Utah Agriculture Teachers’ Perceptions of Teaching Urban and Non-Traditional Agriculture Content

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INTRODUCTION/NEED FOR RESEARCH

- Agriculture teachers expressed need to prepare existing & upcoming students with skills & knowledge for broader scope of agriculture careers in Food, Agriculture, Natural Resources & Human Sciences (FANH) (ManPower, 2015).
- Agriculture teachers often teach agricultural content in prescriptive manner, focusing on traditional careers in agriculture.
- Few agriculture teachers have experience/exposure to prepare students for focusing on traditional careers in agriculture.
- Agriculture teachers expressed need to prepare existing & upcoming students with skills & knowledge for broader scope of agriculture careers.
- Purpose: Evaluate participants’ knowledge, confidence, & level of importance regarding the integration of urban & non-traditional agriculture concepts into curriculum & Supervised Agricultural Experiences (SAEs).

THEORETICAL FRAMEWORK

Theory of Change (Taplin, Clark, Collins, & Colby, 2013)

- Improve economic and social conditions by reducing Food, Agricultural, Natural Resources & Human Sciences (FANH) career gap in urban and suburban environments in Utah
- Increase number of high school graduates who pursue FANH careers in Utah
- Host Career Exploration Day
- Offer 3 one-day workshops
- Change agriculture teachers’ attitudes toward mentoring students in selecting FANH careers
- Change agriculture teachers’ knowledge of skills needed for FANH careers
- Improve confidence of agriculture teachers to teach FANH skills

METHODOLOGY

- Developed lesson plans, worksheets, & PowerPoints about nutrition, genetics, & marketing of alternative/specialty animals in agriculture & adapted USU Extension’s curriculum about community supported agriculture in Utah for workshop.
- Agriculture teachers attended Urban Agriculture-Farm and Feed Workshop & tour offered during summer conference.
- Administered retrospective pretest-posttest evaluation at end of workshop.
- Ran paired-samples t-tests in SPSS version 23 & computed effect size using Cohen’s d (Thalheimer & Cook, 2002).

FINDINGS

Demographic Information (42 respondents)

- Completed traditional teacher certification program (n = 29, 75%)
- Bachelor’s degree (n = 14, 37.8%)
- Some Graduate Work (n = 7, 18.9%)
- Master’s Degree (n = 15, 40.5%)
- Doctorate Degree (n = 1, 2.7%)

Change in Knowledge, Confidence, and Importance of Integrating Urban-Non-traditional Concepts into Curriculum and SAEs

<table>
<thead>
<tr>
<th>Construct</th>
<th>Pretest Mean (M)</th>
<th>Pretest SD (SD)</th>
<th>Posttest Mean (M)</th>
<th>Posttest SD (SD)</th>
<th>t</th>
<th>df</th>
<th>p</th>
<th>Cohen’s d</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge about urban/non-traditional agriculture &amp; SAE options</td>
<td>14.31</td>
<td>3.95</td>
<td>20.50</td>
<td>2.48</td>
<td>9.49</td>
<td>41</td>
<td>.000</td>
<td>1.46</td>
</tr>
<tr>
<td>Confidence to integrate urban/non-traditional agriculture concepts into teaching</td>
<td>5.55</td>
<td>1.89</td>
<td>7.86</td>
<td>1.57</td>
<td>9.18</td>
<td>41</td>
<td>.000</td>
<td>1.41</td>
</tr>
<tr>
<td>Importance of urban/non-traditional agriculture concepts &amp; SAE options for their students</td>
<td>6.86</td>
<td>1.92</td>
<td>8.90</td>
<td>1.21</td>
<td>8.59</td>
<td>41</td>
<td>.000</td>
<td>1.32</td>
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</tbody>
</table>

CONCLUSIONS/IMPLICATIONS/RECOMMENDATIONS

- Workshop demonstrated increase in participants’ content knowledge & confidence associated with teaching these topics.
- Majority of participants lived in urban or urban cluster areas, so workshop’s curriculum & suggested SAEs will help agriculture teachers implement urban & non-traditional agriculture concepts.
- Teaching urban & non-traditional agriculture would prepare participants’ students for broader scope of FANH careers.
- Administer follow-up survey with participants to evaluate integration of urban & non-traditional agriculture concepts into curriculum & SAE projects with students.
- Survey agriculture education students’ knowledge of & interest in urban & non-traditional agriculture careers to measure effectiveness of workshop curriculum.