

BEYOND PRODUCTS: APPLICATION OF SENSORY ANALYSIS FOR DIVERSE OPPORTUNITIES
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ABSTRACT

Sensory methods have been used extensively for food and beverage products and more recently for non-food products such as personal and household care, automobiles, fine fragrances and other products. The underlying principals and some of the methods used can be applied to a variety of situations other than those testing products or product concepts. Various professions, such as the medical profession, have used sensory methods without calling them that, but increasingly, their use is expanding into fields such as service delivery, information, and education. Recent examples have included the use of sensory techniques to better understand nutritional surveys, to evaluate service delivery in nursing homes, and to assist in educational strategies for health. The objective of the case study presented here was to develop a program using sensory evaluation in the context of an educational program to change eating behaviors in adolescents. Twelve lesson plans, targeting 6th grade students, were designed to be taught in a classroom setting and incorporated the five senses into each lesson plan. The tools created for the lesson plans were intended to give students the ability to assess the quality of their food, make healthier food choices, discover new foods, and establish better eating habits. The program not only incorporated sensory concepts into the lessons, but also was evaluated using consumer research methods to provide insight into the development of the lessons. The lesson plans were formatted to include: behavior objectives, lesson overview, materials needed, background information, in-class activities, extra activities and useful resources, all applying sensory ideas and methods with a focus on healthier eating. These types of applications of sensory analysis expand the field beyond products and into new areas of interest.

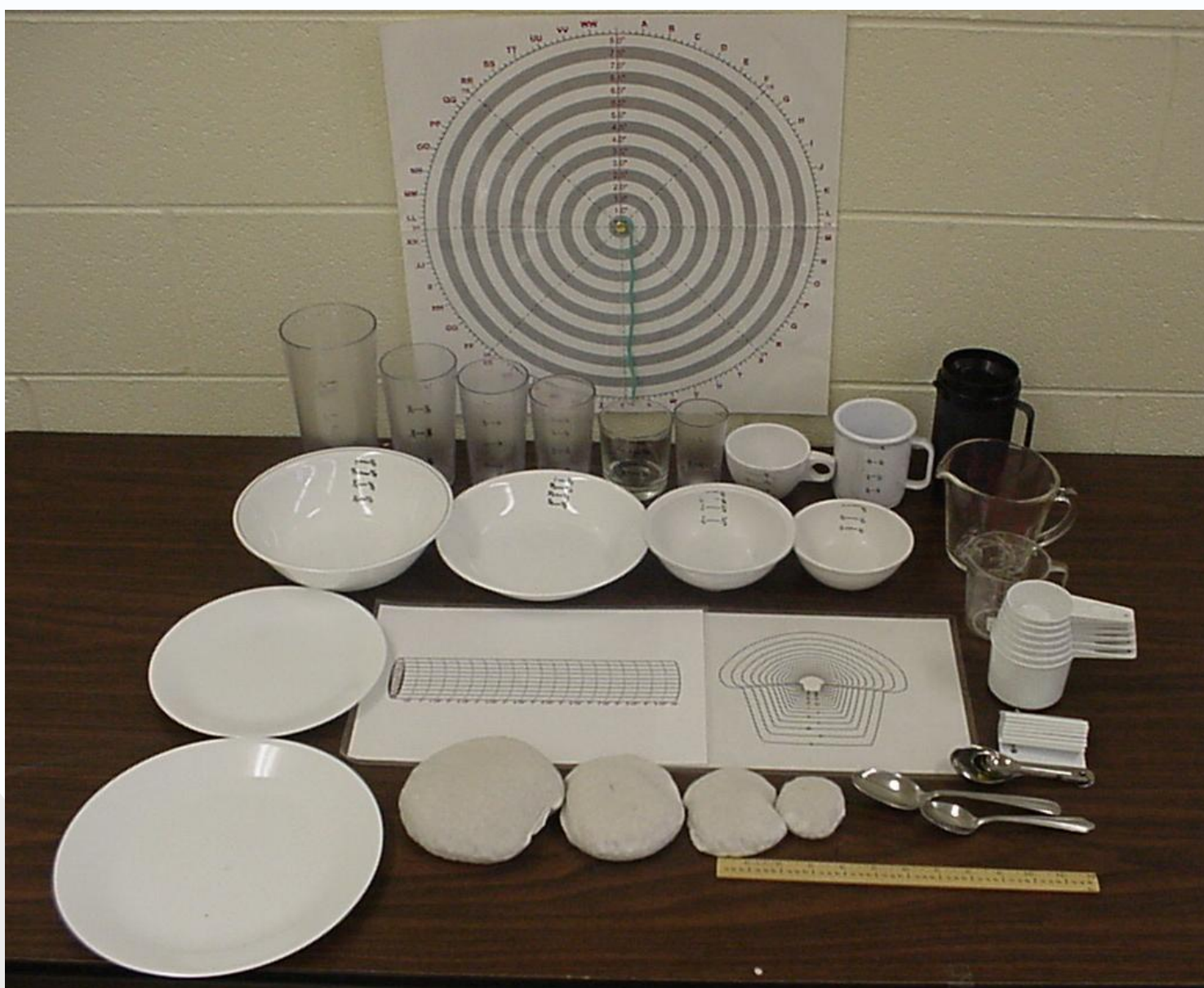
OBJECTIVE

To expand sensory analysis into other areas of interest to obtain extra information.

EXAMPLES OF WAYS SENSORY HAS BEEN USED:

• Use of Scales

This uses scales to measure the size of different things. This allows for people to use different strategies to remember the things that they ate. It also provides a visual aid to help recalling portion sizes. Another use of scales would be to help organize and simplify the person’s memory, guiding them to closer approximations.



*Photo of measuring aids to help recall portion size.

• Use of References

This helps to apply the concept of visual references to make choices. When people look at food portions, do they overestimate or underestimate how much a portions is? Using a physical reference may be used to illustrate a value on a scale.



*Photo of peanut butter references to show a scale of references.

• Use of Design of Experimentation

This applies a design to creating a more balanced and well-rounded research plan. Controlling the factors of the study allows the results obtained to be more easily characterized to the different levels being tested.

An Example of Developing a Conjoint Analysis Test

<p>Titles (A)</p> <ol style="list-style-type: none">Recommended Storage Times For Ready To Eat Foods.Safe Storage Times For Ready To Eat Foods.How Long Can I Keep It? <p>Message (B)</p> <ol style="list-style-type: none">Storing foods too long can make you or your children sick.Short storage times will keep refrigerated foods safe to eat.FDA & USDA have recommended storage times for ready to eat foods.Following recommended storage times can reduce your risk of foodborne illness.Do not store foods longer than recommended.None <p>Graphic (C)</p> <ol style="list-style-type: none">Table (with foods and days)Pie chart (group by days)Refrigerator with arms tossing food into trash canRuler/TimelineOpen Refrigerator <p>Jingle (D)</p> <ol style="list-style-type: none">When in doubt, throw it outHow long is it safe?Use it or throw it?Eat it or toss it?Toss it or toss it (with icon)None <p>Icon (E)</p> <ol style="list-style-type: none">Garbage can with arms ("Trashy")Calendar with the date circled on itCalendar with 3 large datesNone	<p>TITLE</p> <p>Message</p> <p>Graphic with Verbiage</p> <p>Jingle</p> <p>Icon</p>
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CASE STUDY:

LUCKILY WE HAVE 5 SENSES

OBJECTIVE: To develop an educational sensory program that would promote sensory awareness through the use of the five sense while encouraging better food and nutrition habits as well as better health for children.

METHODS: Focus groups were used to find out and understand how much 6th graders knew about health and their eating behaviors. From this information a program was developed addressing at least one sensory aspect and one of the following categories:

- Enhancing food knowledge
- Exploring food product availability
- Importance of moderation
- Incorporating food variety
- Providing information on obesity and exercise

RESULTS: A 12 lesson plan program was designed to be executed in the classroom with 6th graders. Each lesson plan was formatted the same way so that the teachers will better be able to present the information to the students. All lesson plans included:

- Behavior Objectives
- Lesson Overview
- Materials Needed
- Background Information for Teachers
- Teaching Activities
- Extra Activities (optional)
- Useful Resources

EXAMPLES OF TEACHING ACTIVITIES:

Five Senses Optical Illusion



Applesauce Word Find

R L Y W F R Y W W F R W Y P A
F O O N O R S H I E S J L A Q
P E U L I B U R S Y C T A R F
S F O G J A M I S U S P E T W
X C C W H N R S T Z M Z M I Q
T Q C M E N E G D Y F N W C D
A Y K S Y N E T E E W S K L Q
I O S M P Q H S R K J D A E B
M J W S T T X O S E O E P S U
I U I N O M A N N I C K P C D
M R V O L Y X K O B H O L D J
C I M Q M D O M R L B O E O C
X S O U R W Q O R F G C Z O Z
V W A K N C W U X U M L R K W
M O I S T N E S S G R I T T Y

Personal Food Diary

Name: _____	Food Items: (include quantities)
Time: _____	
Meal: _____	
Time: _____	
Snack: _____	
Time: _____	
Meal: _____	
Time: _____	
Snack: _____	
Time: _____	
Meal: _____	
Time: _____	
Snack: _____	

Triangle Test Score Card

Name _____	Date _____	
Instructions		
Before beginning the test, please rinse your mouth with water. Taste the samples in the order they have been presented from left to right. Please rinse your mouth after tasting each sample. Two samples are the same and one is different. Circle the sample number that is DIFFERENT. You may re-taste the samples. You MUST make a choice.		
781	462	347
What is different between the two samples that are the same and the odd sample?		

CONCLUSIONS: From the teachers and student testimonials, the lesson plans have been well designed. After completing the program, students will have a better understanding of sensory knowledge and how it can be used to enhance their food understanding and food choices. Additionally, students will be able to take a more active role in their own lives and use their 5 senses on a daily basis.

SUMMARY

Learning about sensory can be creative and fun. Incorporating the application of sensory analysis into diverse opportunities allows for the 5 senses to be used in all aspects of daily living. Consumers with this new found knowledge may be able to live a healthier and happier lifestyle.

ACKNOWLEDGEMENTS

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