agree

4 = Somewhat agree

3 = Neither agree nor disagree

2 = Somewhat disagree

1 = Strongly disagree

Question 6: If the process was easier, I would be happy to prioritize ordering healthful food for meetings and events.

Code: V6POSTDesireToPrioritize

5 = Strongly agree

4 = Somewhat agree

3 = Neither agree nor disagree

2 = Somewhat disagree

1 = Strongly disagree

Question 7: I am confident in my ability to respectfully answer questions about changes to food that is ordered.

Code: V6POSTCanAnswerOnFoodChanges

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 8: I am confident that I can satisfactorily answer coworker questions about food that I order.

Code: V6POSTCanAnswerCoWorkers

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 9: I don't expect all attendees to react positively when I provide answers about healthful ordering choices.

Code: V6POSTDontExpectPostiveReactions

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 10: I intend to answer any questions I receive about the food I order to the best of my ability.

Code: V6POSTWillAnswer?sBestAsPossible

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 11: The information provided in this video was useful to me, personally.

Code: V6POSTVideoInfoPersonallyUseful

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 12: I think the information provided in this video will be useful to others.

Code: V6POSTVideoInfoUsefulToOthers

- 5 = Strongly agree
- 4 = Somewhat agree

- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 13: I plan to use the information provided in this video when ordering in the future.

Code: V6POSTWillPersonallyUseInfoWhenOrdering

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 14: The HOM (Healthful Ordering Menu) 3000 will make finding healthful **vendor** options easier.

Code: V6POSTHOMEasyFindingVendors

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 15: The HOM 3000 will make finding healthful **menu** options easier.

Code: V6POSTHOMEasyFindingMenu

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 16: The HOM 3000 clearly identifies TXST vendors with healthful meal options.

Code: V6POSTHOMIdentifiesVendors

- 5 = Strongly agree
- 4 = Somewhat agree
- 3 = Neither agree nor disagree
- 2 = Somewhat disagree
- 1 = Strongly disagree

Question 17: How likely are you to use the HOM 3000 after completing this training?

Code: V6POSTUseHOMLater

- 5 = Extremely likely
- 4 = Somewhat likely
- 3 = Neither likely nor unlikely
- 2 = Somewhat unlikely
- 1 = Extremely unlikely

Question 18: In your own words, please share your personal opinion about the HOM 3000 Excel file in terms of usefulness, practicality, functionality, applicability, etc.

Code: V6POSTHOMOpinion

Open Response

Question 19: Should the HOM 3000 be modified in any way? Please explain!

Code: V6POSTHOMModifications

Open Response

Question 20: In what ways can you see yourself using the HOM 3000?

Code: V6POSTWaysToUseHOM

Open Response

Question 21: Have you enjoyed learning via video throughout this training?

Code: V6POSTEnjoyVideoTraining

5 = Definitely

4 = Somewhat

3 = Neutral

2 = Somewhat no

1 = Definitely no

Question 22: What was it about the video-based nature of this training that made it enjoyable for you?

Code: V6POSTWhatMadeVideoEnjoyable

Open Response

Question 23: What was it about the video-based nature of this training that was not enjoyable for you?

Code: V6POSTWhatMadeVideoNOTEnjoyable

Open Response

Question 24: What was it about the video-based nature of this training that determined your answer to the previous question?

Code: V6POSTWhatMadeYourNeutral

Open Response

Question 25: To what extent did viewing these training videos increase your confidence in your ability to order more healthfully for meetings and events on campus?

Code: V6POSTDidTrainingIncreaseAbility

5 = Greatly increased

4 = Somewhat increased

3 = Neither increased nor decreased

2 = Somewhat decreased

1 = Greatly decreased

Question 26: How has watching these videos changed what you might order in the future?

Code: V6POSTDidTrainingChangeOrderHabits

Open Response

Question 27: In your own words, describe the key take-aways of this training.

Code: V6POSTTrainingKeyTakeaways

Open Response

SUPPLEMENTARY MATERIALS

1. HEALTHFUL ORDERING MENU 3000 EXCEL FILE

REFERENCES

1. Ward BW, Schiller JS, Goodman RA. Multiple chronic conditions among US adults: a 2012 update. *Prev Chronic Dis*. 2014;11:E62. doi:10.5888/pcd11.130389
2. Report MW. CDC National Health Report : Leading Causes of Morbidity and Mortality and Associated Behavioral Risk and Protective Factors — United States , 2005 – 2013. 2014;63(4):2005-2013.
3. Statistics NC for H. Health , United States , 2015: With Special Feature on Racial and Ethnic Disparities. 2016.
4. Centers for Disease Control and Prevention. About Chronic Disease | Chronic Disease Prevention and Health Promotion | CDC. <https://www.cdc.gov/chronicdisease/about/index.htm>. Published 2018. Accessed October 10, 2018.
5. McLaren L, Hawe P. Ecological perspectives in health research. *J Epidemiol Community Health*. 2005;59(1):6-14. doi:10.1136/jech.2003.018044
6. McLeroy KR, Bibeau D, Steckler A, Glanz K. Ecological Perspective on Promotion Programs. *Health Educ Q*. 1988;15(4):351-377. doi:10.1177/109019818801500401
7. Richard L, Gauvin L, Raine K. Ecological Models Revisited: Their Uses and Evolution in Health Promotion Over Two Decades. *Annu Rev Public Health*. 2011;32(1):307-326. doi:10.1146/annurev-publhealth-031210-101141
8. Kok G, Gottlieb NH, Commers M, Smerecnik C. The Ecological Approach in Health Promotion Programs : A Decade Later. 2008;22(6):437-442.
9. McLeroy KR, Bibeau D, Steckler A, Glanz K. An ecological perspective on promotion programs. *Health Educ Q*. 1988;15(4):351-377.
10. Kwon Y, Marzec ML, Edington DW. Development and Validity of a Scale to Measure Workplace Culture of Health. *J Occup Environ Med*. 2015;57(5):571-577. doi:10.1097/JOM.0000000000000409
11. Kok G. A practical guide to effective behavior change How to apply theory- and evidence-based behavior change methods in an intervention. *Eur Heal Psychol*. 2014;16(5):156-170. doi:10.31234/osf.io/r78wh
12. Kok G, Mesters I. Getting inside the black box of health promotion programmes using intervention mapping. *Chronic Illn*. 2011;7(3):176-180. doi:10.1177/1742395311403013
13. Ammendolia C, Côté P, Cancelliere C, et al. Healthy and productive workers: Using intervention mapping to design a workplace health promotion and wellness program to improve presenteeism. *BMC Public Health*. 2016;16(1). doi:10.1186/s12889-016-3843-x

14. Bartholomew LK, Parcel GS, Kok G. Intervention mapping: a process for developing theory and evidence based health education programs. *Heal Educ Behav*. 1998;25(5):545-563. doi:10.1177/109019819802500502
15. Bartholomew LK, Mullen PD. Five roles for using theory and evidence in the design and testing of behavior change interventions. *J Public Health Dent*. 2011;71(SUPPL. 1). doi:10.1111/j.1752-7325.2011.00223.x
16. Hesselink G, Zegers M, Vernooij-Dassen M, et al. Improving patient discharge and reducing hospital readmissions by using Intervention Mapping. *BMC Health Serv Res*. 2014;14:389. doi:10.1186/1472-6963-14-389
17. Brendryen H, Johansen A, Nesvåg S, Kok G, Duckert F. Constructing a Theory- and Evidence-Based Treatment Rationale for Complex eHealth Interventions: Development of an Online Alcohol Intervention Using an Intervention Mapping Approach. *JMIR Res Protoc*. 2013;2(1):e6. doi:10.2196/resprot.2371
18. Cherrington A, Martin MY, Hayes M, et al. Intervention mapping as a guide for the development of a diabetes peer support intervention in rural Alabama. *Prev Chronic Dis*. 2012;9(7):E36. doi:E36 [pii]
19. Gray-Burrows KA, Day PF, Marshman Z, Aliakbari E, Prady SL, McEachan RRC. Using intervention mapping to develop a home-based parental-supervised toothbrushing intervention for young children. *Implement Sci*. 2016;11:61. doi:10.1186/s13012-016-0416-4
20. Bartholomew Eldredge LK. *Planning Health Promotion Programs : An Intervention Mapping Approach*.
https://books.google.com/books?hl=en&lr=&id=UyrdCQAAQBAJ&oi=fnd&pg=PR11&dq=An+Intervention+Mapping+Approach&ots=Od6A0EJKwC&sig=HbeQgQUghCaZpOpFvXLN KYktD_8#v=onepage&q=An+Intervention+Mapping+Approach&f=false. Accessed September 17, 2018.
21. Peters G-JY. A practical guide to effective behavior change: How to identify what to change in the first place. *Eur Heal Psychol*. 2014;16(5):142-155.
22. Garba RM, Gadanya MA. The role of intervention mapping in designing disease prevention interventions: A systematic review of the literature. *PLoS One*. 2017;12(3):e0174438. doi:10.1371/journal.pone.0174438
23. Hipp JA, Reeds DN, van Bakergem MA, et al. Review of Measures of Worksite Environmental and Policy Supports for Physical Activity and Healthy Eating. *Prev Chronic Dis*. 2015;12(5):140410. doi:10.5888/pcd12.140410
24. Anderko L, Roffenbender JS, Goetzel RZ, et al. Promoting prevention through the affordable care act: workplace wellness. *Prev Chronic Dis*. 2012;9(9):E175. doi:10.5888/pcd9.120092

25. Goetzel RZ, Henke RM, Tabrizi M, Pelletier KR. Do Workplace Health Promotion (Wellness) Programs Work? *Joem*. 2014;56(9):927-934. doi:10.1097/JOM.0000000000000276
26. Abood DA, Black DR, Feral D. Nutrition education worksite intervention for university staff: application of the health belief model. *J Nutr Educ Behav*. 2003;35(5):260-267. doi:10.1016/S1499-4046(06)60057-2
27. Soler RE, Leeks KD, Razi S, et al. A Systematic Review of Selected Interventions for Worksite Health Promotion. The Assessment of Health Risks with Feedback. *Am J Prev Med*. 2010;38(2 SUPPL.):S237-S262. doi:10.1016/j.amepre.2009.10.030
28. Kent K, Goetzel RZ, Roemer EC, Prasad A, Freundlich N. Promoting Healthy Workplaces by Building Cultures of Health and Applying Strategic Communications. *J Occup Environ Med*. 2016;58(2):114-122. doi:10.1097/JOM.0000000000000629
29. Lloyd L, Crixell S, Bezner J, Forrester K, Swearingen C. Genesis of an employee wellness program at a large university. *Health Promot Pract*. 2017;18(6):879-894. doi:10.1177/1524839917725500
30. Bezner JR, Franklin KA, Lloyd LK, Crixell SH. Effect of group health behaviour change coaching on psychosocial constructs associated with physical activity among university employees. *Int J Sport Exerc Psychol*. 2018;0(0):1-15. doi:10.1080/1612197X.2018.1462232
31. Lloyd LK, Crixell SH, Bezner JR, Forester K, Swearingen C. Genesis of an Employee Wellness Program at a Large University. *Health Promot Pract*. 2017;18(6):879-894. doi:10.1177/1524839917725500
32. Mayer JA, Brown TP, Heins JM, Bishop DB. A multi-component intervention for modifying food selections in a worksite cafeteria. *J Nutr Educ*. 1987;19(6):277-280. doi:10.1016/S0022-3182(87)80235-2
33. Hua S, Kimmel L, Van Emmenes M, et al. Health promotion and healthier products increase vending purchases: A randomized factorial trial. *J Acad Nutr Diet*. 2016;1057-1065. doi:10.1016/j.jand.2016.12.006
34. Menge L, Hu Y, Crixell SH, Lloyd L, Bezner J, Burke T. Influences on Catered Event Ordering in a University Workplace: Development and Validation of the Understanding Food Ordering (UFO) Survey. *Am J Heal Promot*. 2018.
35. Tuong W, Larsen ER, Armstrong AW. Videos to influence: a systematic review of effectiveness of video-based education in modifying health behaviors. *J Behav Med*. 2014;37(2):218-233. doi:10.1007/s10865-012-9480-7
36. Van Acker MM, Kuriata MA. Video education provides effective wound care instruction pre- or post-mohs micrographic surgery. *J Clin Aesthet Dermatol*. 2014;7(4):43-47. <http://www.ncbi.nlm.nih.gov/pubmed/24765229>. Accessed July 5, 2018.

37. Denny MC, Vahidy F, Vu KYT, Sharrief AZ, Savitz SI. Video-based educational intervention associated with improved stroke literacy, self-efficacy, and patient satisfaction. *PLoS One*. 2017;12(3):e0171952. doi:10.1371/journal.pone.0171952
38. Love EM, Manalo IF, Chen SC, Chen KH, Stoff BK. A video-based educational pilot for basal cell carcinoma (BCC) treatment: A randomized controlled trial. *J Am Acad Dermatol*. 2016;74(3):477-483. doi:10.1016/j.jaad.2015.10.014
39. Whittaker R, Dorey E, Bramley D, et al. A theory-based video messaging mobile phone intervention for smoking cessation: randomized controlled trial. *J Med Internet Res*. 2011;13(1):e10. doi:10.2196/jmir.1553
40. Fayaz A, Mazahery A, Hosseinzadeh M, Yazdanpanah S. Video-based Learning Versus Traditional Method for Preclinical Course of Complete Denture Fabrication. *J Dent (Shiraz, Iran)*. 2015;16(1 Suppl):21-28. <http://www.ncbi.nlm.nih.gov/pubmed/26106631>. Accessed June 28, 2018.
41. Buch SV, Treschow FP, Svendsen JB, Worm BS. Video- or text-based e-learning when teaching clinical procedures? A randomized controlled trial. *Adv Med Educ Pract*. 2014;5:257-262. doi:10.2147/AMEP.S62473
42. Lee N-J, Chae S-M, Kim H, Lee J-H, Min HJ, Park D-E. Mobile-Based Video Learning Outcomes in Clinical Nursing Skill Education: A Randomized Controlled Trial. *Comput Inform Nurs*. 2016;34(1):8-16. doi:10.1097/CIN.0000000000000183
43. Bauchner H, Osganian S, Smith K, Triant R. Improving parent knowledge about antibiotics: a video intervention. *Pediatrics*. 2001;108(4):845-850. doi:10.1542/peds.108.4.845
44. Jean M, Walthouwer L, Oenema A, Soetens K, Lechner L, Vries H De. Systematic development of a text-driven and a obesity prevention intervention. *BMC Public Health*. 2013;13(1):1. doi:10.1186/1471-2458-13-978
45. Louis Walthouwer MJ, Oenema A, Lechner L, De Vries H. Comparing a video and text version of a web-based computer-tailored intervention for obesity prevention: A randomized controlled trial. *J Med Internet Res*. 2015;17(10). doi:10.2196/jmir.4083
46. Ramsay SA, Holyoke L, Branen LJ, Fletcher J. Six Characteristics of Nutrition Education Videos That Support Learning and Motivation to Learn. *J Nutr Educ Behav*. 2012;44(6):614-617. doi:10.1016/j.jneb.2011.10.010
47. Brame CJ. Effective educational videos: Principles and guidelines for maximizing student learning from video content. *CBE Life Sci Educ*. 2016;15(4):es6.1-es6.6. doi:10.1187/cbe.16-03-0125

48. Guo PJ, Kim J, Rubin R. How video production affects student engagement. In: *Proceedings of the First ACM Conference on Learning @ Scale Conference - L@S '14*. New York, New York, USA: ACM Press; 2014:41-50. doi:10.1145/2556325.2566239
49. Aronson ID, Marsch LA, Acosta MC. Using findings in multimedia learning to inform technology-based behavioral health interventions. *Transl Behav Med*. 2013;3(3):234-243. doi:10.1007/s13142-012-0137-4
50. Koumi J. Expert's Corner. *J Vis Lit*. 2013;32(2):85-114.
51. L. Kay Bartholomew Eldredge, Christine M. Markham, Robert A. C. Ruiter, Gerjo Kok, Maria E. Fernández GSP. *Planning Health Promotion Programs: An Intervention Mapping Approach 4th Edition.*; 2011.
52. Kok G, Schaalma H, Ruiter RAC, Van Empelen P, Brug J. Intervention Mapping: A Protocol for Applying Health Psychology Theory to Prevention Programmes. *J Health Psychol*. 2004;9(1):85-98. doi:10.1177/1359105304038379
53. Bandura a. Social cognitive theory in cultural context. *Appl Psychol*. 2002;51(2):269-290. doi:10.1111/1464-0597.00092
54. Bandura A. Health promotion from the perspective of social cognitive theory. *Psychol Health*. 1998;13(4):623-649. doi:10.1080/08870449808407422
55. Fishbein, Martin; Ajzen I. *Predicting and Changing Behavior: The Reasoned Action Approach*. New York, New York, USA: Psychology Press Taylor & Francis Group; 2010.
56. Glasgow R, DeVellis B, Strecher VJ, et al. Goal Setting as a Strategy for Health Behavior Change. *Health Educ Q*. 1995;22(2):190-200. doi:10.1177/109019819502200207
57. Gollwitzer PM. Goal Achievement: The Role of Intentions. *Eur Rev Soc Psychol*. 1993;4(1):141-185. doi:10.1080/14792779343000059
58. Sheeran P. Intention—Behavior Relations: A Conceptual and Empirical Review. *Eur Rev Soc Psychol*. 2002;12(1):1-36. doi:10.1080/14792772143000003
59. Prochaska JO, Velicer WF. The transtheoretical model of health behavior change. *Am J Heal Promot*. 1997;12(1):38-48.
60. Prochaska JO, Redding CA, Evers KE. The Transtheoretical Model of stages of change. In: *Health Behavior: Theory, Research, and Practice*. 5th ed. San Francisco, CA: Jossey-Bass; 2015:168-222.
61. Atkinson RC, Shiffrin RM. *The Psychology of Learning and Motivation*. (Spence KW, Spence JT, eds.). London: Academic Press; 1968.
62. Atkinson RC, Shiffrin RM, Baddeley A. *Scientists Making a Difference*. (Sternburg R, Fiske S, Foss D, eds.). New York, New York, USA: Cambridge University Press; 2016.

63. Kintch W. Toward a model of text comprehension and production. *Psychol Rev.* 1978;85(5):363-394.
64. Mayer RE. Models for Understanding. *Rev Educ Res.* 1989;59(1):43-64.
doi:10.3102/00346543059001043
65. McGuire WJ. Attitudes and attitude change. In: Lindzey G, Aronson E, eds. *Handbook of Social Psychology: Vol. 2. Special Fields and Applications*. 3rd ed. New York, New York, USA: Random House; 1985:233-346.
66. McGuire WJ. Input and output variables currently promising for constructing persuasive communications. In: Rice RE, Atkin CK, eds. *Public Communication Campaigns*. Thousand Oaks, CA: Sage; 2001:22-48.
67. Krueger R, Casey M. *Focus Groups: A Practical Guide for Applied Research*. 5th ed.; 2015.