

Reporting on experiments with research integration in teaching

Name
Wender L. P. Bredie, Professor and Sandra Stolzenbach Wæhrens, Assistant Professor, Department of Food Science – Section for Design and Consumer Behaviour, Faculty of Science
Course Name
Sensory Evaluation of Food https://kurser.ku.dk/course/nfob15008u
Study Board
Food, Human Nutrition and Sports
Level and class size
BA, 2nd year, 54 students participated.
Description of the experiment
<p>Develop a new course topic ‘Texture perception of food’</p> <p>4 teachers involved in development of teaching and teaching (Professor, Assistant professor, PostDoc and Research Assistant)</p> <p>Students learn about</p> <ul style="list-style-type: none">• Oral texture sensitivity• Differences in texture perception and preferences across consumer age groups and cultures• Relationships between food texture, oral processing and food intake <p>By</p> <ul style="list-style-type: none">• Presenting examples of research results within the field• Showing the students new approaches to measure oral texture sensitivity and preferences for oral food processing in human subjects• Inviting the students to take part in joint research experiments using presented methodologies <p>Joint research experiment – the student tried different methodologies and learn how to study the relationship between these.</p> <p>1) Texture sensitivity:</p> <ul style="list-style-type: none">• Two Von Frey filaments of different thickness• Each filament is presented multiple times• Subjects indicate when they feel the filament• Threshold calculated <p>2) Preferred mouth behaviour Questionnaire-based categorisation of firm processors and soft processors</p> <p>3) Fat perception and liking of milk with varying fat content Tasting of milk samples</p> <p>Time table: 13:00-13:15 : The importance of texture – An introduction 13:15-13:45: Texture preferences through life 14:00-14:30 Texture sensitivity methods 14:40-15:15 Texture and food intake 15:25-16:00 Oral processing and cross-cultural differences</p>

16:00-16:15 Q&A session
Outcome for the students
<ul style="list-style-type: none"> • Get insight in how to conduct research within sensory and consumer science with focus on texture perception and preference • Be able to discuss and provide feedback on research methodologies based on their experiences as experimenter and test person, herein being critical and reflective towards the applied methodologies
Outcome for the research
<ul style="list-style-type: none"> • Researcher/teacher can try out new research methodologies • With practical exercises, students contribute to the research by collecting data. The outcome of the collected data can be applied in a research publication
Interaction between teaching, research and exams
<ul style="list-style-type: none"> • Research-based teaching involving the students in research activities benefits the students in terms on increased understanding of research field • Increased understanding and learning of the topic, better exam performance • Integrating research in teaching can create awareness and increase student interest in doing research (bachelor and master thesis) within this topic
Adapting of the experiment
<p>COVID-19- Adjustments: Experiment completed in revised form</p> <ul style="list-style-type: none"> • Lectures in class: Replaced by spoken power point presentations or power point presentations with additional text • Plenum discussion in class: Replaced by discussion fora in Absalon with teachers • Research methodologies demonstrated in class: Replaced by video-demonstrations of methodologies • Testing with the presented methodologies in class: Not possible and thus data not collected for further discussion and data analysis • As the developed teaching covers fundamental understanding of food perception, the same material can be used in the next teaching years.
Strengths and weaknesses
<p>Strenghts</p> <ul style="list-style-type: none"> • Get insight in how to conduct research within sensory and consumer science with focus on texture perception. • Be able to discuss the applied methodologies and provide feedback based on experiences as experimenter and test person, herein being critical and reflective. <p>Weaknesses</p> <ul style="list-style-type: none"> • Practical exercises requires many resources when many students in class
Experienced challenges
<p>It has been difficult to get feedback from students on how they experienced research integration in this new course topic 'Texture perception of food' as</p> <ul style="list-style-type: none"> • The planned teaching was revised • Teachers busy adapting to online teaching and preparing themselves and students on new exam form →→less focus on evaluation of this specific activity.
The most important experience
<ul style="list-style-type: none"> • Student learning by doing • Practical exercises requires many resources when many students in class • Relatively easy to make teaching more relevant by integrating presentation of research data