

Bringing Structure to Complexity: Applying the TOP Model Across Four USDA Programs

Kenna Kesler
Research Technician III
Utah State University
kenna.kesler@usu.edu

Michelle Burrows
Assistant Professor
Utah State University
michelle.burrows@usu.edu

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Introduction

The United States Department of Agriculture (USDA) has invested in multiple higher education grant initiatives designed to expand student training and address persistent workforce shortages (USDA NIFA, n.d.). However, evaluation practices within higher education grant programs remain inconsistent, fragmented, or underdeveloped. Many programs lack standardized measures of implementation or outcomes, making it difficult to determine whether funded activities are achieving their intended effects (U.S. Government Accountability Office, 2017). These inconsistencies pose challenges for professionals who must demonstrate accountability, communicate impact to stakeholders, and make data-informed decisions about program improvement. Without a shared evaluation structure, professionals often rely on program-specific or ad hoc approaches that limit comparability across grants and hinder the ability to build a coherent evidence base. A structured, hierarchical framework is needed to support consistent evaluation across diverse initiatives.

The Targeting Outcomes of Programs (TOP) model provides a framework for evaluation. TOP offers a systematic approach for examining program implementation and outcomes which can help address evaluation inconsistencies in higher education (Rockwell & Bennett, 2004). Although TOP has been widely used in Extension and community-based programming, limited research has explored how it can be applied across multiple higher education grant programs. This study addresses this gap by describing the application of the TOP model to four USDA-funded programs and identifying methodological insights gained from its use.

Conceptual Framework

The Targeting Outcomes of Programs (TOP) model is a seven-level hierarchical framework designed to guide program planning and evaluation (Rockwell & Bennett, 2004). When used for evaluation, the model begins with Level 1 (Resources) and progresses through Activities, Participation, Reactions, Knowledge/Attitudes/Skills/Aspirations (KASA), Practices, and Social, Economic, and Environmental (SEE) conditions. For early-stage higher education programs, Levels 2 through 5 are most relevant because they capture implementation processes and short-term participant outcomes. The TOP model aligns closely with logic models commonly used in agricultural education and provides a consistent structure for evaluating diverse programs.

Methods

This methodological study examined how the TOP model was applied to evaluate four USDA-funded higher education programs. The program team first developed logic models outlining intended activities, expected participation, and short-term outcomes for each program. Evaluators then mapped these logic models onto TOP Levels 2–5 to create shared evaluation constructs across programs.

The evaluation team developed data-collection instruments to assess Activities (Level 2), Participation (Level 3), Reactions (Level 4), and KASA outcomes (Level 5). Surveys were administered through Qualtrics to all past and current project directors. To ensure face and content validity, instruments were reviewed by a panel of experts that included USDA National Institute of Food and Agriculture (NIFA) program leaders and institutional specialists. Additional surveys were created for student participants and distributed by project directors. Interviews and a focus group were also conducted with students who opted in through the survey. The semi-structured interview protocol was informed by KASA constructs and by themes emerging from earlier survey responses.

Results

Findings focus on methodological insights rather than program outcomes. Three primary themes emerged. First, TOP provided a consistent structure across diverse programs. Mapping logic models to TOP Levels 2–5 created a shared evaluation language that facilitated cross-program alignment. Programs with different goals and activities were able to use the same hierarchical structure to describe implementation and early outcomes. Second, operationalizing TOP levels clarified evaluation priorities. Defining Activities, Participation, Reactions, and KASA outcomes for each program helped identify gaps in program documentation and areas where evaluation measures needed refinement. Programs with less clearly defined activities benefited from the structured planning process. Third, TOP supported standardization of data collection. Using the same TOP-aligned constructs across programs enabled the development of parallel survey instruments, improved comparability, and reduced the burden on evaluators.

Conclusions / Implications

The application of the TOP model across four USDA-funded programs demonstrated that TOP is a practical and adaptable framework for multi-grant evaluation in higher education. Its hierarchical structure supported alignment between program design, implementation, and early outcomes, even among programs with differing goals and activities. The process of mapping logic models to TOP levels enhanced evaluative rigor.

The findings suggest several implications for agricultural education evaluators and institutions managing multiple grant-funded programs. First, the TOP model can serve as a unifying framework for multi-program evaluation and improve comparability and communication across initiatives. Second, integrating TOP during program planning may strengthen logic model development and clarify intended outcomes. Third, standardizing evaluation instruments using TOP constructs can reduce redundancy and increase efficiency in data collection. Fourth, agricultural education programs seeking to demonstrate collective impact to USDA or other funders may benefit from adopting TOP as a shared evaluation structure.

Future research may explore how TOP can be extended to later-stage outcomes (Practices and SEE conditions) as programs mature or how the model can support longitudinal evaluation across cohorts.

References

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