

A Collaborative Approach to Building Evaluation Capacity among Graduate Nutrition Education Students Using *JNEB* GEMs

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How does “evaluation” make you feel?

A word cloud on a black background. The most prominent words are 'assessment' (large, green) and 'results' (large, blue). Other significant words include 'effectiveness' (blue), 'grade' (white), 'improvements' (white), 'schools' (white), 'nutrition' (white), 'scale' (white), 'effective' (white), 'list' (green), 'judge' (white), 'improve' (green), 'summary' (white), 'process' (white), 'done' (white), 'refine' (white), 'curriculum' (white), 'determine' (white), 'testing' (white), 'question' (white), 'nervous' (white), 'study' (white), 'just' (white), 'get' (white), 'survey' (white), 'impact' (white), 'assess' (white), 'comparison' (white), 'criticism' (white), 'education' (white), 'rigor' (white), 'progress' (white), 'recommendations' (white), and 'test' (white).

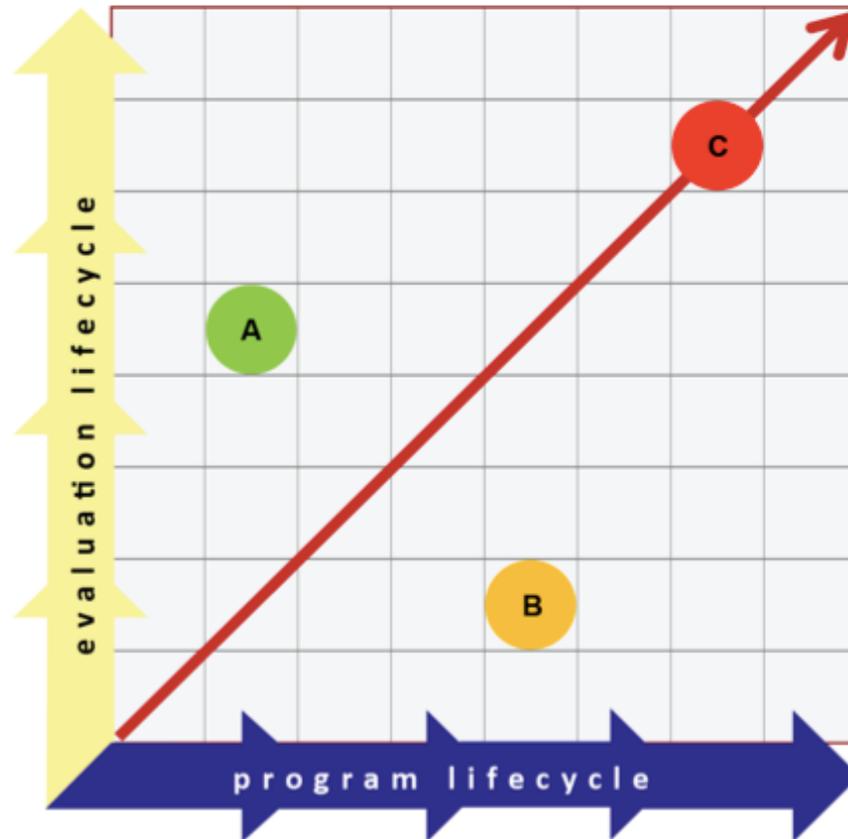
assessment
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determine
testing
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“Just get it done.”

Why do we have **EVALUPHOBIA**?

- Past experiences, especially during schooling or in the workplace
- Emphasis on mature programs and rigorous causal designs in university settings

Resource-intensive evaluations are not always appropriate for programs delivered by entry-level nutrition educators.



Urban, J. B., Hargraves, M., & Trochim, W. M. (2014). Evolutionary evaluation: Implications for evaluators, researchers, practitioners, funders and the evidence-based program mandate. *Evaluation and program planning*, 45, 127-139.

Can learning more about evaluation improve attitudes and self-efficacy?

- 90-minute evaluation seminar + readings
- Applying knowledge in a collaborative activity

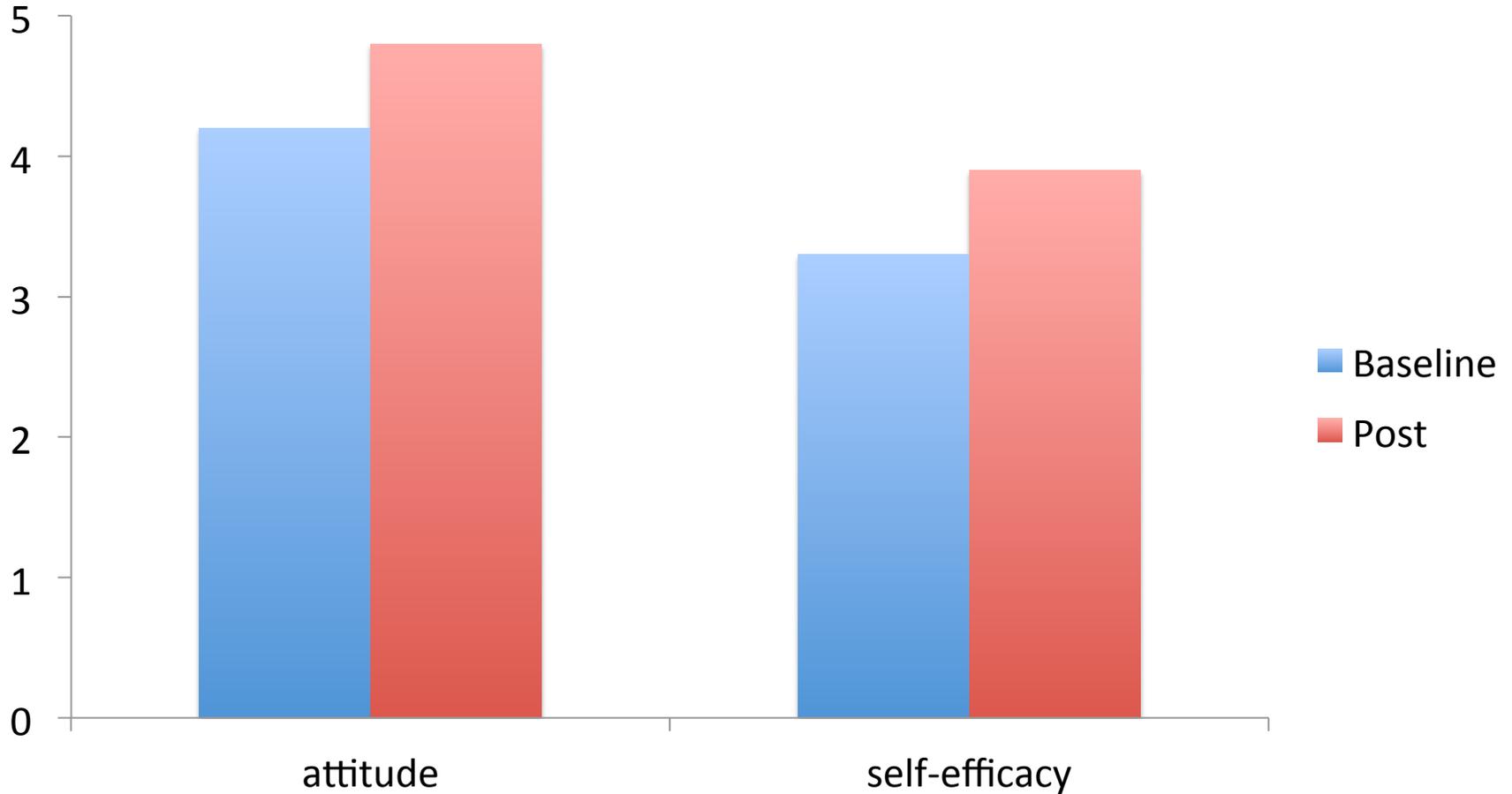
Lecture + readings

- Value of evaluation in nutrition education
- Appropriate evaluation by program stage
- Types of evaluation
- Strategies for integrating context and participant voices in evaluation

Collaborative activity

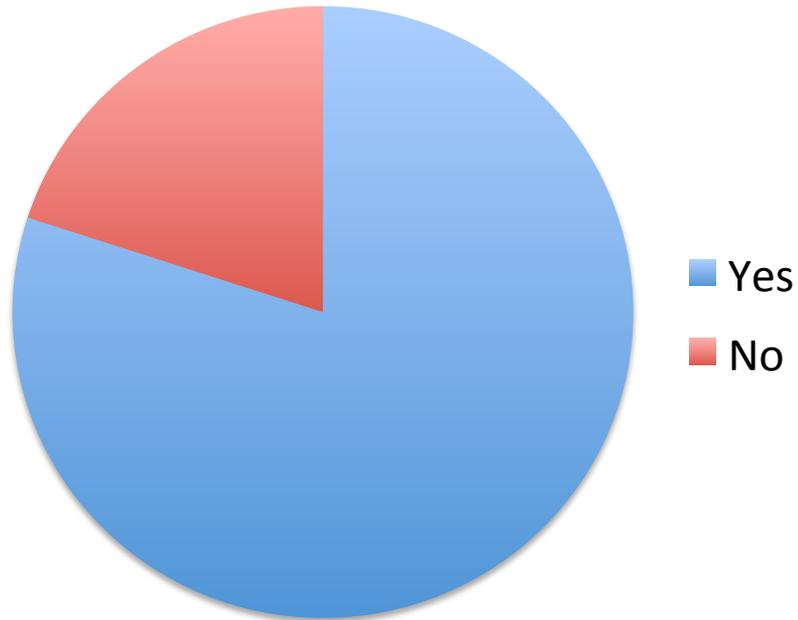
1. Each group of 3-4 students was presented with a “Great Educational Material” from *JNEB* with the evaluation section hidden under a flap.
2. Based on program description, groups planned how they would evaluate the program.
3. Groups compared their approach and the published evaluation.
4. Groups shared their program, evaluation, and comparison with the class.

Learning about evaluation improved attitudes and self-efficacy.

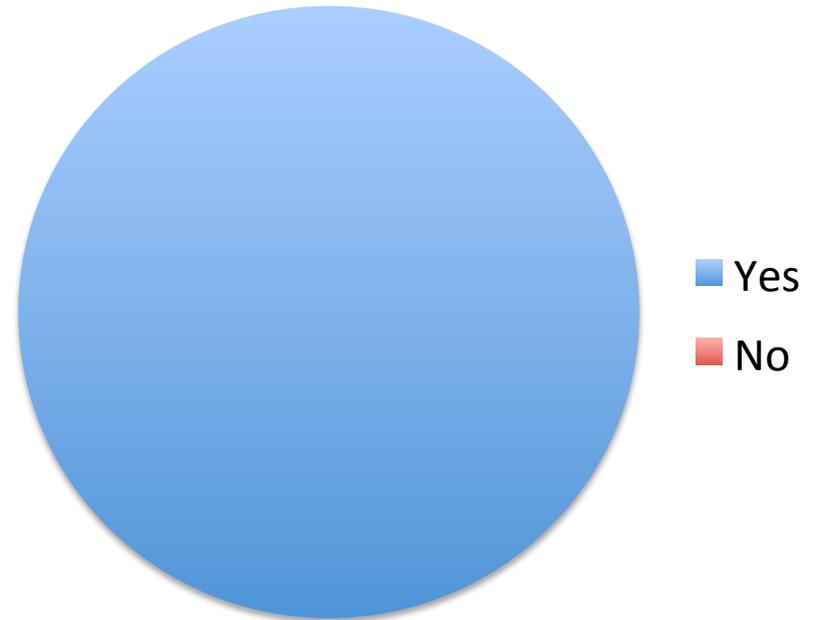


Do you consider yourself an evaluator?

Pre



Post



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Evaluating Nutrition Education

Marissa Burgermaster

Objectives

Students will be able to:

- Articulate the value of program evaluation in the field of nutrition education
- Describe the benefits and drawbacks of using a hierarchy of evidence
- Suggest appropriate evaluation designs for different programs
- Compare and contrast formative, process, and outcome evaluation
- Analyze how implementation and contextual factors can be integrated in an evaluation
- Identify strategies for including participant voices in evaluation
- Apply principles from “evolutionary evaluation” and “comprehensive approach to process evaluation” in their own nutrition education projects

Readings

- Graig, E. (2014). Why evaluate? Usable Knowledge. www.usablellc.net
- Academy of Nutrition and Dietetics (2012). Which type of study is preferred? *Evidence Analysis Manual*. Chicago, IL: Academy of Nutrition and Dietetics, pp. 30-32.
- Archibald, T. (2015). “They just know”: The epistemological politics of “evidence-based” non-formal education. *EPP*, 48, 137-148.
- Chen, H.T. (2010). The bottom up approach to integrative validity: A new perspective for program evaluation. *EPP*, 33, 205-214.
- Urban, J.B., Hargraves, M. & Trochim, W.M. (2014). Evolutionary evaluation: Implications for evaluators, researchers, practitioners, funders and the evidence-based practice mandate. *EPP*, 45, 127-139
- Durlak, J. & DuPre, E. (2008). Implementation matters: A review of research on the influence of implementation on program outcomes and the factors affecting implementation. *AJCP*, 41, 327-350.
- Steckler, A. et al. (2003). Pathways process evaluation results: A school-based prevention trial to promote healthful diet and physical activity in American Indian third, fourth, and fifth grade students. *Preventive Medicine*, 37, S80-90.
- Singh, A.S., Chinapaw, M.J.M., Brug, J., & van Mechelen, W. (2009). Process evaluation of a school-based weight gain prevention program: the Dutch Obesity Intervention in Teenagers (DOiT). *HER*, 24(5), 772-222
- Baranowski, T. & Jago, R. (2005) Understanding the mechanisms of change in children’s physical activity programs. *Exercise and Sport Science Reviews*, 33(4), 163-168.
- Gray, H.L., Contento, I.R., Koch, P. (2015). Linking implementation process to intervention outcomes in a middle school obesity prevention curriculum, ‘Choice, Control and Change.’ *HER*.
- Greaney, M. et al. (2014). Implementing a multicomponent school-based obesity prevention intervention: A qualitative study. *JNEB*, 46(6), 576-581.
- Burgermaster, M., Contento, I., Gray, H. L., & Koch, P. (2015). Food, Health & Choices: A comprehensive approach to process evaluation for childhood obesity prevention trials. *JNEB*, 47(4), S77.

Key questions:

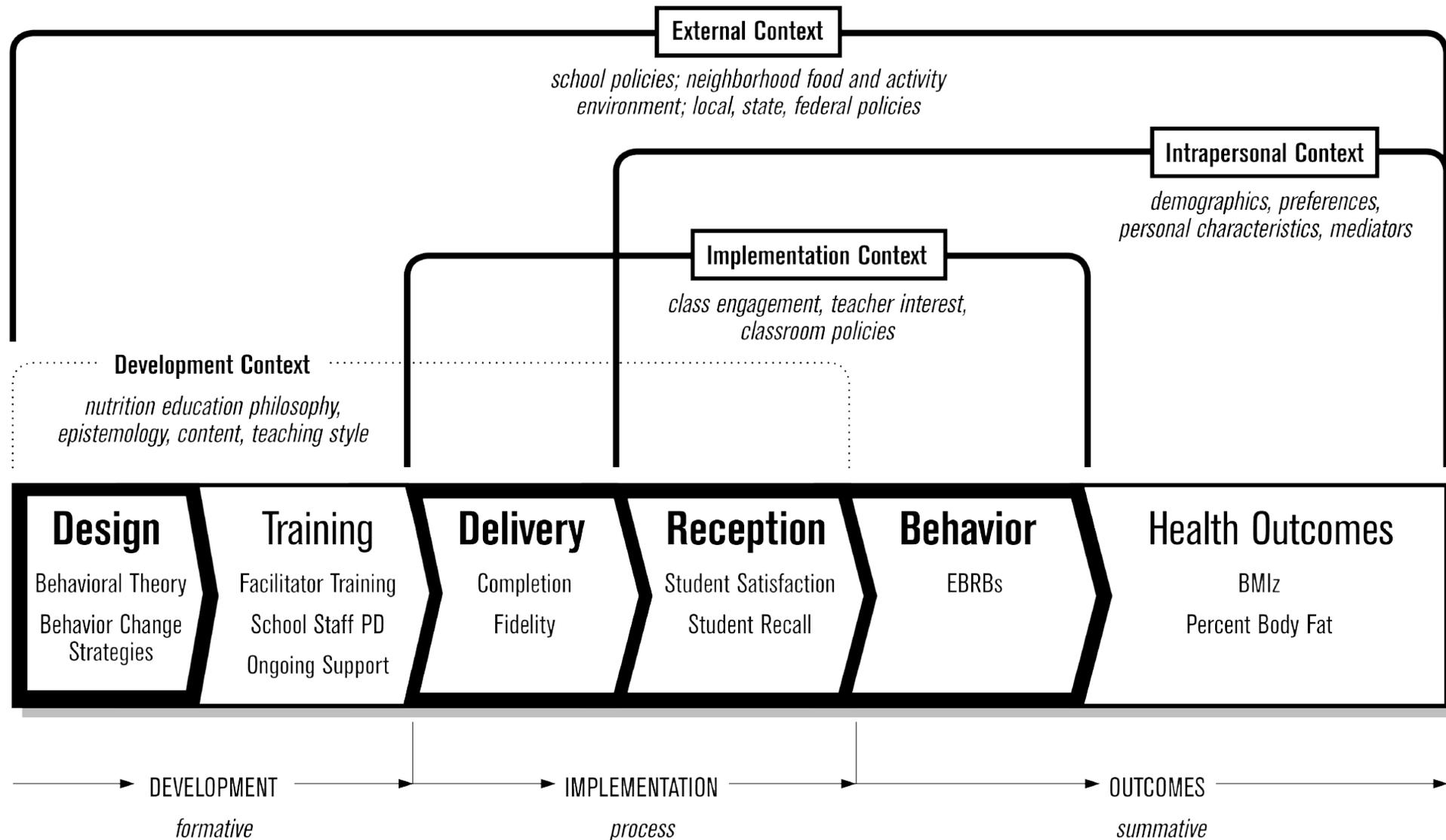
- Why evaluate?
- What are the various connotations of the word, “evaluation”? How does evaluation make people feel? Why is this important to acknowledge?
- How should nutrition education be evaluated?
- When should we use the hierarchy of evidence and the comprehensive approach to process evaluation in nutrition education? Are they mutually exclusive? Should all nutrition education evaluations incorporate any or all of them?
- How can you use evaluation in your work as a nutrition educator?

Appropriate evaluation by program stage

Program Evolution		Phase	Evaluation Evolution	
Initiation	Program is in <i>initial implementation(s)</i> , either as a brand new program or as an adaptation of an existing program.	I-A	Examines <i>implementation, participant and facilitator satisfaction</i> . Uses process and participant <i>documentation</i> and assessment and <i>post-only evaluation of reactions and satisfaction</i> .	Process & response
	Program still undergoing <i>rapid or substantial change/adaptation</i> or revision, after initial trials.	I-B	Focuses on <i>implementation</i> , and increasingly on <i>presence or absence of selected outcomes</i> . Evaluation is <i>post-only</i> ; outcome measures may be under development with attention to internal consistency (reliability).	
Development	<i>Scale and scope of revisions or changes/adaptations are smaller</i> ; most program elements are still evolving while a few may be implemented consistently.	II-A	Examines <i>program's association with change in group outcomes</i> , for these participants in this context. Uses <i>unmatched pre- and post-test of outcomes</i> , quantitative/qualitative assessment of change, assessment of measure reliability and validity.	Change
	<i>Most program elements are implemented consistently</i> ; minor changes may still take place as some elements may still be evolving.	II-B	Examines <i>program's association with change in group (and/or individual) outcomes</i> , for these participants in this context. Uses <i>matched pre- and post-test of outcomes</i> , quantitative/qualitative assessment of change, verifying measure reliability and validity.	
Stability	<i>Program is implemented consistently</i> ; participant experience from one implementation to the next is relatively stable (formal lessons or curricula exist).	III-A	Assesses <i>effectiveness</i> using design and statistical controls and comparisons (<i>control groups, control variables or statistical controls</i>).	Comparison & Control
	Program has <i>formal written procedures/protocol</i> and can be implemented consistently by new well-trained facilitators.	III-B	Assesses <i>effectiveness</i> using <i>controlled experiments or quasi-experiments (randomized experiment; regression-discontinuity)</i> .	
Dissemination	Program is being <i>implemented in multiple sites</i> .	IV-A	Examines <i>outcome effectiveness across wider range of contexts</i> . Multi-site analysis of integrated large data sets over multiple waves of program implementation.	Generalizability
	Program is <i>fully protocolized and is being widely distributed</i> .	IV-B	Formal assessment across multiple program implementations that enable general assertions about this program in a wide variety of contexts (e.g., meta-analysis).	

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Integrating context and participant voices



Burgermaster, M. (2015). *Food, Health & Choices Implementation and Context: The Case for a Comprehensive Approach to Process Evaluation in School-Based Childhood Obesity Prevention Trials*. Columbia University.