



Cross-cultural adaptation of Cooking Skills Evaluation Questionnaire: a tool to Brazilian foodservice context

Manuela Mika Jomori, Maria Elena Echevarria-Guanilo, Greyce Luci Bernardo, Paula Lazzarin Uggioni, Martin Caraher, Rossana Pacheco da Costa Proença

INTRODUCTION

Public health policies recommend cooking skills' evaluations aiming to achieve healthy eating habits.



Canada's Dietary Guidelines

Canada.ca/FoodGuide

for Health Professionals and Policy Makers



Cook it!
fun, fast food for less



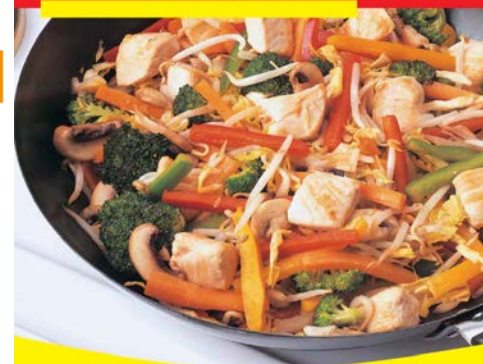
Community nutrition education programme

HSC Public Health Agency

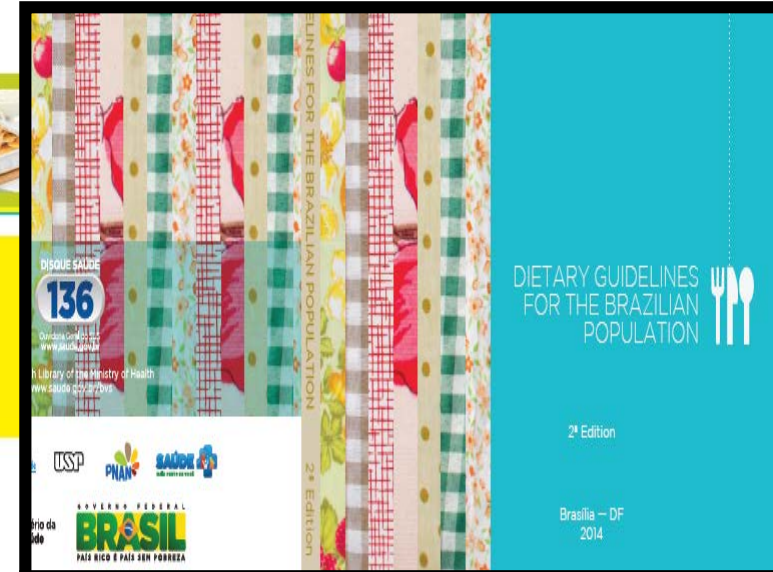


Cook it!

An evaluation of a community nutrition education programme in Northern Ireland - the summary report



HPA Health Promotion Agency



MINISTRY OF HEALTH

COOKING SKILLS

Cooking and other culinary skills are no longer being shared between generations. This favours consumption of ultra-processed foods.

Natural or minimally processed foods, when not eaten by themselves, are selected, prepared, seasoned, cooked, combined with other foods and ingredients, and made into dishes and meals. These culinary skills have been devised, developed and perfected in all societies, and adjusted and improved from generation to generation. They make natural or minimally processed foods into attractive, delicious, satisfying and sometimes memorable meals.

Cooking and growing

Chopping and changing

This report is for anyone who runs, manages or commissions cooking skills courses. It uses evidence from a realist self-evaluation study group to show the impact of cooking skills courses on people who are affected by health inequalities: vulnerable people and parents managing on a low income.

Publishers: Community Food and Health (Scotland), NHS Health Scotland

Publication category: Cooking and growing

Related topics: community food activity, cookery sessions, evaluation

Area of Work: Cookery skills

Publications Library

Newsletters

Policy and planning

Retailing and catering

Conferences and networking

Business and project development

Cooking and growing

Children and young people

Professional development

Caraher et al., 1999; HSC Public Health Agency, 2009; Chenhall, 2010; Community Food and Health Scotland, 2013; Brazil, 2014

INTRODUCTION



In Brazil, foodservice sector can improve cooking skills of their staffs to offer healthy and unprocessed food preparations.

OBJECTIVE

This study described the cross-cultural adaptation process of a cooking skills questionnaire from the US to Brazil.



A top-down view of various kitchen tools scattered on a rustic wooden surface. The tools include several wooden spoons of different sizes, a metal grater, a whisk, a rolling pin, a heart-shaped cookie cutter, a small metal scoop, and two small yellow eggs with star-shaped cutouts. A central white rectangular box contains the text: Measurement, Data collection, Data analysis.

Measurement
Data collection
Data analysis

Measurement

www.clemsor

Availability and Accessibility of Fruits and Vegetables (AAFV) Index

DIRECTIONS: This section is about the presence of fruits and vegetables in your house during the past week. Please circle YES or NO for EACH question.

| | | | |
|----|---|-----|----|
| 1. | Did you have pure (100%) fruit juice in your home last week? | Yes | No |
| 2. | Did you have fresh fruit in your home last week? | Yes | No |
| 3. | Did you have raw or cooked vegetables in your home last week? | Yes | No |
| 4. | Did you have salad in your home last week? | Yes | No |
| 5. | In the last week, were fruit and vegetables on the kitchen counter or somewhere in the open? | Yes | No |
| 6. | In the last week, was 100% fruit juice or cut up fresh fruit on the front shelf of the refrigerator as a snack? | Yes | No |
| 7. | In the last week, were cut up fresh vegetables on the front shelf of the refrigerator as a snack? | Yes | No |
| 8. | In the last week, were vegetables in the refrigerator prepared so they readily could be used in a meal? | Yes | No |

Extension

1. AAFV – Availability and Accessibility of F&V

Yes/No

8 scales

64 items

8

1. AAFV – Availability and Accessibility of F&V

7

2. CA – Cooking Attitude

11

3. CB – Cooking Behavior

3

4. SEPC - Self-efficacy in Produce Consumption

6

5. SEC – Cooking Self-efficacy

12

6. SECT – Self-efficacy in Basic Cooking Techniques

9

7. SEFVS – Self-efficacy in Using F&V and Seasonings

8

8. CTT - Knowledge of Cooking Terms and Techniques

Measurement

Cooking Attitude (CA) Scale

DIRECTIONS: For each item below, indicate the extent to which you agree or disagree with the statement about cooking.

| | | Strongly disagree | Disagree | Neither agree nor disagree | Agree | Strongly agree |
|-----|--|--------------------------|--------------------------|----------------------------|--------------------------|--------------------------|
| 9. | I do NOT like to cook because it takes too much time. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. | Meals made at home are affordable | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 11. | Cooking is frustrating. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 12. | I like trying new recipes. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 13. | It is too much work to cook. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 14. | Making meals at home helps me to eat more healthfully. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 15. | I find cooking tiring. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

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Food, Nutrition, and Packaging Sciences

AAFV – Availability and Accessibility of F&V

→ 2. CA – Cooking Attitude

3. CB – Cooking Behavior

EPC - Self-efficacy in Produce Consumption

→ 5. SEC – Cooking Self-efficacy

– Self-efficacy in Basic Cooking Techniques

– Self-efficacy in Using F&V and Seasonings

Knowledge of Cooking Terms and Techniques

Measurement

Cooking Behavior (CB) Scale

DIRECTIONS: For the 3 items below, think about your usual cooking habits.
Select **ONE** box for **EACH** question.

| | How often did you do the following? | Not at all | 1 to 2 times this week | Once a week | Several times each week | About everyday |
|-----|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 16. | Prepare meals from basic ingredients (such as whole fresh produce, raw chicken, etc). | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 17. | Prepare meals using convenience items (such as bagged salad, prepared mashed potatoes, pre-shredded carrots, deli rotisserie chicken). | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 18. | Reheat or use leftovers in another meal. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 18a | Eat breakfast away from home | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 18b | Reheating leftovers from a home cooked lunch or dinner meal | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 18c | Reheating leftovers from a meal from away from home for lunch or dinner meal | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 18d | Using leftovers from a home cooked meal in a new dish | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 18e | Using leftovers from a meal away from home in a new dish | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 18f | Using fresh and convenience items in combination for home meal preparation (i.e. a bag salad with cooked meat or pasta dish) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 18g | Eat lunch away from home | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 18h | Eat dinner away from home | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |



Quality and Accessibility of F&V

2. CA – Cooking Attitude

3. CB – Cooking Behavior

4. SE – Self-efficacy in Produce Consumption

5. SEC – Cooking Self-efficacy

6. Basic Cooking Techniques

7. Using F&V and Seasonings

8. Cooking Terms and Techniques

Cooking Self-Efficacy (SEC) Scale

DIRECTIONS: For each item below, indicate the extent to which you feel performing the particular activity. Select ONE box for EACH question.

| | | NOT at all confident | NOT very confident | Neither confident nor unconfident | Confident | Extremely confident |
|-----|--|----------------------|--------------------|-----------------------------------|-----------|---------------------|
| 22. | Cook from basic ingredients (e.g., whole lettuce, fresh tomatoes, chicken) | | | | | |
| 23. | Follow a written recipe (ex: preparing fresh salsa from tomatoes, onion, garlic, jalapeño peppers) | | | | | |
| 24. | Prepare dinner items you currently have in your pantry and refrigerator | | | | | |
| 25. | Use knife skills in the kitchen. | | | | | |
| 26. | Plan nutritious meals. | | | | | |
| 27. | Use basic cooking techniques. | | | | | |

Self-Efficacy for Using Basic Cooking Terms and Techniques (SEBCTT) Scale

DIRECTIONS: For each item below, indicate the extent to which you feel performing the particular activity. Select ONE box for EACH question.

| | | NOT at all confident | NOT very confident | Neither confident nor unconfident | Confident | Extremely confident |
|-----|-------------|----------------------|--------------------|-----------------------------------|-----------|---------------------|
| 28. | Boiling | | | | | |
| 29. | Simmering | | | | | |
| 30. | Steaming | | | | | |
| 31. | Deep frying | | | | | |
| 32. | Sautéing | | | | | |
| 33. | Stir-frying | | | | | |
| 34. | Grilling | | | | | |
| 35. | Poaching | | | | | |
| 36. | Baking | | | | | |
| 37. | Roasting | | | | | |
| 38. | Stewing | | | | | |
| 39. | Microwaving | | | | | |

Produce Consumption Self-Efficacy (SEPC) Scale

Self-Efficacy for Using Fruits, Vegetables, and Seasonings (SEFVS) Scale

DIRECTIONS: For each item below, indicate the extent to which you currently feel confident about preparing the following foods. Select ONE box for EACH question.

| | | NOT at all confident | NOT very confident | Neither confident nor unconfident | Confident | Extremely confident |
|-----|--|----------------------|--------------------|-----------------------------------|-----------|---------------------|
| 40. | Fresh or frozen green vegetables (ex: broccoli, spinach) | | | | | |
| 41. | Root vegetables (ex: potatoes, beets, sweet potatoes) | | | | | |
| 42. | Fruit (ex: peaches, watermelon) | | | | | |
| 43. | Herbs (ex: basil, thyme) | | | | | |
| 43a | Spices (ex: cayenne pepper, cinnamon) | | | | | |
| 43b | Vinegars | | | | | |
| 43c | Citrus juice | | | | | |
| 43d | Citrus zest | | | | | |
| 43e | Hot sauces | | | | | |

of Cooking Terms and Techniques

Knowledge of Cooking Terms and Techniques Evaluation

DIRECTIONS: For questions 56-61 below, indicate what you believe is the best answer by checking the box next to your response. Select **ONE** answer for **EACH** question.

44. **Cooking peaches briefly in boiling water then cooling in ice water to remove the skins is an example of:**

- * Blanching
- * Poaching
- * Broiling
- * Don't know

45. **If a recipe tells you to sauté an onion, you should cook it:**

- * In a basket set above boiling water.
- * In a pan with a small amount of hot oil.
- * In a pan with a small amount of water.
- * Don't know.

46. **A diced potato should be cut into :**

- * Long, thin matchstick size pieces.
- * Very small and uneven pieces.
- * Cubes usually $\frac{1}{4}$ to $\frac{3}{4}$ inch in size.
- * Don't know.

47. **Water is simmering when:**

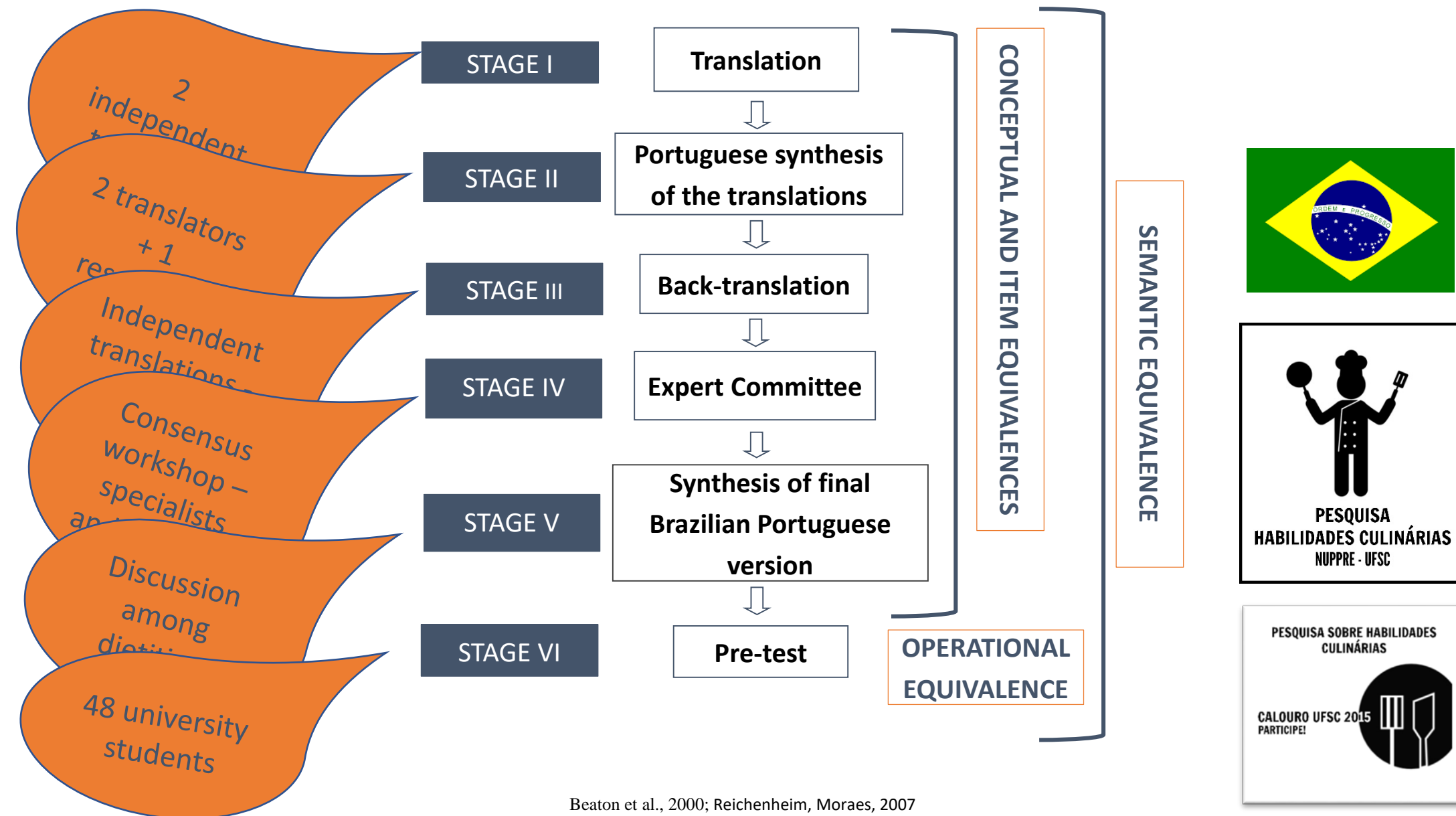
- * Steam begins to form.
- * Tiny bubbles collect on the bottom and sides of the pan.
- * Bubbles rise rapidly and break on the surface.
- * Don't know.

48. **Sweet potatoes are roasting when they are:**

- * Cooked by dry heat in a hot oven.
- * Cooked in a hot oven with liquid in the pan.
- * Cooked in a covered pan with a small amount of liquid.
- * Don't know.

Data Analysis

Cross-cultural adaptation of CWC Questionnaire



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QUESTIONÁRIO DE IDENTIFICAÇÃO DAS HABILIDADES CULINÁRIAS

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Contatos

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Departamento de Nutrição
Núcleo de Pesquisa de Nutrição em Produção de Refeições – NUPPRE
Campus Universitário, Trindade.
Florianópolis/SC
88040-900.

Endereço eletrônico:

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<https://www.facebook.com/pesquisahabilidadesculinarias/>

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Navigation: Página | Mensagens | Notificações | Informações | Ferramentas de publicação | Configurações | Ajuda

Profile Picture: Logo of a chef holding a spoon and a spatula, with the text **PESQUISA HABILIDADES CULINÁRIAS**.

Page Name: Pesquisa Habilidades Culinárias
Category: Site educacional

Stats (ESTA SEMANA):

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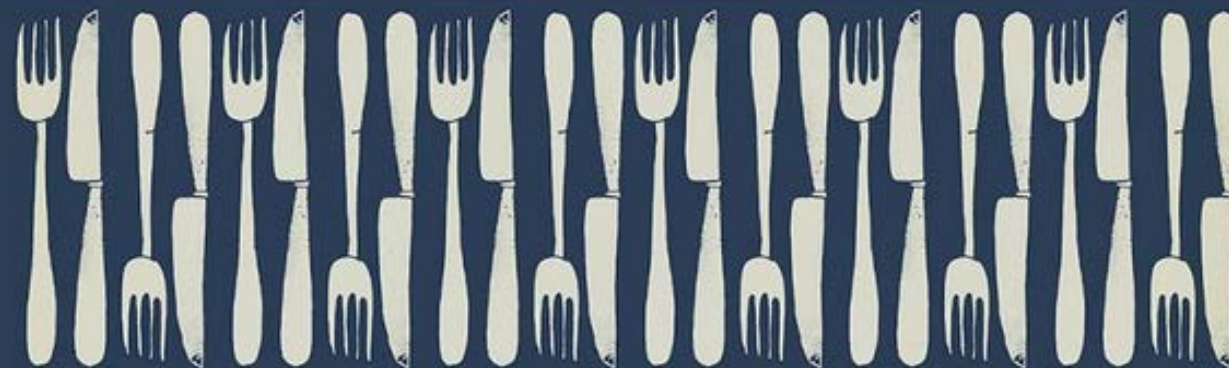
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Write something...

Pesquisa Habilidades Culinárias

Footer: Pesquisa Habilidades Culinárias. A pesquisa a Habilidades culinárias em estudantes.




QUESTIONÁRIO DE IDENTIFICAÇÃO DAS HABILIDADES CULINÁRIAS

Por favor, preencha os dados a seguir.

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Available in August, 2015



RESULTS

Cooking techniques

Cross-cultural adaptation

SEMANTIC, CONCEPTUAL AND ITEM
EQUIVALENCES

STAGE I

Translation

STAGE II

Portuguese synthesis
of the translations

STAGE III

Back-translation

STAGE IV

Expert
Committee

STAGE V

Synthesis of final Brazilian
Portuguese version

STAGE VI

Pre-test

Boiling

DIRECTIONS: For each item
performing the particular acti

| | | |
|-----|-------------|--------------------------|
| 28. | Boiling | <input type="checkbox"/> |
| 29. | Simmering | <input type="checkbox"/> |
| 30. | Steaming | <input type="checkbox"/> |
| 31. | Deep frying | <input type="checkbox"/> |
| 32. | Sautéing | <input type="checkbox"/> |
| 33. | Stir-frying | <input type="checkbox"/> |
| 34. | Grilling | <input type="checkbox"/> |
| 35. | Poaching | <input type="checkbox"/> |
| 36. | Baking | <input type="checkbox"/> |
| 37. | Roasting | <input type="checkbox"/> |
| 38. | Simmering | <input type="checkbox"/> |
| 39. | Microwaving | <input type="checkbox"/> |

cooking in boiling water



cooking over a low heat





RESULTS

Cooking techniques

Cross-cultural adaptation

STAGE I

Translation

STAGE II

Portuguese synthesis
of the translations

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Expert
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STAGE VI

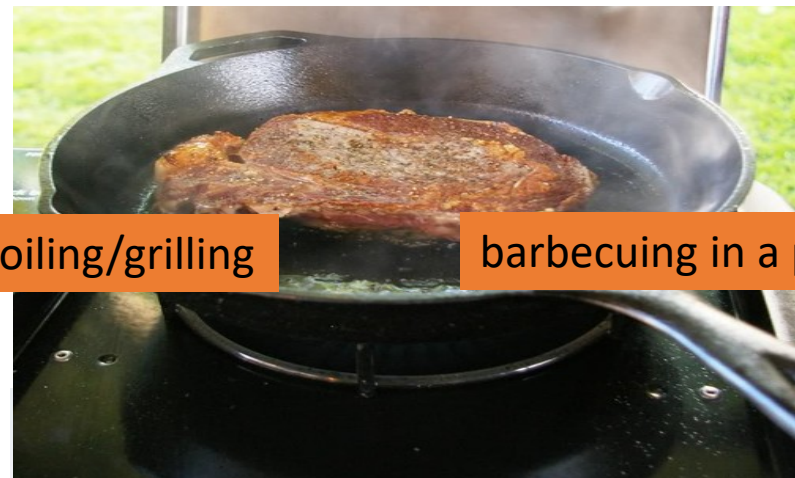
Pre-test

SEMANTIC, CONCEPTUAL AND ITEM
EQUIVALENCES

Grilling

broiling/grilling

barbecuing in a pan



Baking

baking in the oven



Roasting

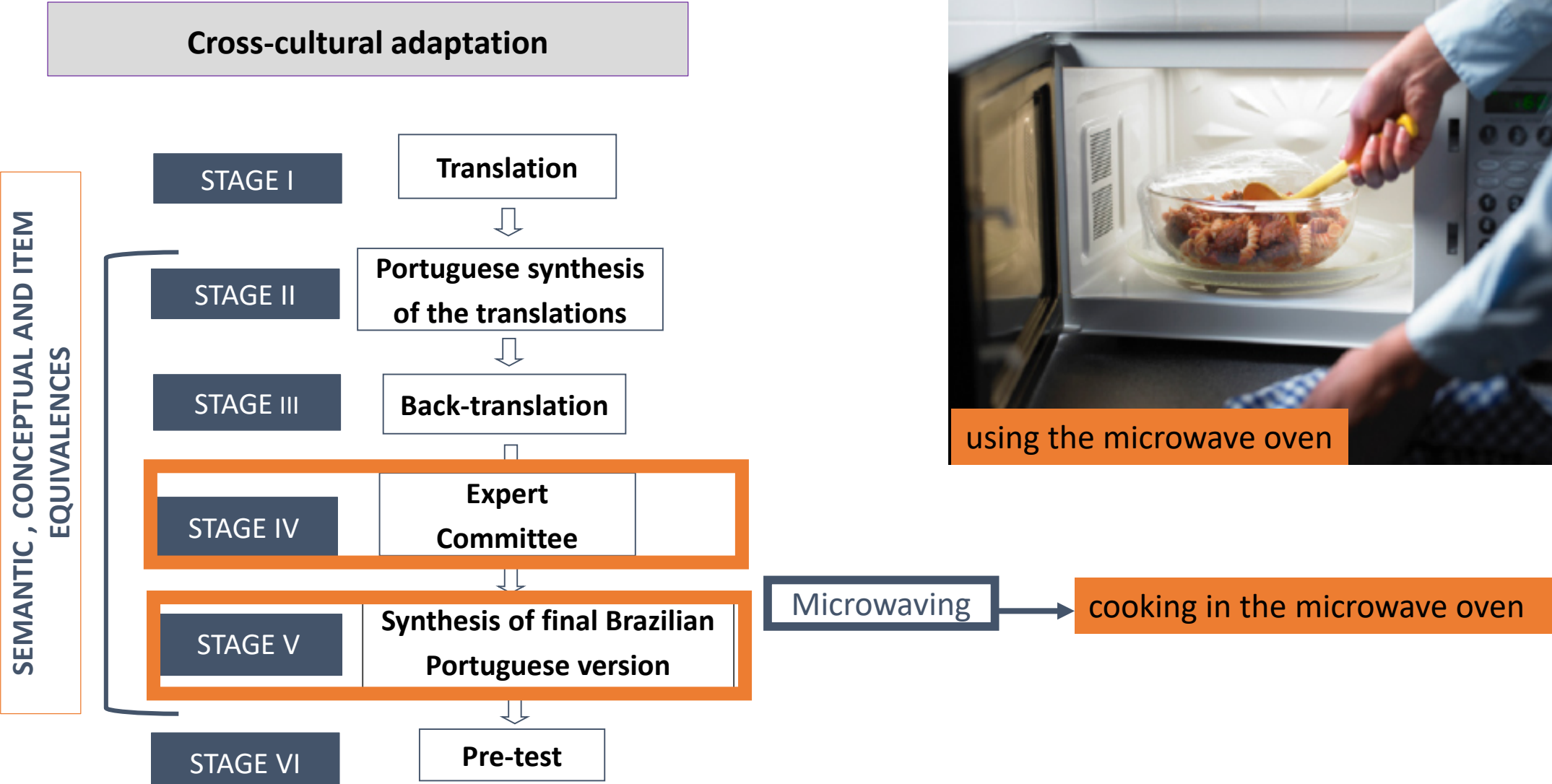
roasting in flame

barbecuing in a grill



RESULTS

Cooking techniques

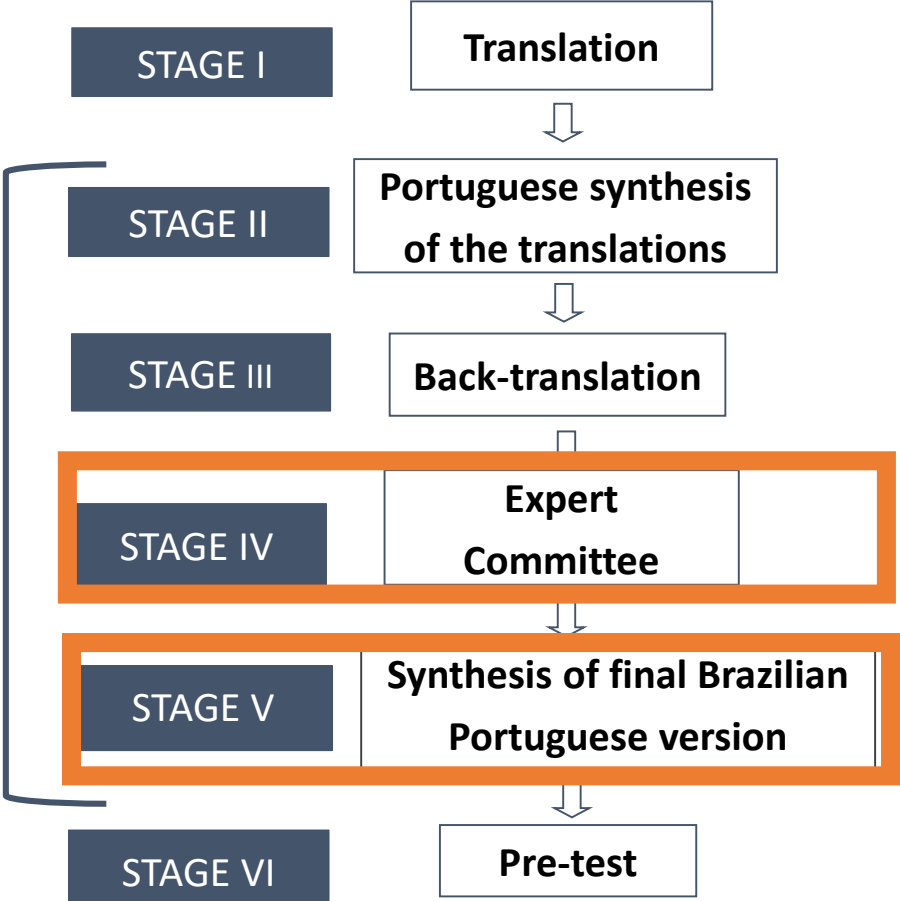


RESULTS

Cooking terms

Cross-cultural adaptation

SEMANTIC, CONCEPTUAL AND ITEM EQUIVALENCES



| Cooking Attitude (CA) Scale | | | | | | |
|---|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| DIRECTIONS: For each item below, indicate the extent to which you agree or disagree with the statement about cooking. | | | | | | |
| 14. | Making meals at home helps me to eat more healthfully. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

in a healthier way

| Self-Efficacy for Using Fruits, Vegetables, and Seasonings (SEFVS) Scale | | | | | | |
|---|--|--------------------------|--------------------------|-----------------------------------|--------------------------|--------------------------|
| DIRECTIONS: For each item below, indicate the extent to which you currently feel confident about preparing the following foods. Select ONE box for EACH question. | | | | | | |
| | | NOT at all confident | NOT very confident | Neither confident nor unconfident | Confident | Extremely confident |
| 40. | Fresh or frozen green vegetables (ex: broccoli, spinach) | <input type="checkbox"/> | | | <input type="checkbox"/> | <input type="checkbox"/> |
| 41. | Root vegetables (ex: potatoes, beets, sweet potatoes) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

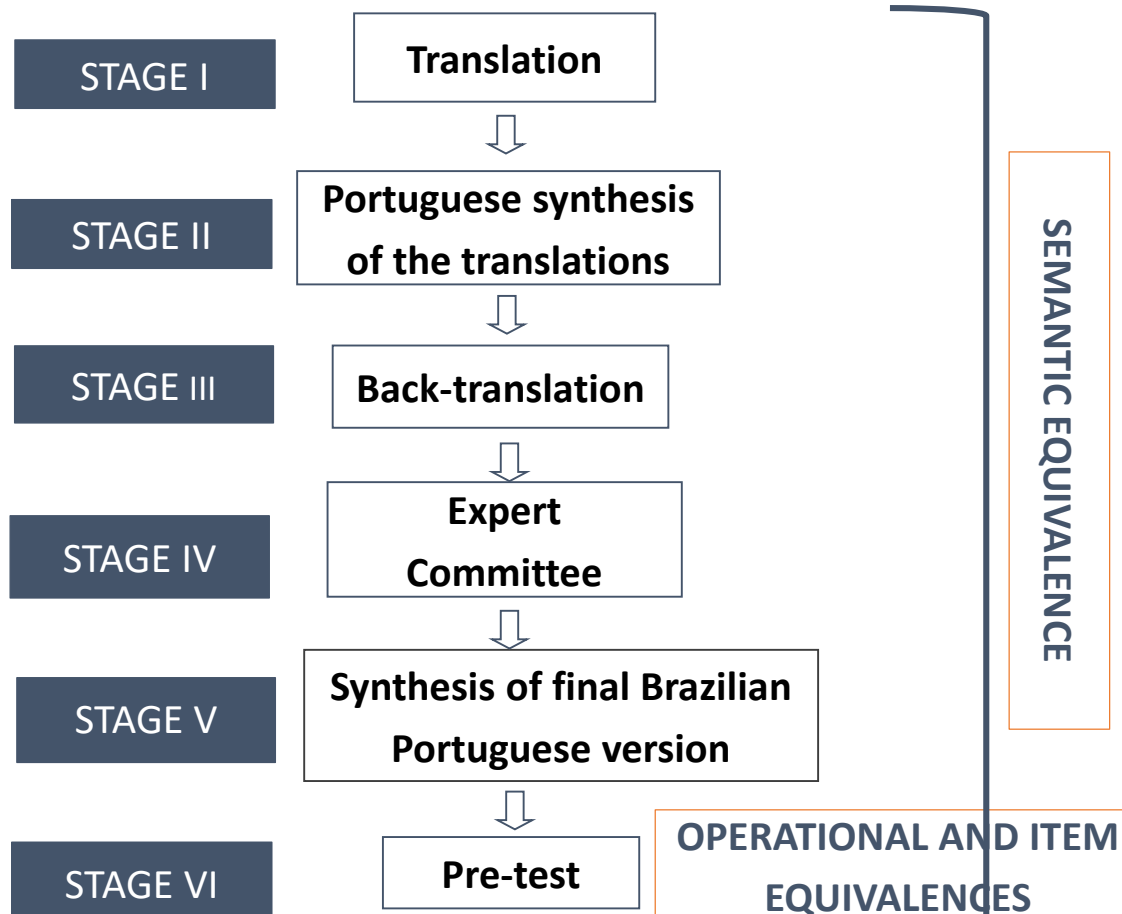
vegetables and greens

starch



RESULTS

Cross-cultural adaptation



In the **pre-test**, few participants misunderstood the questionnaire, thus supporting **semantic, item and operational equivalences** between the **original** and the **Brazilian Portuguese versions**.



The concept of cooking skills: A review
with contributions to the
scientific debate


*O conceito de habilidades culinárias: uma
revisão com contribuições ao
debate científico*

Manuela Mika JOMORI¹  0000-0003-2294-6692

Francisco de Assis Guedes de VASCONCELOS¹  0000-0002-6162-8067

Greyce Luci BERNARDO¹  0000-0003-0411-012X

Paula Lazzarin UGGIONI¹  0000-0003-2696-0539

Rossana Pacheco da Costa PROENÇA¹  0000-0001-6149-8752

JOMORI, Manuela Mika et al. *Rev. Nutr.* [online]. 2018,
31(1): 119-135.
<http://dx.doi.org/10.1590/1678-98652018000100010>

DISCUSSION

**The amendments of cooking
skills terms showed the
complexity of cooking skills
concepts and highlighted the
importance of the cross-cultural
adaptation process.**

CONCLUSIONS

The use of an adapted questionnaire in Brazil can **adequate** the **evaluation of cooking skills** and plan appropriated **interventions in foodservice sector** to provide healthy preparations.





THANK YOU!

mikajomori@yahoo.com.br