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## **Social Impact Assessment in the Cooperative Extension System: Revitalizing the Community Capitals Framework in Measurement and Approach**

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### **Abstract**

*Measuring program impact is continually placed in the forefront of discussions, efforts, and reporting when it comes to outreach and engagement efforts related to Cooperative Extension. However, the diversity of programs represented through program areas, as well as the complexities of local infrastructures present ongoing challenges to effectively addressing needs in community development and vitality. One of the greater hurdles in these efforts is addressing areas of social impact. This article argues for a deliberate attempt to parse out efforts that address social impact, while looking for ways to bring such impact full circle with existing efforts in economic impact. This article answers the following questions: (1) How is program impact defined as it relates to the land-grant university? and (2) How is social impact defined, and what are the common approaches to examining/measuring social impact? Based on this review of the literature, we describe and justify a proposed model approach for overall community diagnostics, directly supporting social impact assessment efforts. Such a proposed model would then have the capacity to lead to two very distinct and applicable outcomes that ultimately lead to measuring and examining program impact. The first is an immediate snapshot of a given community for diagnostic purposes; and the second would create a framework by which longitudinal data could be collected, which can then demonstrate changes and shifts over time. Such data can then provide a more holistic approach to program planning, development, and overall evaluation.*

*Keywords:* community development; Extension; needs assessment; program evaluation; social impact

## Introduction

The Cooperative Extension System (CES) is a complex and multifaceted structure, addressing pertinent issues in agricultural and natural resources, youth development, family finance and nutrition, and community development – all, of which, serve as entry points into the plethora of needs and issues that exist at every local level. To maintain capacity and meet community needs, extension programming is often dependent on local, state, and federal dollars to aid in program design and leverage sustainability from county to county (Franz & Townson, 2008). Such multi-level funding is facilitated by grants, contracts, user fees, and fiscal gifts. Subsequently, fiscal ties result in the pressure and expectation to demonstrate a return on investment (ROI) and community impact from delivered programs.

Of course, economic data have a firmly established and valuable place within the realm of impact reporting, such as in production yield, business development, and volunteer hours to name a few. Regardless of the program area, such data are imperative when demonstrating and justifying the ROI among key stakeholders. However, some of the more difficult, yet important, dimensions to assess amongst programs are the social dimensions that address overall individual and community development and wellbeing over time (Berry & Welsh, 2010).

The purpose of this article is to outline and argue for a deliberate attempt to parse out efforts that address social impact, while looking for ways to bring such impact full circle with existing efforts in economic impact. This article is driven by the following questions:

1. How is program impact defined as it relates to the land-grant university, and how it has traditionally been approached?

2. How is social impact defined, and what are the common approaches to examining/measuring social impact?

Based on this review of the literature, we describe and justify a proposed model approach for overall community diagnostics, directly supporting social impact assessment efforts.

## Program Impact Defined

Program impact is an outcome facilitated by organizational activities and experienced by a targeted population (Israel, Harder, & Brodeur, 2011). Such impact is also expected to explain the difference a program's results make in the life of a person or collective group of people (Workman & Scheer, 2012). Common forms and documented best practices of impact assessment include one or a combination of surveys, focus groups, interviews, and observations that indicate a change in knowledge, attitude, or behavior (Nichols, Blake, Chazdon, & Radhakrishna, 2015; Workman & Scheer, 2012). The resulting collected data are then shared in informal and institutional reports, scholarly journals, as well as institutional marketing collateral.

While extension is no stranger to reporting mechanisms that aim to demonstrate the ongoing ROI, whether domestically or internationally, the diversity of programs representing the multifaceted program areas present unique challenges that have continued to endure over time (Lamm & Lamm, 2018). For example, in a 1983 *Journal of Extension* publication, Smith and Straughn contend that extension goals are often so broad that the ability to strategically focus on explicit outcomes (direct or indirect, positive or negative) is difficult or prohibitive. Today, established goals remain broad—i.e., Extension aims to “Prepare people to break the cycle of poverty, encourage healthful lifestyles, and prepare youth for responsible adulthood” (USDA-NIFA, 2018, para. 6)—leaving

significant room for interpretation, program design, and application. Further critique of impact evaluation resides in overarching program goals being too process-oriented or non-existent, and if results are non-generalizable or complicated (intentional vs. unintentional, short- vs. long-term, or directly or indirectly targeting a given audience). To consider such challenges in land-grant university program evaluation and impact reporting, it is relevant to also consider the significant changes in expectations over the life of legislative support and requirements (Nichols et al, 2015):

- *Hatch Act (1887)* – Established experiment stations to focus on agricultural production that oversaw demonstration fields and plots, and testing recommended practices that were then reported to farmers through university publications or other agricultural publications.
- *Smith-Lever Act (1914)* – Cooperative Extension System was formally established, and Congress became more concerned with reports that offered full detail in overall operations rather than programmatic impact.
- *Food and Agriculture Act (1977)* – Ushered in a new era of accountability and evaluation, calling for the justification of actions, as well as economic and social consequences of existing programs. Extension became a key focus of such accountability and evaluation.
- *Government Performance and Results Act (1993)* – “...required strategic plans and a numerical assessment of outcomes for measurement of performance of governmental organizations” (p. 86).
- *Agricultural Research, Extension and Education Reform Act (1998)* – “...required state Extension

programs to submit plans of work and reports of results documenting how formula-funded programs were achieving outcomes toward five national goals” (p. 87).

Throughout this period, there have been a number of scholars and specialists who have dedicated tremendous effort in developing evaluation methods and tools that can attest to the value of university outreach and engagement (Ladewig, 1999), provide structure in program development and delivery (Lamm, Carter, & Lamm, 2016), and be accountable to the shifting expectations of fiscally supportive agencies (Lamm, Lamm, Davis, & Swaroop, 2018). Some of the key developments and adoption throughout this time include the logic model and the Targeting Outcomes of Programs model (Rockwell & Bennett, 2004).

While models and associated practices have been developed, the complex university structure creates a challenging situation when it comes to determining where evaluation efforts and experts should be located. Lambur (2008) examined three possible structural choices, identifying unique limitations through in-depth interviews with evaluators: (1) Within an administrative unit where evaluators potentially focus on the needs of the organization and accountability rather than program impact; (2) as a separate evaluation unit or program area where evaluators may better understand the given unit or area, potentially inserting bias and limiting scope and application in other areas; and (3) within an academic unit or school where evaluators may diminish the importance of accountability and rely more so on the expertise of applied researchers.

Regardless of where evaluation is located within the university, the likelihood of its existence in a single location to account for a holistic overview of an institution’s comprehensive outreach and engagement efforts is low to impossible

(Lambur, 2008). Programmatic evaluation is not a one-size-fits-all approach (Roucan-Kane, 2008). Key variables of interest used to account for impact range significantly from agriculture to youth and leadership development programs (Marshall, 2012; Scott, Weeks, & Weeks, 2018; Yueh-Ti Chen, King, Cochran, & Argabright, 2014;), as well as diverse areas of interest from country to country (Jayaratne et al, 2017; Warner & Murphrey, 2015).

One key characteristic revealed within the context of program impact associated with university-based evaluation and assessment is that collected data are predominately situated from an *outside-in* perspective. In other words, key measurements are based on programmatic outcomes—considering the impact as a result of a university program’s presence (the outsiders) in the community (the insiders). This perspective is perpetuated as a result of funding processes that require accountability and effective communication of achieved goals and future intentions (Kalambokidis, 2004; Workman & Scheer, 2012). Thus, impact planning, development, and evaluation, especially pertaining to societal change, will continue to be increasingly important. As Workman and Scheer (2012) asserted, “The ultimate goal is to remain relevant and of value to the public. The strongest method to demonstrate relevancy and public value is to document ‘true impact’” (“Conclusions/Implications”, para. 3). However, aside from determining what is *true impact*, critics claim there is a continued lack of consistency, as well as a lack of consideration in bridging short-term and long-term impacts (Rossi, Lipsey, & Freeman, 2004). In addition, while institutional impact reporting efforts are intended to indicate positive changes in the knowledge, attitude, and behavior of clientele, important lessons can also be learned from results and impacts that miss

the mark of a program’s intended goals (Diem, 2003). To address this would require an *inside-out* perspective, rather than *outside-in*.

In an effort to shift away from an *outside-in* perspective, and begin considering what an *inside-out* perspective could look like, there is a need to reconsider the entry point of evaluation. *Inside-out* would place the entry point with the existing infrastructure at the local level, with the intent to point a collected mass of local data back to university outreach and engagement efforts for purposes of program planning, development, and evaluation. While economic and other infrastructural data can play a role in this proposed approach, *inside-out* places the context and emphasis of examination efforts within the social impact research paradigm, which begins to situate the conversation around unique community characteristics, as well as overall community vitality.

## Social Impact Overview

### Social Impact’s Definition, Operationalization & Value

Impacts that are social in nature refer to various aspects of people’s lives and the physical, political, interpersonal, and intrapersonal systems in which they operate (Jones, McGinlay, & Dimitrakopoulos, 2017). In this manner, social impact takes cultural impact into account as people experience a new normal and re-think how they view themselves and their environment (Burdge et al., 1995). Social impact has been formally defined as the effect an organization or program’s actions have on the well-being of a community or population (Franz, Arnold, & Baughman, 2014; The Wharton School, 2011). It is the “...consequences to human populations of any public or private actions – that alter the ways in which people live, work, play, relate

to one another, organize to meet their needs, and generally cope as members of society” (Burdge et al., 1995, p. 11).

Researchers claim that if used as a primary entry point into program evaluation, social impact provides the type of community engagement that promotes parity and integrity (Gust & Jordan, 2006; Srinivas, Meenan, Drogin, & DePrince, 2015). In addition, social impact research has often placed its central focus on social capital as a key construct, where a number of community characteristics have been examined. Such characteristics include areas such as social networks and reciprocity (Stone & Hughes, 2002), including those between and among individuals and organizations (Chilenski et al., 2014). Other characteristics include trust, accepted norms, and connections among people (Zoorob & Salemi, 2017); civic identity and engagement related to predictions in societal outcomes (Zoorob & Salemi, 2017); and public value related to those directly and indirectly impacted by a program (Franz et al., 2014; Kalambokidis, 2004). Areas of research and practice that incorporate such characteristics include epidemiology and public health (De Silva et al., 2005), drug and alcohol dependence (Zoorob & Salemi, 2017), public policy and management (Ozanne et al., 2017), education and developmental psychology (Magson, Craven, & Bodkin-Andrews, 2014), community service learning (Srinivas et al., 2015), tourism and extension (Bhattacharyya, Templin, Messer, & Chazdon, 2017), rural sociology (Flora & Bregendahl, 2012), and policy analysis (Fey, Bregendahl, & Flora, 2006).

### **Methods of Social Impact Assessment**

Common approaches to examining social impact implemented by both researchers and practitioners include the community impact scale, social impact

assessment, ripple effects mapping, and community capitals framework. Each uses a community-based research (CBR) approach that calls for more interaction between research entities and the communities in which they address issues and problems. For the purposes of this overview, these common approaches will be briefly expounded upon.

**Community impact scale.** The community impact scale (CIS) is designed as a 46-item scale to help community organizations gauge costs and benefits of community-university partnerships and how those partnerships may affect an organization and its staff (Srinivas, Meenan, Drogin, & DePrince, 2015). Often used in university service-learning programs, CIS examines university-community partnerships in regard to being collaborative, rigorous, and context-specific. The scale is also intended to account for multi-dimensional factors and emerging themes from a given partnership.

**Social impact assessment.** Social impact assessment (SIA) aims to examine possible effects on a particular group of people because of a government, an organization, or an event (Score, 1995). The intent is to gain stakeholder input on how program and community data are collected and categorized, creating a community profile, summarizing subsequent projections, and sharing information with community members, whose response can determine the success or failure of an existing or future project (Barrow, 2000; Cordova, 2011; Score, 1995). SIA is in alignment with CBR as it argues for stakeholder input for the credibility and accountability of program planning, development, and implementation (Score, 1995). This approach is often used in environmental studies (Burdge, 1995), the

Cooperative Extension System, rural sociology, policy analysis, and non-governmental organizations.

**Ripple effects mapping.** Ripple Effects Mapping (REM) is an evaluation tool that involves groups of people creating visual representations of impacts once a program is complete (Bhattacharyya, Templin, Messer, & Chazdon, 2017). Predominantly qualitative in method, themes often emerge from methods using mind mapping and appreciative inquiry, which provides groups with information that informs the analysis of the findings and their learning. REM also highlights unintended results of an initiative as well as insight into how those involved should move forward (Emery, Higgins, Chazdon, & Hansen, 2015). The REM process can be beneficial for program leaders, program participants, and/or other stakeholders. Emery et al. (2015) described three approaches to REM: web mapping (mapping short-, medium-, and long-term impact onto a community capitals-based template), in-depth rippling (mapping to find the effects considered the most impactful), and theming and rippling (mapping to gather a collective list of impact, which generates themes and subsequent participant stories that align with themes). Those using REM are encouraged to choose a method that works best for the group and the resulting desired data (Emery et al., 2015). REM has been used in fields such as 4-H and youth development (Baker & Johannes, 2013), tourism (Bhattacharyya et al., 2017), and Cooperative Extension community gardening (Kollock, Flage, Chazdon, Paine, & Higgins, 2012).

**Community capitals framework.** The Community capitals framework (CCF), developed by Cornelia Flora, Jan Flora, and Susan Fey in 2004, is a systems approach (Emery et al., 2006) and a logic model

(Bhattacharyya et al., 2017) for community characteristics, known as capitals, that can be influenced. It has been used to outline and map community strategies, monitor results, envision the future, create holistic planning committee structures, and enhance other methods such as Appreciative Inquiry (Emery, Fey, & Flora, 2006; Bhattacharyya et al., 2017). In the same way that a community profile provides a more holistic view of a community and the initiatives that are incorporated on its behalf, CCF helps researchers and practitioners view their work in a holistic way (Flora & Bregendahl, 2012). It is noted to improve both communities and organizations and provides an outline for how capitals can be defined in the context of a community, how they influence each other, and how they can be the foundation of communal actions (Flora & Bregendahl, 2012). The framework defines community capital in terms of assets, using seven components: *Natural* (environmental assets that abide in a specific location), *human* (people's natural and learned competencies, and access to necessary resources), *social* (connections among people and organizations), *cultural* (how people understand and interact with the world around them), *political* (access to personal and structured power), *financial* (monetary support for community improvement), and *built* (physical infrastructure) (Emery & Flora, 2006; Fey, Bregendahl, & Flora, 2006; Flora & Bregendahl, 2012). These capitals, of which social capital is deemed the most abstract (Stone & Hughes, 2002), emerged out of C. Flora, J. Flora, and Fey's research on communities supportive of entrepreneurship and were indicative of long-lasting community and economic development when communities invested in all of them (Emery et al., 2006). They have now been used to assist concepts, such as community-

supported agriculture (Flora & Bregendahl, 2012).

CCF's unique strengths (when compared to other approaches) lie in its ability to encapsulate a broad set of variables, while recognizing the complexity of the community issues and needs. It also highlights the holistic benefit of paying attention to all capital areas, especially social capital, to avoid a decline of effectiveness in certain assets affecting programmatic initiatives and the community as a whole (Emery et al., 2006; Stone & Hughes, 2002).

### **Social Impact Assessment Challenges & Opportunities**

Social impact and its organization-based societal effects are directly correlated with social capital. Measuring social impact, social capital, or any of the associated community capitals has been noted as difficult because it involves abstract materials that make up societies (Fey et al., 2006), along with longitudinal time and effort that are required to recognize genuine change (Beckman et al., 2011). Among multiple attempts to create valid instruments, evaluative constructs and wording are still convoluted (Magson et al., 2014). This results in empirical work that is limited and measurement consensus that cannot be found, both of which are heralded as the field's greatest weaknesses (Magson et al., 2014). Ozanne et al. (2017) also adds that while assessment of this type of impact is an increasing priority, there are no agreed-upon best practices due to the complexity of its nature and influences. Measuring social impacts in objective (i.e. quantifiable changes) and subjective (i.e. changes in well-being) ways also complicates measurement procedures (Jones et al., 2017). The literature suggests that for social capital research to be instrumentally- and theoretically-sound, the following must be

adhered: (1) social capital measurement needs to be theoretically informed; (2) social capital needs to be viewed as a resource for collective action and assessed as to whether or not it generates desirable social and economic outcomes; (3) social capital needs to be theorized as a multidimensional construct; and (4) it needs to be recognized that social capital will vary depending on network type and social scale under examination (i.e., family, community, societal) (Magson et al., 2014).

Additionally, the literature reiterates the subjective nature of social impact research. Aspects of what is chosen to be evaluated can be influenced by a sociopolitical climate (Smith & Straughn, 1983) and funding can affect the use and/or implementation of suggested strategies such as the community profile (Score, 1995). Furthermore, to fully grasp the impact on societies, longitudinal work has long been needed (Smith & Straghn, 1983; Workman & Scheer, 2012) and impact work and evaluation should not take place solely upon completion of an initiative. Rather, desired programmatic benefits, along with strategies for how to engage stakeholders (Gust & Jordan, 2006; Ozanne et al., 2017), should be discussed at the beginning of an initiative's planning stages and weaved throughout its development and implementation (Diem, 2003). Ozanne and colleagues (2017) not only call for research to be more applicable to stakeholders, but that researchers be more intentional about effective societal impact measurement and that publications reflect this improvement.

### **Proposed Model Approach**

Leveraging the unique qualities and segmented areas of the community capitals framework (CCF), there is an opportunity to take on the recommended *inside-out* perspective as an initial step toward evaluation and assessment related to local

programming efforts. The argument here is to take a two-part assumption: (1) that, regardless of the presence or absence of university programming, the community profile must first be considered; and (2) local perceptions are critical to shifts—positive or negative—related to community development and vitality. CCF's holistic approach in considering the seven capitals sets the stage to address both assumptions.

### Considering the Community Profile

For approaches addressing social capital, the literature states that any form of measurement be theoretically informed (Magson et al., 2014). This proposed model seeks to modify the approach to CCF by using the culture-centered approach (Dutta, 2008; CCA) as the overarching framework. Traditionally used in international health communication research, CCA recognizes

culture as a dynamic construct, while placing its primary entry point on the marginalized members of a community—individually or collectively. Guided by critical theory, CCA, as a methodological framework, is concerned with the modes of knowledge production and access to existing resources, political processes, and the design of the existing infrastructure within a particular community or targeted population. The overarching intent of CCA is to critically deconstruct the infrastructure while locating the actual barriers that exist through the voices, perceptions, and lived experiences of members of the community—individually and collectively. Three constructs that guide CCA are culture, agency, and structure (Figure 1), whereby the critical deconstruction is placed on the contested intersection that exists between each of those constructs.

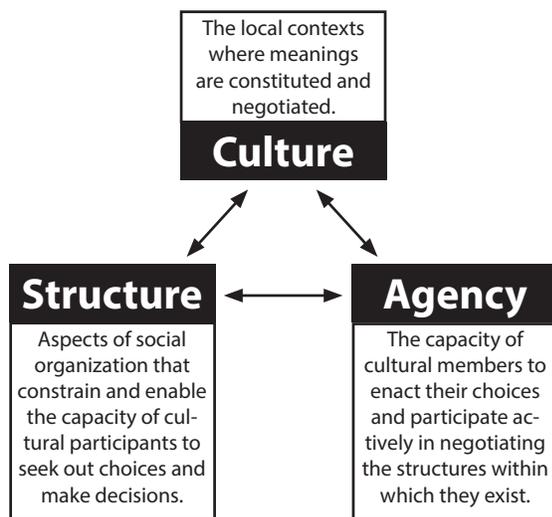


Figure 1. The three constructs of CCA (Dutta, 2008).

By allowing CCA to inform the development of the CCF, a new discursive space becomes possible within the context of the community. Not only would individuals' outward perception of their community be considered—which has traditionally been the objectives of previous

CCF work (Emery & Flora, 2006; Fey, Bregendahl, & Flora, 2006; Flora & Bregendahl, 2012)—but their individual agency related to the seven capitals is also incorporated into the collected data. This provides a distinction between individuals' outward view of the community along with

their perceived personal capacity within the community.

The value of better understanding personal agency within the context of the community perspective is because, regardless of a given community infrastructure, along with established resources and opportunities (i.e., employment, education, healthcare), if an individual perceives their access to such resources to be minimized or non-existent, or if they believe others' ability to access is compromised, the quality of the infrastructure is diminished. This, in turn, creates the potential for an overarching set of community indices that complements and enriches economic data analysis.

### A Modified CCF Scale

With these assumptions in mind, a modified approach to CCF was designed to address how an individual operationalizes each capital from two points of view. The first is based on structural perception and the second is based on perceived internal agency. For example, each capital will be addressed as a portion of the complete set of capitals, representing a complete CCF scale. The following is an excerpt of the scale with select representative statements. The scale statements are assessed via a five-point Likert scale, ranging from strongly agree to strongly disagree (Figure 2).

#### **HUMAN CAPITAL**

**Structural Perception:** "I believe that my community..."

- Has meaningful employment to attract young people.
- Offers residents access to a wide range of healthcare.

**Internal Agency:** "If I choose to, I have the ability to..."

- Be a leader in my community.
- Collaborate to impact community change.

Figure 2. Example of Likert-designed statements (Human Capital only).

A possibility for administering this scale at the local level might be completed using opt-in panels through an online survey firm. This would ensure that preidentified quotas could be filled at the local level. In addition to the representation of all capitals in the proposed scale, additional data, including representative census-based demographic data, as well as individual participation in an extension program within the last five years, could be collected.

Of course, such data, collected at a given point in time within a defined geographic area, cannot directly point to extension programmatic impact. However, it does provide a robust set of baseline data,

serving as a comprehensive measure and leading to two very distinct and applicable outcomes that ultimately lead to measuring and examining program impact. The first is an immediate snapshot of a given community—or applicable geographical boundary, such as counties in the United States, or villages or provinces within an international context. Such a snapshot offers a form of diagnostic analysis, which provides a unique overview based on abstract social structures that are captured from each of the seven capitals. Regression analysis would demonstrate significant relationships between or among the capitals as constructs, or among the items of each

construct. Demonstrating significant relationships between or among constructs can lead to a more informed approach to program planning and development. This is especially the case if there is a significant statistical difference between the individuals' outward view of the community and perceived personal capacity within the community.

The second outcome is the value of longitudinal data. Throughout the development of this modified CCF scale, our intent is to capture this data on an annual basis statewide, which would begin to demonstrate changes and shifts across the state and from county to county. While economic consequences play a critical role in accounting for programmatic impact and justification, there are also social consequences that are just as critically important. To this point, no identified research approach and subsequent analysis has been able to successfully bridge the two. While the results of the CCF scale cannot directly point to extension program impact, the anticipation is that the regression analysis between CCF data and economic data will be able to point to programmatic impact—socially and economically—over time.

The expectation is that this approach to community assessment and evaluation will not replace current efforts uniquely designed for a given program area or unit. However, this particular approach can help to support these efforts, as well as demonstrate overarching trends and unique community characteristics over time.

### **Future Application**

Within the context that the scale has been developed, which is at a large research university in the Southeastern United States, the expectation of the associated Cooperative Extension System is that it will enhance overall community development

and vitality through distinct program areas. While program goals may continue to remain broad and far reaching for the sake of the diverse array of institutional programming, it is ever more essential that such programming approaches every county with the capacity to address the unique obstacles and opportunities of each county.

Follow-up reports based on evaluative data are expected to demonstrate positive shifts. Therefore, included data that demonstrate how a program may have “missed the mark” does not necessarily bode well for extension program viability. Yet, what this proposed model provides is a way for extension professionals and researchers to be more holistically informed at the onset of a given program, establishing an *inside-out* perspective of being vested in the needs of a community.

Collecting CCF data at a given point in time provides a set of baseline data that serves as a diagnostic tool for a targeted community, village, county, or province—or any collective, thereof. But, in that single snapshot, the capacity to provide social impact data does not exist. What it does do is establish the entry points through which key areas of inquiry can be formed. For instance, if the data demonstrate lower levels of individuals' outward view of the community, but higher levels of perceived personal capacity within their community, then a significant opportunity exists to begin working within the context of individual capacity to address the perceived limitations of structural capacity. Not only does this inform program planning and development, but it can also identify key variables of interest for program evaluation efforts. As such, the *inside-out* perspective is preserved.

The *inside-out* perspective is even further maintained if such CCF baseline data serve as the entry points by which a qualitative approach—perhaps based in ethnographic methods—is designed to

further engage with and understand the unique and complex dynamics that lend themselves to the perceived structural and individual capacities. Such an approach would help to identify and account for extrinsic influencers, such as political and economic changes, or even areas of modern popular culture. Even more so, as extension professionals or researchers engage in an international context, CCF ensures that the local perspective and cultural values are first taken into account prior to designing a prescriptive solution for local issues.

As stated before, conducting social impact assessment has become an increasing priority in developing evaluation efforts (Ozanne et al, 2017). As such, collecting CCF data using this modified approach over a longitudinal period of time can provide data that support long-term follow-up to programs where measuring true and immediate social impact has traditionally proven to be more challenging. Longitudinal data can demonstrate shifts over time, showing relevant correlations or even patterns between or among the capitals, and how social capital may or may not serve as the proverbial fulcrum by which all other capitals hinge (Gust & Jordan, 2006; Srinivas, Meenan, Drogin, & DePrince, 2015).

In addition, this model also demonstrates the capacity to offer a comparative analysis with economic data and other indices, such as health or education, providing a more enhanced diagnostic overview of community trends on such indices relative to each capital. The scale thus provides the opportunity to extend and deepen potential partnerships and collaborations between extension and other community-level entities.

Overall, the relevance of this model is its intent to transition from an *outside-in* to an *inside-out* perspective when it comes to extension programming and community-

engaged research. Where the entry point of assessment and understanding begins with the existing infrastructure at the local level, with the intent to point the collected mass of local data back to and direct the efforts of extension outreach and engagement—equipping extension professionals to more readily assess and measure perception and impact changes within communities and across cultures.

### References

- Baker, B., & Johannes, E. M. (2013). Measuring social capital change using ripple mapping. *New Directions for Youth Development*, 2013(138), 31-47. doi:10.1002/yd.20056
- Berry, H., & Welsh, J. (2010). Social capital and health in Australia: An overview from the household, income and labour dynamics in Australia survey. *Social Science & Medicine*, 70(4), 58-96. doi:10.1016/J.SOCSCIMED.2009.10.012
- Bhattacharyya, R., Templin, E., Messer, C., & Chazdon, S. (2017). Participatory evaluation and learning: A case example involving Ripple Effects Mapping of a tourism assessment program. *Journal of Extension*, 55(2). Retrieved from <https://www.joe.org/joe/2017april/a3.php>
- Boyer, E. (1996). The scholarship of engagement. *Journal of Public Service and Outreach*, 1(1), 11-20.
- Burdge, R. J., Fricke, P., Finsterbusch, K., Freudenburg, W. R., Gramling, R., Holden, ... & Williams, G. (1995). Guidelines and principles for social impact assessment. *Environmental Impact Assessment Review*, 15, 11-43.

- Chilenski, S. M., Ang, P. M., Greenberg, M. T., Feinberg, M. E., & Spoth, R. (2013). The Impact of a Prevention Delivery System on Perceived Social Capital: the PROSPER Project. *Prevention Science, 15*, 125–137. <https://doi.org/10.1007/s11121-012-0347-5>
- Cordova, T. L. (2011). Community-based research and participatory change: A strategic, multi-method community impact assessment. *Journal of Community Practice, 19*(1), 29-47. doi:10.1080/10705422.2011.550259
- Diem, K. G. (2003). Program development in a political world – It’s all about impact! *Journal of Extension, 41*(1). Retrieved from <https://www.joe.org/joe/2003february/a6.php>
- Emery, M., Fey, S., & Flora, C. (2006). Using community capitals to develop assets for positive community change. *CD Practice, 13*. Retrieved from <http://srdc.msstate.edu/fop/levelthree/trainarc/socialcapital/communitycapitalstodevelopassets-emeryfeyflora2006.pdf>
- Emery, M., & Flora, C. (2006). Spiraling-up: Mapping community capitals framework. *Community Development, 37*(1), 19-35. doi: 10.1080/15575330609490152
- Emery, M., Higgins, L., Chazdon, S., & Hansen, D. (2015). Using ripple effect mapping to evaluate program impact: Choosing or combining the methods that work best for you. *Journal of Extension, 53*(2). Retrieved from: <https://www.joe.org/joe/2015april/tt1.php>
- Fey, S., Bregendahl, C., & Flora, C. (2006). The measurement of community capitals through research. *Online Journal of Rural Research & Policy, 1*(1). Retrieved from <https://doi.org/10.4148/ojrrp.v1i1.29>
- Flora, C. B., & Bregendahl, C. (2012). Collaborative community-supported agriculture: Balancing community capitals for producers and consumers. *International Journal of Sociology of Agriculture and Food, 19*(3), 329-346.
- Franz, N. K., & Townson, L. (2008). The nature of complex organizations: The case of Cooperative Extension. *New Directions for Evaluation, 120*, 5-14. <https://doi.org/10.1002/ev.272>
- Franz, N., Arnold, M., & Baughman, S. (2014). The role of evaluation in determining the public value of Extension. *Journal of Extension, 52*(4). Retrieved from <http://www.joe.org/joe/2014august/comm3.php>
- Gust, S. A., & Jordan, C. (2006). The Community Impact Statement: A prenuptial agreement for community-campus partnerships. *Journal of Higher Education Outreach and Engagement, 11*(2), 155-169.
- Imperiale, A. J., & Vanclay, F. (2016). Using social impact assessment to strengthen community resilience in sustainable rural development in mountain areas. *Mountain Research and Development, 36*(4). <http://dx.doi.org/10.1659/MRD-JOURNAL-D-16-00027.1>
- Israel, G., Harder, A. & Brodeur, C. (2011). What is an Extension program? University of Florida Institute of Food and Agricultural Sciences. Retrieved from <http://edis.ifas.ufl.edu/wc108>

- Jayaratne, K., Taylor, L., Edwards, M., Sitton, S., Cartmell, D., Watters, C., & Henneberry, S. (2017). Evaluation of an international entrepreneur exchange program: Impacts, lessons learned, and implications for agricultural development. *Journal of International Agricultural and Extension Education*, 24(2), 50-64. doi:10.5191/jiaee.2017.24204
- Jones, N., McGinlay, J., & Dimitrakopoulos, P. G. (2017). Improving social impact assessment of protected areas: A review of the literature and directions for future research. *Environmental Impact Assessment Review*, 64(2017), 1-7. doi:10.1016/j.eiar.2016.12.007
- Kalambokidis, L. (2004). Identifying the public value in Extension programs. *Journal of Extension*, 42(2). Retrieved from <https://www.joe.org/joe/2004april/a1.php>
- Kollock, D. A., Flage, L., Chazdon, S., Paine, N., & Higgins, L. (2012). Ripple effect mapping: A “radiant” way to capture program impacts. *Journal of Extension*, 50(5). Retrieved from <http://www.joe.org/joe/2012october/t6.php>
- Ladewig, H. (1999). Accountability and the cooperative extension system. Paper presented at the *Cooperative Extension Program Leadership Conference*, Pittsburgh, PA.
- Lamm, K. W., Carter, H. S., & Lamm, A. J. (2016). Evaluating extension-based leadership development programs in the Southern United States. *Journal of Agricultural Education*, 57(1), 121-136. doi:10.5032/jae.2016.01121
- Lamm, K. W., & Lamm, A. J. (2018). Considering an appreciative approach to international extension evaluation. *Journal of International Agricultural and Extension Education*, 25(4), 74-82. doi:10.5191/jiaee.2018.25406
- Lamm, K. W., Lamm, A. J., Davis, K., & Swaroop, B. J. (2018). Effective advocacy for extension networks: An evaluation of critical capacities. *Journal of International Agricultural and Extension Education*, 25(2), 43-56. doi:10.5191/jiaee.2018.25204
- Lambur, M. T. (2008). Organizational structures that support internal program evaluation. In M. T. Braverman, M. Engle, M. E. Arnold, & R. A. Rennekamp (Eds.), *Program evaluation in a complex organizational system: Lessons from Cooperative Extension. New Directions for Evaluation*, 120, 41–54.
- Magson, N. R., Craven, R. G., & Bodkin-Andrews, G. H. (2014). Measuring social capital: The development of the social capital and cohesion scale and the associations between social capital and mental health. *Australian Journal of Educational & Developmental Psychology*, 14(2014), 202-216.
- Marshall, R. (2012). The impact of the extension service on minority-owned small farm operations. *Journal of Extension*, 50(1). Retrieved from <https://joe.org/joe/2012february/com1.php>
- Nichols, A., Blake, S., Chazdon, S., & Radhakrishna, R. (2015). From farm results demonstrations to multistate impact designs: Cooperative Extension navigates its way through evaluation pathways. *Journal of Human Sciences*, 3(2), 83-107.

- Ozanne, J. L., Davis, B., Murray, J. B., Grier, S., Benmecheddal, A., Downey, H., & ... Veer, E. (2017). Assessing the societal impact of research: The relational engagement approach. *Journal of Public Policy & Marketing*, 36(1), 1-14. doi:10.1509/jppm.14.121
- Rockwell, K., & Bennett, C. (2004). Targeting Outcomes of Programs: A hierarchy for targeting outcomes and evaluating their achievement. *Faculty Publications: Agricultural Leadership, Education & Communication Department*, 48, <http://digitalcommons.unl.edu/aglecf/acpub/48>
- Rossi, P. H., Lipsey, M. W., & Freeman, H. E. (2004). *Evaluation: A systematic approach*. Thousand Oaks, CA: Sage.
- Roucan-Kane, M. (2008). Key facts and key resources for program evaluation. *Journal of Extension*, 46(1). Retrieved from: <https://www.joe.org/joe/2008february/tt2.php>
- Scott, M., Weeks, W., & Weeks, P. (2018). Impact of a professional development experience focused on extension educators as change agents. *Journal of Extension*, 56(6). Retrieved from <https://joe.org/joe/2018october/rb1.php>
- Score, M. (1995). Social impact assessment in extension educational programming. *Journal of Extension*, 33(6). Retrieved from: <https://www.joe.org/joe/1995december/tt2.php>
- Smith, M. F., & Straughn, A. A. (1983). Impact evaluation: A challenge for extension. *Journal of Extension*, 21(5). Retrieved from <https://www.joe.org/joe/1983september/83-5-a9.pdf>
- Srinivas, T., Meenan, C. E., Drogin, E., & DePrince, A. P. (2015). Development of the community impact scale measuring community organization perceptions of partnership benefits and costs. *Michigan Journal of Community Service Learning*, 21(2), 5-21.
- Stone, E., & Hughes, J. (2002). Understanding community strengths. *Family Matters*, 2002(61), 62-67.
- The Wharton School (The University of Pennsylvania). (2011, July 28). *Social Impact*. Retrieved from <http://kwhs.wharton.upenn.edu/term/social-impact/>
- USDA-NIFA (n.d.). *Extension*. Retrieved from <https://nifa.usda.gov/extension>
- Warner, L., & Murphrey, T. (2015). An examination of the use of the framework of social marketing to achieve environmental sustainability in international agricultural and extension education. *Journal of International Agricultural and Extension Education*, 22(2), 20-36. doi:10.5191/jiaee.2015.22202
- Workman, J. D., & Scheer, S. D. (2012). Evidence of impact: Examination of evaluation studies published in the Journal of Extension. *Journal of Extension*, 50(2). Retrieved from <https://www.joe.org/joe/2012april/a1.php>
- Yueh-Ti Chen, C., King, J., Cochran, G. & Argabright, K. (2014). Evaluation of the leadership institute: A program to build individual and organizational capacity through emotional intelligence. *Journal of Extension*, 52(1). Retrieved from <https://joe.org/joe/2014february/rb2.php>