Application of Delphi Method in Extension Needs Assessment

(UC ANR ECB Training)

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Learning objectives

- At the end of this presentation, you will be able to:
  - Understand Delphi method
  - Review practical applications where Delphi was used in Extension needs assessment
  - Advantages of Delphi method – personal reflections
  - Understand challenges and ways to overcome those – personal reflections

Delphi - Introduction

- A group-consensus building method with a purposively selected panel
  - Reduce domination by powerful individuals
  - Reduce personality trait bias
  - Controlled feedback
  - Problem-solving focus
  - Free expression of ideas
- Usually, 3-4 rounds with first round being open ended (some also use pre-selected ideas in first round)

Two examples

- Identifying the essential competencies for extension educators as perceived by evaluators working for different Extension systems
- Identifying the challenges (and potential suggestions to overcome challenges) faced by urban and sub-urban Extension professionals in planning, delivering, and evaluating Extension programs in urban and suburban areas

Essential Competencies

- Need/context – Identifying essential evaluation competencies for Extension educators
- Target Audience – Extension educators
- Panelists – Evaluation specialists working for US Cooperative Extension System
  - Used AEA Extension Education Evaluation TIG listserv and individual university websites
  - Follow-up individual solicitation calls to gauge interest
  - 46 evaluation specialists representing 31 states and had average 12 years of experiences

Diaz, J., Kumar Chaudhary, A., Jayaratne, K. S. U., & Assan, E.* (2020). Expanding evaluation competency research: Exploring competencies for program evaluation using the context of non-formal education. Evaluation and Program Planning, 79. doi: 10.1016/j.evalprogplan.2020.101790

Essential Competencies

- Three round modified Delphi study
  - Three open-ended question with first question “Please list all of the core program evaluator competencies that are necessary to build the evaluation capacity of Cooperative Extension educators to conduct meaningful evaluations” focusing on current project
    - Constant comparative analysis
    - 96% (n = 44) response rate and 98 unique themes
  - Second round – 93% (n = 43) response rate and 40+1 competencies retained using a priori consensus
  - Third round – 96% (n= 44) response rate and 36 final competencies

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	Competency	%
1	Conduct a needs assessment that informs program development	89.8
2	Use evaluation results to improve either an existing program or future programs	89.7
3	Clearly articulate a program theory of change	87.5
4	Ability to develop a logic model	85.0
5	Conduct culturally-responsive evaluations	85.0
6	Integrate evaluative thinking throughout programming cycle	84.2
7	Differentiate between inputs, outputs, outcomes and impacts	82.5
8	Follow best practices for ethical evaluations and human subject protection measures (i.e. IRB compliance procedures)	82.1
9	Measure program outcomes and impacts	82.1
10	Understand the target audience for evaluation results	82.1

	Competency	%
11	Understand how power, privilege, race and gender play in designing and analyzing evaluation data	81.6
12	Write impact statements	81.6
13	Determining how and when to collect data	80.0
14	Understand the type of evidence needed from an evaluation (based on who the evaluation results are for)	79.5
15	Develop a program theory of action	79.0
16	How to identify what data are important for the purpose of accountability	79.0
17	Ability to identify issues or problems (i.e. issue identification)	77.5
18	Understand what programs are worth evaluating	76.9
19	Utilize evaluation results to effectively develop and disseminate tailored messages to key stakeholder groups	76.9
20	Advocate for the value of evaluation and use of evaluation findings	75.0

	Competency	%
21	Determine key stakeholders and engage them in program development and evaluation	75.0
22	Develop a list of evaluation questions that will guide the evaluation design	75.0
23	Develop measurable objectives aligned with intended program outcomes	75.0
24	Interpretation of evaluation results to understand program's ability to meet need or solve problem	74.4
25	Utilize multiple evaluation techniques that extend beyond surveys (i.e. focus groups, interviews, observation, records review, etc.)	74.4
26	Articulate the purpose, importance, and use of evaluation	72.5
27	Effective communication skills (written and oral) to engage stakeholders	72.5
28	Identification of impact indicators	71.8
29	Utilize appropriate scales of measurement	71.8
30	Specify the types of expected program outcomes	70.3

	Competency	%
31	Develop an evaluation plan that is incorporated into the plan of work to link program development to evaluation	70.0
32	Develop appropriately framed questions/measures to effectively assess program outcomes (i.e. knowledge, behavior change, etc.) and needed improvements.	70.0
33	Differentiate the levels/types of outcomes	70.0
34	Understand data collection methods such as qualitative, quantitative, and mixed methods and select the method(s) appropriate for the program and audience.	69.2
35	Determine appropriate evaluation design and approaches for their programs	67.5
36	Develop a quality survey	67.5

Urban and Sub-urban Extension

- Need/context – Identifying the challenges (suggestions/strategies) faced by urban and sub-urban Extension professionals in planning, delivering, and evaluating Extension programs in urban and suburban areas
- Target Audience – Urban and Suburban Extension educators
- Panelists – Extension educators working in 7 urban counties of Pennsylvania
  - Used publicly accessible University directory (excluded administrative assistants, advisers, part-time employees, and program assistants) to identify educators
  - Follow-up individual email communication and consultation
  - Identified 55 educators with 30 agreed to participate

Basak, S.* & Kumar Chaudhary, A. (in press). Urban/suburban extension: Challenges & solutions for program design, delivery, and evaluation. Journal of Extension.

Urban and Sub-urban Extension

- Three round modified Delphi study
  - Two open-ended questions “Please list all the challenges that you face in designing, delivering, and evaluating Extension programs in urban and suburban contexts; what do you consider as strategies or solutions to overcome the challenges described in the previous question?”
    - Constant comparative analysis
    - 83.3% (n = 25) response rate and 41 challenges and 31 strategies
  - Second round – 83.3% (n = 25) response rate and 22 challenges and 28 strategies retained using a priori consensus
  - Third round – 90% (n= 47) response rate and 20 challenges and 27 strategies

Challenges

Challenge	*f*
1. Lack of time and competing demands among Extension educators	100
2. Inadequate compensation of Extension staff to keep pace with the living cost in urban areas	100
3. Urban programming requires a hyper-localized collaboration, outreach, and continued presence	92
4. Difficulty in recruitment and retention of diverse (e.g., bi- or multi-lingual) Extension employees	88.46
5. A gap in understanding the actual needs of diverse urban communities	88.46
6. The long time needed to develop connections in urban areas	88.46
7. Lack of interest in/awareness of Extension in general/Extension programs among the urban audience	84.62
8. Difficulty in recruitment and retention of diverse (e.g., bi- or multi-lingual) community volunteers	84.62
9. Due to the centralization of Extension efforts, the educators lack a direct connection with program stakeholders	84.62
10. Lack of diversity (e.g., racial) within Extension creates a challenge to connect with the urban audience	84.62
11. Inappropriate support from Extension for an urban audience who needs hands-on training/instruction	84.62
12. Difficulty in advertising programs to specific audiences	80.77
13. Limited resources among participants, volunteers, and partners affecting their participation in programs	76.93
14. Lack of program staff	76.93
15. Not having access to program resources in alternative languages	76.93
16. The complexity of issues (e.g., policies and regulations) in urban areas	76.93
17. Inappropriate location of Extension office/programming site	76.93
18. Competing needs (e.g., job, illness) of program participants affect their recruitment to programs	69.24
19. Limited urban experience among Extension professionals	69.24
20. Many programs are geared toward communities with resources and political support	68.75

Strategies

Strategy	*f*
1. Appropriate compensation to urban Extension staff considering the cost of living and skills needed	100
2. Focus on topics that bridge the gap between all urban communities (e.g., food and nutrition)	100
3. Representation in Extension leadership of people with urban experience	100
4. Partnership/collaboration with agencies/programs doing similar work	96.15
5. Enhanced onboarding and continued education training of Extension professionals	96.15
6. Setting realistic expectations for educators working in urban areas	96.15
7. Recruitment of Extension professionals with required expertise (e.g., language) and demographic characteristics (e.g., racial diversity) to serve diverse urban needs	96.15
8. Building strategic relationships in urban communities	92.59
9. In-person meetings with Extension stakeholders where they are	92.31
10. Reducing educators' workload to focus more on programming efforts	92
11. Providing more on-the-ground experience to educators while training them about important issues in urban communities	92
12. Increased support from Extension administrators	92
13. Develop and provide accessibility to program resources in alternative languages	88.47
14. Increase the number of staff for public-facing positions	88.47

Strategies

1.	Better planning and management of staff transitions to maintain the continuity of programs	88.47
2.	More investment in urban and sub-urban initiatives by Extension for future success	88
3.	Context-specific program materials/Rebranding of programs in the urban context	84
4.	Enhanced support (e.g., training on project management) for Extension volunteers	84
5.	Forming an urban advisory group to support urban programming efforts	84
6.	Intensive statewide pilot testing of programs to better serve urban and sub-urban audiences	84
7.	Use of innovative ways (e.g., volunteer ambassadors) to attract new volunteers	84
8.	More flexibility, support, and adaptability for educators in urban areas	84
9.	Recruitment of County Advisory Board from constituents and partners, not alumni	83.33
10.	Locate urban Extension offices in central and accessible locations	80
11.	Access to a storage facility to store program materials	80
12.	Easier and more streamlined process to evaluate programs	80
13.	Enhanced engagement with local funders to get sponsorships and gifts	76

Advantages of Delphi method over other methods - Reflection

- Democratic consensus method
- Less resource intensive (travel, time, money)
- Avoid conflicts
- Quick, structured and very organized process

Delphi challenges and ways to overcome those – Reflections

- Identification and recruitment of panelists (putting a boundary – depends on topic) – decide early on
- Maintaining panelists engaged (time commitment and returning to three rounds)– keep emphasizing the importance and implications of study findings
- Quick turnaround for round 1 analysis – keep a team and division of labor

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THANK YOU & QUESTIONS ?

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