The Use of Organizational Learning Feedback Loops in the Practice of Planning: Citizen Participation and Virginia's Urban Development Area Comprehensive Plan Requirement.

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ABSTRACT

From 2007 to 2011, select Virginia localities were legislatively mandated to update their respective comprehensive plans to include Urban Development Areas. The completion of the Urban Development Area comprehensive plan requirement was complicated by uneven application and codification of the legislative mandate. In 2012, the Urban Development Area legislation had been reduced from a legislative mandate to a state enabled optional comprehensive plan element. This research examines the practice of comprehensive planning in the Commonwealth of Virginia during the Urban Development Area comprehensive plan update requirement to determine legislation outcomes and the effects of citizen participation in the comprehensive planning process in relation to organizational and planning practitioner outcomes. Select local jurisdictional planning organizations were studied using the organizational learning theories of Argyris and Schön in a mixed method research setting. Conclusions find the presence of limited learning systems (single loop planning) and limited modal learning occurring within the Commonwealth of Virginia's local jurisdictions, directly affecting completion of legislative mandates. Recommendations suggest modification of existing communal planning procedures at a local and state level to encourage citizen involvement and investment in comprehensive planning and future economic development.

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Introduction

This research examined comprehensive planning practice within the Commonwealth of Virginia during the period of 2007 to 2012. During this time period, the Commonwealth of Virginia mandated certain local jurisdictions update their respective comprehensive plans to include Urban Development Areas (UDA) for future land-use plans. Urban Development Area legislation required those affected local jurisdictions to provide for increased housing densities of a minimum of four housing units per acre, with optional performance for non-mandated jurisdictions. During the five year period, the Urban Development Area legislation was revised to include additional comprehensive planning /local mandate parameters 2009, and a phase out of all UDA related mandates occurring in 2012. As a result of changes to the Urban Development Area legislation in 2012, UDA's are now optional for any jurisdiction in the Commonwealth of Virginia.

This mixed methods research used organizational learning theory to determine effects of Urban Development Area legislation in relation to the practice of comprehensive planning. Virginia jurisdictions that were mandated to include UDAs in their respective comprehensive plan documents, were statistically analyzed to determine affects of jurisdictional population growth changes in relationship to Urban Development Area compliance and adoption. Planning practitioners, engaged citizens, and Virginia state-level actors were interviewed using semi-structured questions to establish what organizational learning processes occurred within local jurisdictions

during the UDA mandate time period, and the processes that local jurisdictions and comprehensive planners used to engage citizen participation. Conclusions to this research establish the existence of self-sustaining negative feedback loops, Single Loop Planning, within local jurisdictions that failed to update their comprehensive plans in accordance with the Commonwealth of Virginia's Urban Development Area legislation.

Problem Statement

In 2007, the Commonwealth of Virginia passed the 2007 Omnibus Transportation Bill that included the Urban Development Area comprehensive plan mandate for certain local jurisdictions. Urban Development Areas were defined by the Virginia General Assembly as "area(s) designated by a locality that (are) (i) appropriate for higher density development due to its proximity to transportation facilities, the availability of a public or community water and sewer system, or a developed area and (ii) to the extent feasible, to be used for redevelopment or infill development" (Code of Virginia, § 15.2-2223.1, 2011). The Urban Development Area component of the 2007 legislation required local jurisdictions with populations of 20,000 and five percent growth rates for declinal (1990 to 2000) census and local jurisdictions with growth rates of fifteen percent of higher, to include Urban Development Areas. Further, the legislation mandated Urban Development Areas that provide a minimum housing density of four units per acre for jurisdictions with populations less than 130,000, and a minimum housing density of eight units per acre for jurisdictions with populations greater than 130,000, in accordance with state legislation. Additional requirements were enacted to the Urban Development Area legislation in 2009 to require additional jurisdiction compliance from previously non-UDA mandated jurisdictions and enabled population growth from 2000 to 2010 to be

computed to establish future UDA required jurisdictions. Exact density requirements of the Urban Development Area legislation are shown below in the Table 1.

Table 1: Urban Development Area Density Requirements

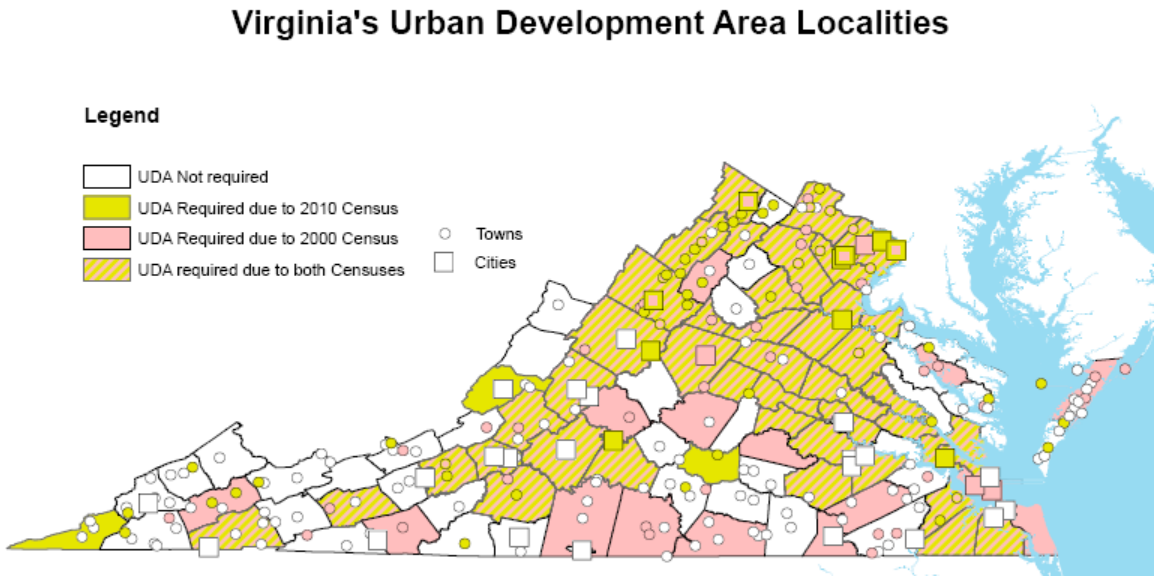
	For localities with population of 130,000 or more	**For localities with population of less than 130,000**
Single-Family	8 units per acre	4 units per acre
Townhouses	12 units per acre	6 units per acre
Apartments, Condominiums, or Cooperative Units	24 units per acre	12 units per acre
Commercial	0.8 floor area ratio	0.4 floor area ratio

Sources: Commission of Local Governance, 2011, p 1;
Code of Virginia, § 15.2-2223.1, 2007, 2009, 2011.

The Virginia Commission of Local Governments (CLG) had determined that by November 2011, fifty-five county jurisdictions, seventeen city jurisdictions, and seventy-nine town jurisdictions, or one hundred fifty one total jurisdictions within the Commonwealth of Virginia, were required to update their comprehensive plan documents to include Urban Development Areas or comply with the Urban Development Area legislation. Of those required jurisdictions, the Virginia Commission of Local Governments found that twenty-seven counties, three cities, and two towns had complied with the UDA mandate requirement, in addition to one city and one town jurisdiction that certified compliance with the Urban Development Area legislation outside of the mandated population growth parameters, for a total of thirty-four compliant jurisdictions per Commission of Local Governments survey guidelines (Commission on Local Government, 2011). The image below highlights Virginia jurisdictions that were required

to include Urban Development Areas in their respective comprehensive plan documents per the Code of Virginia.

Figure 1: Virginia's Urban Development Area Localities



Source: Used with permission from the Commission on Local Government.

Total compliance per CLG guidelines data show that 10.5% of Virginia's local political jurisdictions, or thirty-four out of three hundred twenty-four jurisdictions within the Commonwealth of Virginia complied with Urban Development Area legislation. Reasons given to CLG regarding jurisdictional non-compliance include jurisdictional objections to census data results, jurisdictional objections to Urban Development Area legislation text involving zoning ordinance origination statue and/or census population growth requirements, and certain jurisdictions' desires to wait while legislation was revised from the period of 2009 until 2012 (Commission on Local Government, 2011). Further investigation of the Commission on Local Government 2011, *Report on the Progress of Cities, Counties, and Towns Toward Designating Urban Development Areas (UDAs),* shows that physical evidence of completion of the Urban Development Areas was not

required for the CLG's jurisdictional UDA compliance determination. Respondents to the 2011 CLG study provided one of five response categories including, documents describing the jurisdiction's Urban Development Area; policies, zoning provisions, or other ordinances; a capital improvement plan; the UDA resolution, or "other" (Commission on Local Government, 2011). Given these limitations, the 2011 Commission on Local Government UDA study does not necessarily portray an accurate narrative of the practice of comprehensive planning in the commonwealth of Virginia or the application of Urban Development Areas on the comprehensive planning process by the local jurisdictions.

Economic development and future growth necessary to encourage local jurisdictional revenue generation requires future land-use planning and investment. Guarantees to physical infrastructure require long-term financial products, enabling future land-use economic output forecasting in advanced capitalist economies (Escobar, 1995; Sasken, 2000; Harvey, 2005; Dawkins, 2003; Hyra, 2008). The Commonwealth of Virginia has an economic interest in local jurisdictions' future land-use planning to ensure optimal allocation of state resources to local jurisdictions and regions throughout the Commonwealth. Previous Commonwealth of Virginia produced land-use studies fail to account for planning processes and practices that dissuade development, instead providing information related directly to legislative outcomes. Furthermore, these studies fail to account for complexity inherent in the Commonwealth of Virginia's democracy, where individual citizens and independent state actors are able to interact with planners and policy makers in multiple emergent communication formats, potentially affecting plan document adoption by localities.

The Commonwealth of Virginia does not have an independent planning department within the executive branch of State Government. Planning advisory functions are spread among various executive branches with the Department of Housing and Community Development and Virginia Department of Transportation providing some limited technical oversight and state review of local jurisdictions' comprehensive planning efforts (Commission of Local Governments, 2011). Oversight of local jurisdiction comprehensive planning is limited in the Commonwealth of Virginia, with state agencies only providing technical functions as administratively directed by the Commonwealth, with no practical legislative enforcement powers. The effects of contemporary practices of comprehensive planning within the Commonwealth of Virginia are relatively unknown as a result of limited research capacity of the Commonwealth of Virginia's local jurisdictions, increasing uncertainty in state and local jurisdiction's future land-use planning goals, capital infrastructure development, and economic development. This study reviews the practice of comprehensive planning as it relates to the Urban Development Area legislation in the Commonwealth of Virginia to determine planning practitioner processes that enable state, regional, and local land-use goals.

Comprehensive Planning in the Commonwealth of Virginia

Comprehensive planning is administered by state legislative code, mandating all municipal and county jurisdictions maintain a comprehensive plan. Legislatively required components of the comprehensive plan are listed within the legislation including, future land-use mapping, jurisdictional boundary and transportation mapping, demographic information, and elements detailing the state of the jurisdictions' natural resources,

natural environment, and critical infrastructure. Comprehensive plan reviews are also required by the Code of Virginia on a five year schedule, but local jurisdictions are not required to update their comprehensive plans during reviews. This dynamic allows for the possibility of local jurisdictions within the Commonwealth of Virginia operating with outdated comprehensive plans. As discussed above, state enforcement is generally non-existent with the exception of civil suites available to any citizen in the Commonwealth of Virginia.

Virginia's comprehensive planning legislation is similar to other states without executive statewide planning functions, having been based on original legislation developed by the United States Department of Commerce, in the early twentieth century. Maryland provides a unique difference comparatively, as the State of Maryland does have an executive statewide planning department (Maryland Department of Planning), and includes enforcement mechanisms in state planning legislation to limit locality authority in processing local property rezoning applications. Compared to other adjoining states, Virginia provides equal protections with slight differences in judicial weight of comprehensive plan authority. In addition to regulatory environments enabling different planning processes and responsibilities, the Commonwealth of Virginia operates as a hard Dillon's Rule state, with many local jurisdictions fearful of administering local ordinance outside of pre-determined allowances granted by the Virginia General Assembly, as the jurisdiction may be liable for civil damages as a result. Exact effects of the Dillon's Rule statue varies per jurisdiction within the Commonwealth of Virginia, depending on political, judicial, and historical factors. Addressing the issues surrounding the execution

of the Urban Development Area comprehensive plan requirement provides research related to the effectiveness of comprehensive planning in practice.

Literature Review Introduction

Contemporary interdisciplinary democracy and planning scholarship have focused on organizational democratic practices, with multiple planning practice models having been developed to espouse a real or perceived planning praxis gap (Brooks, 2004; Guttman and Thompson, 2004; Gastil and Levine, 2005; Hoch, 2007; Briggs, 2008; Stivers, 2008). Planning practice models use bureaucratic organizational processes to mitigate negative externalities that occur in routine planning practice (Lindbolm, 1957; Forrester, 1984; 1988; Hall, 2003; Brooks, 2004). While planning process modeling may provide a legal rational framework for routine practice, many of these planning models fail to account for the impact of citizen participation within a rational framework or organizational system shocks that occur from external sources. This research examined forms of participation used in planning practice during the Urban Development Area legislatively required comprehensive plan update (2007-2012) using the organizational learning theory of reflective practice, developed by Dr.s Chris Argyris and Donald Schön, examining the method of comprehensive planning conducted on the practitioner unit of analysis. Experimental protocols such as near-randomized participant solicitation and coding mechanism, enabled qualitative and quantitative research, showing single and double loop feedback mechanisms affecting jurisdictional outcomes and choices occurring in the practice of comprehensive planning in the Commonwealth of Virginia.

General Participation Methods

Methods for finalizing local jurisdictions comprehensive plans form from multiple overarching theoretical planning methods, with process application of specific planning techniques. This research will review specific planning techniques used in the practice of planning in the Commonwealth of Virginia during a state mandated comprehensive plan update. Kelly and Becker establish general techniques planners undertake to provide for citizen participation in planning activities. These techniques include public hearings, public meetings, stakeholder group meetings, key-person interviews, focus groups, surveys, simulations, charrettes, and general marketing methods (Kelly, E. & Becker, B., 1999, pp 117-125).

Public hearings involve a public notice and use parliamentary procedures throughout a formal meeting process, and are generally open to all who wish to attend (Kelly, E. & Becker, B., 1999). Public meetings are meetings in addition to public hearings, that jurisdictions conduct to engage the community in qualitative and quantitative issue understanding. The specific methods used in public meetings can change between jurisdictions and can be focused in specific areas of a single jurisdiction (Kelly, E. & Becker, B., 1999, pp 118). Stakeholder group meetings, key-person interviews, and focus groups target specific constituents to determine future development impacts and community needs. Stakeholder group meetings and focus groups provide for a wider sample than key-person interviews, but all risk limiting participation for the entire community and are seen as secondary to public hearings or public meetings (Kelly, E. & Becker, B., 1999, pp 120).

Passive participation methods and design engaged planning participation methods are used in community development in addition to traditional meeting methods of

participation. Surveys are used in planning practice to provide for plan comment by members of the community who may not be able to attend public meetings and to gauge sentiment towards community goals. The use of surveys in the plan process does necessitate quality design and determination of data, but does provide access to comprehensive planning participation for those unable to attend community meetings. Additionally, random sample surveys may be used with generalized results to fill population requirements.

Simulations provide for a representation of potential future outcomes. These include planning games, design imaging, and other engagement techniques. Charettes are similar to simulations, providing those in attendance a direct opportunity to design solutions to specific community issues (Kelly and Becker, 1999). Both simulations and charettes are useful in the design of the comprehensive plan to determine additional community planning goals, but jurisdictional capacity to encourage active participation may be limited for smaller jurisdictions or those with limited planning resources (Briggs, 2008).

Social Capital in Participatory and Associational Democracy

Social capital research by planning theorists has found that beneficial citizen participation encourages communities to encourage social capital networks (Briggs, 2008; Siriani, 2009). Planning theorists describe social capital in different ways, potentially limiting its use as a reliable variable. Briggs finds a form of social capital, *civic capacity*, or the forms of social capital that citizens can use to engage government for effective governance returns, as beneficial for development (Briggs, 2009). A combination of "stable coalitions that authorize things and implementation-focused

alliances that get things done" form the basis for deploying civic capacity (Briggs, 2009, pp 12). Successful plan implementation combines the logics of empowerment and efficiency and requires government accountability by the citizens of the respective community or jurisdiction (Briggs, 2009). *Civic capacity* includes capability for collective action and the choice in applying the capability (Briggs, 2009). *Civic capacity* can be seen as breaking down the old model of professional knowledge superiority inherent in older systems planning models, by enabling structured participation methods that lead to planning goal implementation. Additional participation can encourage cooperation, providing additional blended action strategies by community members, local organizations, and valued stakeholders (Briggs, 2009).

In Investing in Democracy, Sirianni finds that *civic engagement* has declined as a result of the decline in social capital and the decline of associational structures occurring in local communities (Sirianni, 2007). These include concepts found in Robert Putnam's Bowling Alone and Theda Skocpal's Diminished Democracy, and include factors such as increased participation in the labor force, a more materialistic culture, and technological transformations as mechanisms for the decline in associational democracy. Siriani finds that a change has occurred with younger generations government structured around volunteerism and entrepreneurial governance (Siriani, 2007). Siranni explains the need for government to become more involved with promoting civic engagement, finding three challenges to contemporary community civic engagement. The first challenge is that "Long term changes in civic organization and culture" (Sirianni, 2007, pp 2) are making it difficult for effective public engagement. The second challenge is that "Government policies and administrative practices" (Sirianni, 2007, pp 3) have negatively impacted

governments' capacity for civic engagement. The third challenge involves the continually increasing monetary costs of civic democracy, further compounding and constraining local governments' opportunities to provide beneficial development (Sirianni, 2007, pp 3). Both Sirianni and Briggs call for increased social capital mechanisms to cultivate democratic problem solving and enable community development in local jurisdictions (Briggs, 2008; Siriani, 2007).

Social capital planning theorists imply the use of an abstract concept to generate beneficial public comment not readily determinable through quantitative measurement. Both Briggs and Sirianni note the work of Robert Putnam, and use slightly different definitions of social capital. Additionally, both make extensive use of qualitative analysis to determine outcomes. These methods are problematic due to limited jurisdictional and time convertibility of research methodological processes. Local jurisdictional applications or use of social capital building methods is not readily determinable by individual jurisdictions. Overall findings from social capital planning theorists note increased public participation in public affairs providing opportunities for research into dynamic processes used in the construction of public forums.

Democratic Decision making

The use of democratic methodologies in organizational decision making has been researched by social scientists with a revival of technical form and structure dating to the 1960's and 1970's in reaction to early scholarship of pluralists such as Eckstien, Schuempter, and Dahl featuring citizen and government interaction in an exchange economy (Pateman, 1970; Ehrenberg, 1996) . In Participation and Democratic Theory, Pateman explores the general forms of democracy that have existed in practice in

relationship to earlier democracy theory. Pateman finds that most mid-twentieth century ideals of democracy are flawed in comparison to Rouseauan and J.S. Mill based conceptions of democracy noting,

> "The contemporary and participatory theories of democracy both include the argument that individuals should receive some 'training' in democracy outside the national political process. However, advocates of the contemporary theory such as Dahl or Eckstien give little indication of how this training takes place, and there is something paradoxical in calling socialistion inside existing organizations and associations, most of which, especially industrial ones, are oligarchical and hierarchical, a training explicitly in democracy" (Pateman, 1970, p 43).

Patemen's research reviews multiple democratic theories; the theories of John Stewart Mill and Rousseau are found to encourage educational components and the incorporation of democratic processes in work settings. Pateman finds that the United States political system does not recognize the participatory requirements for a true democracy, instead encouraging limiting participation practices to perpetuate a false ideal of democratic participation. Pateman provides a detailed analysis of democratic theory but additional research is limited to Soviet Yugoslavian institutions, further limiting applicability to municipal or county jurisdiction citizen participation in advanced capitalist economic regions (Pateman, 1970).

Jane Mansbridge provided insight into additional democratic mechanisms that occur in the United States. In Beyond Adversary Democracy, Mansbridge explores two types of organizational and governmental decision making with unitary and adversary democracy. Unitary democracy uses a consensus decision making frame work with face to face contract to remedy disputes and proceed with consensus. Adversary democracy is seen as the current imagined political system operating in our representative democracy with secret ballots, majority rule, and a the use of a pluralist system of special interest groups in decision making processes (Mansbridge, 1980). Mansbridge implies that

adversary democracy is the process that would be practiced in complex organizational realms, including the United States federal government system. Adversary democracy is a result of compounding time and natural physical environmental and spatial limitations, structurally inhibiting consensus in large democratic organizations.

Pateman's material is dated but provides for a basis of democratic decision making in contrast to pluralist organizations. Overall, local governmental planning organizations do not function in a strict Rousseau inspired democratic manner, instead relying on a rational bureaucratic model similar to those described by Max Weber in Economy and Society and Forrester's bounded rationality. Pateman's work provides for additional perspective, but requires further study of organizations current functional ability to operate a in a democratic manner.

Mansbridge's analysis does provide data describing participation in a near bureaucratic system. In Beyond Adversary Democracy, Mansbridge studies participation in the Town of Shelby, VT. The organizational makeup of the town is unique, but the theoretical method of consensus building is still applicable to planning practice involving negotiation and community engagement. Mansbridge was able to show inequalities in town decision making with correlation analysis showing associations between participation, length of residence, location of residence, age, gender, and socioeconomic status (Mansbridge, 1980, pp 99). Mansbridge's findings correspond to previous planning theory and applied community activism related to advocacy planning and policy legitimating activism methods (Hall, 2003).

Citizen Participation in the Practice of Planning

Starting in the 1960's planning theorists have encouraged citizen participation in local jurisdictional planning processes. In "A Ladder of Citizen Participation" Arnstein highlights a practice rubric planning organizations can use to determine beneficial citizen participation levels. Arnstien describes eight levels of citizen participation available in the practice of governance. Methods of manipulation and therapy were found to lack citizen engagement mechanisms while organizations that use informing, consultation, and placation methods are only engaged in tokenism and other forms of fraudulent engagement (Arnstein, 1965). Partnerships, delegated power, and citizen control are found to be the most beneficial participatory methods governing bodies can use (Arnstein, 1965). For Arnstein, those methods to encourage citizens in the decision making process and the inclusion of citizen groups in planning activities legitimize and sustain and optimize impacted political economies.

In addition to practice methods available to planners, the role of the planner is torn between organizational duties and citizen engagement duties that may not reflect the democratic nature of citizen participation required in the practice of planning. Davidoff suggests a role change for the planner, from a government only community plan designer to a pluralistic community interest group focused plan designer. In "Advocacy and Pluralism in Planning," Davidoff suggests the new route for planning practice, to a more special interest advocate similar to advocate legal services. Davidoff's practice encourages the planner to be based in a role of mediation with the interest of the public driving community plans. This approach is political in nature and is does not readily adapt to rational planning processes. For Davidoff the planner should be a concerned agent throughout the process and should not remain neutral. This process is problematic

and could delegitimize the profession as the planning practitioner as a planning agent is reduced to client services that may or may not represent all of the views held within their respective community of practice.

Practitioner shifts from top down comprehensive planning to advocacy and citizen participation can be seen as a response to the social changes that were occurring at the time. The theory of advocacy planning came during a paradigm shift within the United States in all social professions and academic disciplines. Planning theorists were heavily influenced by the work of sociologists and fostered a need for additional citizen control in governmental matters to alleviate social problems (Hall, 2003). Theorized democratic planning was rebutted after initial attempts proved flawed and community development processes adapted to a changing globalized economy (Krumholz, 1984; Sassen 2000; Hall 2003). Increased relevance of standardization in coordination with regional economic development further limited individual jurisdictions efforts as complex jurisdictional overlapping boundaries interfered with practical realization of democratic participation ideals.

Rationality and Organizational Learning

Planning theories have delved into the nature of planning practice as a result of increases in participatory methods. Rational theories of planning practice were explored by Lindbolm in the work “The Science of 'Muddling Through'” published in 1959. Lindbolm describes rational processes practitioners must use to come to outcome determinations. Lindbolm describes the appearance of a planning theory practice gap, and explains the reasoning for the praxis gap is the result of differences in instrumentalism. For Lindbolm the failure of achieving comprehensive understanding of problems has

limited the role of theory as it relates to practice. Lindbolm's models are differentiated between root (rational comprehensive) and branch (successive limited comparisons) approaches (Lindbolm, 1959, pp 81). Root approaches are those rational models that begin by examining the fundamentals involved with the issue at hand. Branch approaches are those that attempt to fix the problem without beginning at the core rudimentary issues. Lindbolm suggests that planning practitioners would benefit from the rational comprehensive approach, finding solutions to the fundamental planning and social problems to create ideal plan outcomes (Lindbolm, 1959).

Lindbolm's theory has since been cast into a negative light, due to problems with complex interactions and transactions that occur in daily practice. In the "Bounded Rationality and the Politics of Muddling Through," Forrester finds five different levels of rationality used in practice depending on the actor, setting, problem, information available, time constraints, and specific political strategy used by the practitioner (Forrester, 1984, pp 26). Forrester classifies Lindbolm's comprehensive rationality as actually composing a pluralist system that is fundamentally different than the other four forms of rational processes available. Forrester concludes that "technical solutions depend upon a stable context and a problem to be solved that can be isolated from that context" (Forrester, 1984, pp 29-30). The ability of a planning organization to operate in a rational context is limited and may not be practical in all areas of planning practice.

In 1999, Forrester suggested the use of deliberation in the practice of planning to strengthen citizen participation. In "The Deliberative Practitioner: Encouraging Participatory Planning Processes," Forrester argues for planners to engage in a reflective technique to come to conclusions. This form of deliberation is unique in that it does not

necessarily rely upon citizen engagement, instead with questioning originating from the individual planning practitioner. For Forrester, the planning practitioner can operate outside of the planning organization as an auto-ethnographer, learning from their and respective organizations' mistakes and working with other citizens and professionals to form planning policy. Forrester's research method is inherently qualitatively focused, making direct execution of experimental protocols problematic for the goals of this research.

The earlier work of Donald Schön complements Forrester's deliberative method and also allows for organizational study. In The Reflective Practitioner: How Professionals Think in Action, Schön establishes the need for planning practitioner to think back on the issues they face. Reflecting in action is described by Schön to mean the improvisational aspect of practice in which the practitioner has to come to a decision when evaluating rational choices (Schön, 1983). Schön examines the practice of multiple design focused professions and finds that reflexive feedback processes enable professional and organizational growth. This can be seen as applying the earlier work of Argyris' and Schön's theory of action and their work in organizational learning studies.

Argyris and Schön provided the most accessible theoretical background for this research, given time and resource constraints. In Organizational Learning, Argyris and Schön highlight a form of systems theory to describe organizational processes that occur in practice. The need for feedback is paramount to organizations abilities to learn new processes and methods of practice, providing the individual agents of the organization information to determine model process sequencing. The type of feedback and the number of the organizational feedback loops can have negative implications for long term

organizational sustainability. Argyris and Schön suggest the use of double loop feedback systems to expand the entire organization's knowledge potentially enabling organizational structural change appropriate for rational decision making requirements.

Single Loop Planning/Double Loop Planning

Argyris' and Schön's conception of Single Loop and Double Loop Learning systems examine the processes, design based occupational practice enables for self evaluation. For the purposes of this research, learning systems have been replaced with the term planning systems to enable study of planning practice. Single Loop Planning is the process that occurs when planning practitioners face repetitive problematic task completion that results from limited reflection of structural reasons for objective failure. Single Loop Planning is theorized by Argyris' and Schön to occur more frequently in Model-1 specific structural organizational settings. Model-1 settings dissuade practitioner learning and work process modification, inhibiting organizational and practitioner growth (Argyris' and Schön, 1974). Planning practitioners that reevaluate organizational processes and individual practice objectives and goals in relationship to governing variables, process inhibitors or other external factors that limit objective completion, are engaging a second round of internal feedback identified as Double Loop Planning. Organizational environments that foster the secondary round of internal practitioner feedback are seen as Model-2 settings (Argyris and Schön, 1974). Model-2 organizational formats are theorized to be the exception to general organizational learning systems, with most organizations falling into subsets of Model-1 learning systems (Argyris and Schön, 1974; Schön , 1983; Argyris, Putnam, and Mclain, 1985; Argyris, 1999).

Argyris' and Schön's theories of practitioner reflection and organizational learning highlight complex interactions that occur in routine planning practice that affect organizational outcomes. Practitioner reflection on issues of control, collaboration, and goal oriented practice vary depending on situation, but provide increased opportunities for practitioner identification of limiting practices that they may personally exhibit while working (Argyris and Schön, 1974; Schön , 1983). Organizations that employ professionals who fail to identify negative self-sustaining feedback mechanisms, and remain entrenched in Single Loop Planning, will become ineffective in the long term, unable to adapt to changes in the individual and professional practice.

Chapter 2 Research Methods and Experimental Outcomes

Research Design

The purpose of this research is to establish the use of Single Loop Planning and Double Loop Planning in the practice of comprehensive planning in the Commonwealth of Virginia, to analyze citizen participation during the comprehensive planning process, and to evaluate different jurisdictional outcomes related to the Urban Development Area comprehensive plan mandate. This research involved a mixed-method approach with initial data provided by the Virginia Department of Housing and Community Development. Additional data collection instruments included interviews and local comprehensive plan document content analysis identifing the Urban Development Area in existing or previous jurisdictions' comprheneisve plan documents.Individual unit of analysis interviews focused on planning practitioners and citizens engaged in their respective localites' Urban Development Area comprehensive plan update, in the Commonwealth of Virginia. Quantitative data was derived from historical comprehensive plan material, including comprehensive plans, governmental meeting minutes, governmental meeting sign-in sheets, organizational publications, and legislative amendments. Quantitative and qualitative data was analyzed simultaneously, to determine the use of Double-loop Learning/Planning in the practice of planning at varying units of analysis.

In a comparison of town, city, and county jurisdictions in the Commonwealth of Virgninia, it is anticipated that those jurisdictions or planning organizations with practitioners who engaged in Single Loop Planning throughout the comprehensive plan review/update process will have decreased citizen planning participation than will those

jurisdictions or planning organizations with practitioners engaged in Double Loop Planning throughout the comprehensive plan review/update process. It is further anticipated that in a comparison of Virginia town, city, and county jurisdictions, planners who did not engage Double Loop Planning techniques will have failed to produce comprehensive plan documents in accordance with state law, as compared to jurisdictions or planning organizations, with practitioners who engaged in Single Loop Planning throughout the comprehensive plan review/update process. The following main research hypotheses demonstrate these testing objectives and enabled further research refinement to determine process that occurred in comprhensive planning practice in the Commonwealth of Virginia.

Main Research Hypotheses

Main Research Hypothesis Number 1

H_o: There are no associations between Single Loop Planning planning practice in the Commonwealth of Virginia and citizen engagement outcomes in comprhensive planning.

H_a: There are associations between Single Loop Planning planning practice in the Commonwealth of Virginia and citizen engagement outcomes in comprhensive planning.

Main Research Hypothesis Number 2

H_o: There are no associations between Single Loop Planning practice in the Commonwealth of Virginia and jurisdictions' ability to complete state Urban Development comprehensive planning mandates.

H_a: There are associations between Single Loop Planning practice in the Commonwealth of Virginia and jurisdictions' ability to complete state Urban Development Area comprehensive planning mandates.

Quantitative Methods

Initial testing involved cross tabulations to determine effects of jurisdiction population on Urban Development Area Adoption. Population growth rates were used as a mechanism within the Urban Development Area legislation to determine jurisdictions required to comply with UDA legislation requirements. Jurisdiction population totals for 1990, 2000, and 2010 were examined against each jurisdiction's Urban Development Area Code of Virginia compliance and physical proof of Urban Development Area adoption variables, as determined by the Commission of Local Governments, in addition to jurisdiction population count and percent changes for 1990 to 2000 and from 2000 to 2010.

Statistical associational testing based on population growth change within Virginia's local jurisdictions provides rationale for establishing effects of growth as an impetus for comprehensive plan adoption as opposed to community engagement protocols, as discussed in the literature review. The following hypotheses were developed to test the effects of the Virginia Urban Development Area legislatively prescribed population thresholds on UDA compliance and Commission on Local Government's most stringent UDA adoption measure recorded.

H_{o1}: Urban Development Area mandated jurisdictions' population is not statistically associated with Urban Development Area mandated jurisdictions' frequency of Urban Development Area compliance.

H_{a1}: Urban Development Area mandated jurisdictions' population is statistically associated of Urban Development Area mandated jurisdictions' frequency of Urban Development Area compliance.

H_{o2}: Urban Development Area mandated jurisdictions' population changes over five percent are not statistically associated of Urban Development Area mandated jurisdictions' frequency of Urban Development Area compliance.

H_{a2}: Urban Development Area mandated jurisdictions' population changes over five percent are statistically associated of Urban Development Area mandated jurisdictions' frequency of Urban Development Area compliance.

H_{o3}: Urban Development Area mandated jurisdictions' population percent changes greater than or equal to fifteen percent, are not statistically associated with Urban Development Area mandated jurisdictions' frequency of Urban Development Area compliance.

H_{a3}: Urban Development Area mandated jurisdictions' population percent changes greater than or equal to fifteen percent, are statistically dependent of Urban Development Area mandated Jurisdictions' frequency of Urban Development Area compliance.

H_{o4}: Urban Development Area mandated jurisdictions' population is not statistically associated with Urban Development Area mandated jurisdictions' frequency of Urban Development Area adoption.

H_{a4}: Urban Development Area mandated jurisdictions' population is statistically associated of Urban Development Area mandated jurisdictions' frequency of Urban Development Area adoption.

H_{o5}: Urban Development Area mandated jurisdictions' population changes over five percent are not statistically associated of Urban Development Area mandated jurisdictions' frequency of Urban Development Area adoption.

H_{a5}: Urban Development Area mandated jurisdictions' population changes over five percent are statistically associated of Urban Development Area mandated jurisdictions' frequency of Urban Development Area adoption.

H_{o6}: Urban Development Area mandated jurisdictions' population percent changes greater than or equal to fifteen percent, are not statistically associated with Urban Development Area mandated jurisdictions' frequency of Urban Development Area adoption.

H_{66}: Urban Development Area mandated jurisdictions' population percent changes greater than or equal to fifteen percent, are statistically dependent of Urban Development Area mandated Jurisdictions' frequency of Urban Development Area adoption.

The Role of Jurisdiction Population Changes in UDA Compliance

Chi-square test statistics were conducted on Commission on Local Government UDA report jurisdiction groups one through five. First round chi-square testing involved jurisdiction population totals tested against jurisdiction Urban Development Area compliance rates. Second round testing involved changes to jurisdiction population totals tested against jurisdiction Urban Development Area compliance rates. Third round testing involved percentage changes to jurisdiction population totals tested against jurisdiction Urban Development Area compliance rates. All three rounds of statistical tests found no statistically significant relationships between population growth and jurisdictional approval of Urban Development Areas within comprehensive plan documents, with the following exceptions.

Chi-square tests for Virginia jurisdictions with populations greater than 20,000 with more than or equal to five percent growth from 1990 to 2000, showed association for counties (x^2= 8.370; df=1;p<.05), towns (x^2= 30.369; df=1;p <.05), and total jurisdictions (40.208; df=1;p <.05). City jurisdictions data was incompatible with the Pearson's chi-square test, on account of cells containing fewer than five variables and did city jurisdiction data not have significance with Fisher's exact test. These tests shows that there was jurisdictional relationship with cities with populations greater than 20,000 with more than or equal to five percent growth from 1990 to 2000, showing association with Urban Development Area compliance. Virginia jurisdictions with populations greater than 20,000 with greater than five percent growth for 2000-2010, also showed association with UDA compliance with counties (x^2= 13.223; df=1;p <.05) and total jurisdictions (x^2= 58.671; df=1;p <.05), showing results rejecting the intial null hypothesis. As a result

of these findings H_{o3} is rejected, as certain Virginia jurisdictions with populations over five percent from 1990 to 2000, and same and other jurisdictions from 2000 to 2010, did show statistical association with this growth measure.

Total jurisdictions Fisher's Exact test showed mixed results for jurisdictions with populations less than and those equal to or greater than 130,000 in 2000 were associated with Urban Development Area compliance. No associations were found for any of the specific jurisdiction types, limiting this finding's significance in the use of this research. Overall compliance rates are found in Table 2 UDA Compliance, below, followed by cross tabulation SPSS statistical output.

Table 2: Urban Development Area Compliance

Jurisdiction Type	**Jurisdiction did not comply with UDA Legislation**	**Jurisdiction did comply with UDA Legislation**	**Total**
County	28	27	55
City	14	3	17
Town	77	2	79
Total	119	32	151

Table 3: Pop >20,000 & >= 5% growth 1990-2000 * Jurisdiction Complied with UDA Legislation * Jurisdiction Type

Crosstab

Count

Jurisdiction Type			Jurisdiction Complied with UDA Legislation		Total
			No	Yes	
County	Pop >20,000 & >= 5% growth 1990-2000	No	17	6	23
		Yes	11	21	32
	Total		28	27	55
City	Pop >20,000 & >= 5% growth 1990-2000	No	5	1	6
		Yes	9	2	11
	Total		14	3	17
Town	Pop >20,000 & >= 5% growth 1990-2000	No	74	0	74
		Yes	3	2	5
	Total		77	2	79
Total	Pop >20,000 & >= 5% growth 1990-2000	No	96	7	103
		Yes	23	25	48
	Total		119	32	151

Table 4: Pop >20,000 & >= 5% growth 2000-2010 * Jurisdiction Complied with UDA Legislation * Jurisdiction Type

Crosstab

Count

Jurisdiction Type			Jurisdiction Complied with UDA Legislation		Total
			No	Yes	
County	Pop >20,000 & >= 5% growth 2000-2010	No	13	1	14
		Yes	15	26	41
	Total		28	27	55
City	Pop >20,000 & >= 5% growth 2000-2010	No	11	2	13
		Yes	3	1	4
	Total		14	3	17
Town	Pop >20,000 & >= 5% growth 2000-2010	No	73	0	73
		Yes	4	2	6
	Total		77	2	79
Total	Pop >20,000 & >= 5% growth 2000-2010	No	97	3	100
		Yes	22	29	51
	Total		119	32	151

Table 5: Pop growth >= 15% growth 1990-2000 * Jurisdiction Complied with UDA Legislation * Jurisdiction Type

Crosstab

Count

Jurisdiction Type			Jurisdiction Complied with UDA Legislation		Total
			No	Yes	
County	Pop growth >= 15% growth 1990-2000	No	9	6	15
		Yes	19	21	40
	Total		28	27	55
City	Pop growth >= 15% growth 1990-2000	No	9	2	11
		Yes	5	1	6
	Total		14	3	17
Town	Pop growth >= 15% growth 1990-2000	No	34	1	35
		Yes	43	1	44
	Total		77	2	79
Total	Pop growth >= 15% growth 1990-2000	No	52	9	61
		Yes	67	23	90
	Total		119	32	151

Table 6: Pop growth >= 15% growth 2000-2010 * Jurisdiction Complied with UDA Legislation * Jurisdiction Type

Crosstab

Count

Jurisdiction Type			Jurisdiction Complied with UDA Legislation		Total
			No	Yes	
County	Pop growth >= 15% growth 2000-2010	No	17	11	28
		Yes	11	16	27
	Total		28	27	55
City	Pop growth >= 15% growth 2000-2010	No	8	2	10
		Yes	6	1	7
	Total		14	3	17
Town	Pop growth >= 15% growth 2000-2010	No	34	2	36
		Yes	43	0	43
	Total		77	2	79
Total	Pop growth >= 15% growth 2000-2010	No	59	15	74
		Yes	60	17	77
	Total		119	32	151

Table 7: Pop < 130000 2000 * Jurisdiction Complied with UDA Legislation * Jurisdiction Type

Crosstab

Count

Jurisdiction Type			Jurisdiction Complied with UDA Legislation		Total
			No	Yes	
County	Pop < 130000 2000	No	1	5	6
		Yes	27	22	49
	Total		28	27	55
City	Pop < 130000 2000	No	4	0	4
		Yes	10	3	13
	Total		14	3	17
Town	Pop < 130000 2000	Yes	77	2	79
	Total		77	2	79
Total	Pop < 130000 2000	No	5	5	10
		Yes	114	27	141
	Total		119	32	151

Table 8: Pop >= 130000 2000 * Jurisdiction Complied with UDA Legislation * Jurisdiction Type

Crosstab

Count

Jurisdiction Type			Jurisdiction Complied with UDA Legislation		Total
			No	Yes	
County	Pop >= 130000 2000	No	27	22	49
		Yes	1	5	6
	Total		28	27	55
City	Pop >= 130000 2000	No	10	3	13
		Yes	4	0	4
	Total		14	3	17
Town	Pop >= 130000 2000	No	77	2	79
	Total		77	2	79
Total	Pop >= 130000 2000	No	114	27	141
		Yes	5	5	10
	Total		119	32	151

Table 9: Pop < 130000 2010 * Jurisdiction Complied with UDA Legislation * Jurisdiction Type

Crosstab

Count

Jurisdiction Type			Jurisdiction Complied with UDA Legislation		Total
			No	Yes	
County	Pop < 130000 2010	No	1	3	4
		Yes	27	24	51
	Total		28	27	55
City	Pop < 130000 2010	No	5	0	5
		Yes	9	3	12
	Total		14	3	17
Town	Pop < 130000 2010	Yes	77	2	79
	Total		77	2	79
Total	Pop < 130000 2010	No	6	3	9
		Yes	113	29	142
	Total		119	32	151

Table 10: Pop >= 130000 2010 * Jurisdiction Complied with UDA Legislation * Jurisdiction Type

Crosstab

Count

Jurisdiction Type			Jurisdiction Complied with UDA Legislation		Total
			No	Yes	
County	Pop >= 130000 2010	No	27	24	51
		Yes	1	3	4
	Total		28	27	55
City	Pop >= 130000 2010	No	9	2	11
		Yes	5	1	6
	Total		14	3	17
Town	Pop >= 130000 2010	No	77	2	79
	Total		77	2	79
Total	Pop >= 130000 2010	No	113	28	141
		Yes	6	4	10
	Total		119	32	151

All null hypothesis are confirmed indicating that jurisdictional growth rates were not associative with Urban Development Area compliance within the Commonwealth of Virginia. Other factors were determinable to plan document outcomes, encouraging review of specific organizational learning structures that are established within the planning discipline as enabling successful planning practice. Due to the complexities of this research qualitative inputs were necessary to answer the executive research hypothesis.

The Role of Jurisdiction Population Changes in UDA Adoption

Additional analysis determined that the Commission on Local Government data show county comprehensive plan documents had some association with UDA adoption.

County jurisdictions with populations greater than 20,000 and growth rates higher than five percent showed associational statistical significance towards UDA adoption (x^2= 4.935; df=1;p <.05), in additional to all total jurisdictions (x^2= 27.547; df=1;p <.05). Statistical measures for Virginia counties with population and growth changes similar to the above for 2000 to 2010 were unavailable, but Fisher's Exact Test showed similar statistical significance with p<.05, while total jurisdictions showed chi-square associational statistical significance with the 2000 to 2010 data (x^2= 24.718; df=1;p <.05). As a result of these findings H_{o5} is rejected, as certain Virginia jurisdictions with populations over five percent from 1990 to 2000, and same and other jurisdictions from 2000 to 2010, did show statistical association with this growth measure.

Table 11: Urban Development Area Adoption

Jurisdiction Type	**Jurisdiction did not present CLG with UDA specific documents.**	**Jurisdiction did present CLG with UDA specific documents.**	**Total**
County	39	16	55
City	15	2	17
Town	78	1	78
Total	132	19	151

Table 12: Pop >20,000 & >= 5% growth 1990-2000 * Jurisdiction gave CLG Response A with UDA Legislation * Jurisdiction Type

Crosstab

Count

Jurisdiction Type			Jurisdiction gave CLG Response A with UDA Legislation		Total
			No	Yes	
County	Pop >20,000 & >= 5% growth 1990-2000	No	20	3	23
		Yes	19	13	32
	Total		39	16	55
City	Pop >20,000 & >= 5% growth 1990-2000	No	6	0	6
		Yes	9	2	11
	Total		15	2	17
Town	Pop >20,000 & >= 5% growth 1990-2000	No	74	0	74
		Yes	4	1	5
	Total		78	1	79
Total	Pop >20,000 & >= 5% growth 1990-2000	No	100	3	103
		Yes	32	16	48
	Total		132	19	151

Table 13: Pop >20,000 & >= 5% growth 2000-2010 * Jurisdiction gave CLG Response A with UDA Legislation * Jurisdiction Type

Crosstab

Count

Jurisdiction Type			Jurisdiction gave CLG Response A with UDA Legislation		Total
			No	Yes	
County	Pop >20,000 & >= 5% growth 2000-2010	No	13	1	14
		Yes	26	15	41
	Total		39	16	55
City	Pop >20,000 & >= 5% growth 2000-2010	No	11	2	13
		Yes	4	0	4
	Total		15	2	17
Town	Pop >20,000 & >= 5% growth 2000-2010	No	73	0	73
		Yes	5	1	6
	Total		78	1	79
Total	Pop >20,000 & >= 5% growth 2000-2010	No	97	3	100
		Yes	35	16	51
	Total		132	19	151

Table 14: Pop growth >= 15% growth 1990-2000 * Jurisdiction gave CLG Response A with UDA Legislation * Jurisdiction Type

Crosstab

Count

Jurisdiction Type			Jurisdiction gave CLG Response A with UDA Legislation		Total
			No	Yes	
County	Pop growth >= 15% growth 1990-2000	No	12	3	15
		Yes	27	13	40
	Total		39	16	55
City	Pop growth >= 15% growth 1990-2000	No	10	1	11
		Yes	5	1	6
	Total		15	2	17
Town	Pop growth >= 15% growth 1990-2000	No	34	1	35
		Yes	44	0	44
	Total		78	1	79
Total	Pop growth >= 15% growth 1990-2000	No	56	5	61
		Yes	76	14	90
	Total		132	19	151

Table 15: Pop growth >= 15% growth 2000-2010 * Jurisdiction gave CLG Response A with UDA Legislation * Jurisdiction Type

Crosstab

Count

Jurisdiction Type			Jurisdiction gave CLG Response A with UDA Legislation		Total
			No	Yes	
County	Pop growth >= 15% growth 2000-2010	No	21	7	28
		Yes	18	9	27
	Total		39	16	55
City	Pop growth >= 15% growth 2000-2010	No	9	1	10
		Yes	6	1	7
	Total		15	2	17
Town	Pop growth >= 15% growth 2000-2010	No	35	1	36
		Yes	43	0	43
	Total		78	1	79
Total	Pop growth >= 15% growth 2000-2010	No	65	9	74
		Yes	67	10	77
	Total		132	19	151

Table 16: Pop < 130000 2000 * Jurisdiction gave CLG Response A with UDA Legislation * Jurisdiction Type

Crosstab

Count

Jurisdiction Type			Jurisdiction gave CLG Response A with UDA Legislation		Total
			No	Yes	
County	Pop < 130000 2000	No	4	2	6
		Yes	35	14	49
	Total		39	16	55
City	Pop < 130000 2000	No	4	0	4
		Yes	11	2	13
	Total		15	2	17
Town	Pop < 130000 2000	Yes	78	1	79
	Total		78	1	79
Total	Pop < 130000 2000	No	8	2	10
		Yes	124	17	141
	Total		132	19	151

Table 17: Pop >= 130000 2000 * Jurisdiction gave CLG Response A with UDA Legislation * Jurisdiction Type

Crosstab

Count

Jurisdiction Type			Jurisdiction gave CLG Response A with UDA Legislation		Total
			No	Yes	
County	Pop >= 130000 2000	No	35	14	49
		Yes	4	2	6
	Total		39	16	55
City	Pop >= 130000 2000	No	11	2	13
		Yes	4	0	4
	Total		15	2	17
Town	Pop >= 130000 2000	No	78	1	79
	Total		78	1	79
Total	Pop >= 130000 2000	No	124	17	141
		Yes	8	2	10
	Total		132	19	151

Table 18: Pop < 130000 2010 * Jurisdiction gave CLG Response A with UDA Legislation * Jurisdiction Type

Crosstab

Count

Jurisdiction Type			Jurisdiction gave CLG Response A with UDA Legislation		Total
			No	Yes	
County	Pop < 130000 2010	No	4	0	4
		Yes	35	16	51
	Total		39	16	55
City	Pop < 130000 2010	No	5	0	5
		Yes	10	2	12
	Total		15	2	17
Town	Pop < 130000 2010	Yes	78	1	79
	Total		78	1	79
Total	Pop < 130000 2010	No	9	0	9
		Yes	123	19	142
	Total		132	19	151

Table 19: Pop >= 130000 2010 * Jurisdiction gave CLG Response A with UDA Legislation * Jurisdiction Type

Crosstab

Count

Jurisdiction Type			Jurisdiction gave CLG Response A with UDA Legislation		Total
			No	Yes	
County	Pop >= 130000 2010	No	35	16	51
		Yes	4	0	4
	Total		39	16	55
City	Pop >= 130000 2010	No	9	2	11
		Yes	6	0	6
	Total		15	2	17
Town	Pop >= 130000 2010	No	78	1	79
	Total		78	1	79
Total	Pop >= 130000 2010	No	122	19	141
		Yes	10	0	10
	Total		132	19	151

Commission on Local Government data on Urban Development Area compliance and adoption show that legislatively defined population compliance measures did not have an effect on jurisdiction's application of Urban Development Areas into their respective comprehensive plan documents, with the exception of association between jurisdictions with growth rates over five percent and populations over 20,000. Legislation maintained population growth as the basis for Urban Development Area adoption and compliance throughout the legislation's legislative history, until 2012 when the Urban Development Area legislation was made optional to local jurisdictions in the Commonwealth of Virginia. Additional in-depth research was warranted to determine the practice of comprehensive planning with respect to the Urban Development area, given the previous null hypotheses satisfaction of comparatively higher growth rates or

jurisdictional population not being associated with increased frequency of Urban Development Area adoption or compliance.

Qualitative Methods

The application of Urban Development Areas by Virginia Jurisdictions not being influenced by population growth, as inferred from UDA legislation text, may be influenced by individual planning practitioner and/or organizational environment. Argyris and Schön provide a testable theory of reflexivity enabling research hypothesis to determine the qualitative effects of practice on plan outcomes. The following hypothesis was determined to test the effects of the jurisdiction's respective planning practitioner's organization's learning system.

H_o: Organizational Learning did not affect Urban Development Area comprehensive plan document adoption.

H_a: Organizational Learning did affect Urban Development Area comprehensive plan document adoption.

The above null hypotheses were tested using interview data with sampling consisting of Commonwealth of Virginia jurisdictions that were required to implement Urban Development Areas per Commission on Local Government findings (Commission on Local Government, 2011). The jurisdiction sample was determined using a stratified random sampling technique. The jurisdictions that were researched fall into one of three different governmental types or strata. The first type is county jurisdictions. In Virginia, there are ninety-five counties, of which fifty-five counties were required to update their comprehensive plan to include Urban Development Areas (Commission of Local Government, 2011). The second strata are independent cities. Thirty-nine independent

cities exist in Virginia, and seventeen cities were required to update their comprehensive plan to include Urban Development Areas, and one additional city updated their comprehensive plan to include Urban Development Areas unrelated to the UDA legislative mandate (Commission on Local Government, 2011). The final jurisdictional strata type in Virginia, are towns. There are currently one hundred ninety towns in Virginia. Seventy-nine towns were required to update their comprehensive plan to include Urban Development Areas, and one additional town that updated their comprehensive plan to include Urban Development Areas unrelated to the UDA legislative mandate (Commission of Local Government, 2011).

Jurisdictions with populations smaller than 1,000 as of 2010 U.S. Census were not included in the sample; this decision allowed for equal access to interview participants and historical documentation given potential resource constraints in smaller municipal jurisdictions. Some jurisdictions have limited staffing making full study participation limited, potentially biasing results (Creswell, 2009; Pollock 2011). As a result total sample sizes for towns were reduced from seventy-nine total towns to forty eight towns.

A Stratified Random sampling technique was used to determine sample cases from the larger population. A modified version of this technique was determined using formatting found in Agresti and Finley's statistics for the Social Sciences (Agresti & Finley, 2008) The three different jurisdiction types constitute three separate strata which were then compiled using disproportional weighting to allow for accurate study of planning practitioners spanning the different jurisdictional types. A strata cap of five jurisdictions was determined to allow for adequate research data capture within the

confines of the study. As these strata are disproportional, data analysis will be used to highlight potential biases that could occur during the study. Finally, the independent city strata and town strata were guaranteed to contain jurisdictions that on their own accord updated the comprehensive plan to include Urban Development Areas. The City of Hopewell and Town of Front Royal provide additional case merit due to their unique use of the Urban Development Area requirement and will automatically be included for study. As a result, thirteen jurisdictions were randomly sampled, with five county jurisdictions, four independent city jurisdictions, and four town jurisdictions selected.

Jurisdictions were placed into specific strata alphabetically, with strata defined by jurisdictions that were involved with Urban Development Area requirement. A random number was generated by random.org on November 8, 2012, to determine a starting point of randomization for each stratum. The County Jurisdiction strata were assigned the starting point of 27, the City Jurisdiction strata were assigned the starting point of 33, and the Town Jurisdiction strata were assigned the number 47. A second random number was generated by random.org on November 8, 2012, to determine the sequence for randomization for each stratum. County Jurisdictions were assigned a sequence of 9, City Jurisdictions were assigned 5, and Town Jurisdictions were assigned 34.

During the first round of participant solicitation an anomaly was discovered, where over 70% of solicited parties failed to open the initial and secondary solicitation emails. It was determined that of those jurisdictions that did respond, study parameters could be altered to allow for a continuation of planned research. Prior to the detection of the anomaly, two County jurisdictions (Counties A and B) agreed to interview requests. Both cases represent the difference in adoption binary, with one jurisdiction having

adopted Urban Development Areas and the other deferring to the Commonwealth of Virginia. Both of the County jurisdiction's interviews were conducted in early December of 2012, with the first interview conducted one on one, and the second interview being conducted with two planners simultaneously. All of the planners interviewed held professional certification in the American Institute of Certified Planners, and had directly worked on their jurisdiction's response to Urban Development Area requirements, including direct citizen engagement related to state comprehensive planning public hearing requirements or facilitation of public and departmental input sessions.

Both interviews occurred at county administration complexes, with the County A interview occurring in the planning department library and County C interview occurring in a planning department conference room. Interviews consisted of nine question categories related to reflective practice, with responses coded in a binary yes no, depending on participant responses. Questions were designed to extract planning practitioner opinions related to the Urban Development Area comprehensive plan requirement, their comprehensive planning involvement, and their engagement with citizens. Response coding was conducted twice on each interview, to ensure adequate representation to answer a modified question hypothesis, directly relatable to this qualitative data.

A second round of participant solicitation, modified from the originally intended research design, was conducted in March and of 2013, resulting in two additional planning practitioner interviews. Both of these interviews occurred on Mondays in early April of 2013, via telephone. The interview structure did not change with the exception of the spatial difference between interviewer and subject. The interview protocoled resulted

in four interviews with planners from two jurisdictions that had adopted Urban Development Areas and planners from two jurisdictions that did not. An engaged citizen was interviewed from one jurisdiction from the adopted UDA interviewed jurisdiction pool, and did not adopt UDA interviewed jurisdiction pool. Research design was modified throughout the research plan enabling participant access, while keeping a mixed method QUAL + QUAN focused methodology, encouraging concurrent design to enable accurate research data reflection.

Qualitative Research Limitations

Access to planning practitioners engaged in the practice of comprehensive planning during the Urban Development Area comprehensive plan legislative mandate, was challenging given time lapse, organizational churn, and general access issues. In addition to physical ethnographic challenges, questions were developed to solicit planning practitioner attitudes and opinions that may not be accurately reflected in the coding binary used to determine Single Loop and Double Loop planning in Commonwealth of Virginia local jurisdictions planning departments. Physical coding in this research is also problematic as coding was completed by one researcher further limiting reliability of experimental design. While these limitations and other unaccounted internal validity issues are present in this modified research design, outcomes related to the main research hypotheses were still possible and present data answering the research question.

Qualitative Research Results

Coding results showed that organizational learning systems appeared to operate in Model 1 conditions, with all jurisdictions showing some level of Single Loop Planning.

Counties A and D may have increased opportunity for Model 2 advancement enabling increased frequency of Double Loop Planning opportunity for the planning practitioner (Argyris and Schön, 1974). County C showed increased incidence of Single Loop Planning, while still enabling some degree of Double Loop Planning. City B showed a higher incidence of Single Loop Planning compared to the other jurisdictions, with only two instances of Double Loop Planning opportunity. The following table represents coded responses for the participant jurisdictions.

Table 20: Double Loop/Single Loop Responses

Jurisdiction	**Q: A**	**Q: B**	**Q: C**	**Q: D**	**Q: E**	**Q: F**	**Q: G**	**Q: H**	**Q: I**	**Total S**	**Total D**	**D:S Ratio W/O Question I**
County A*	D	S	D	D	S	D	D	D	#	3	7	**6:2**
County C	S	S	D	S	D	D	S	S	D	5	4	**3:5**
County D*	D	D	D	S	D	D	S	D	D	2	7	**6:2**
City B	S	S	S	S	D	S	S	S	D	7	2	**1:7**

D= Double-Loop Learning/Planning
S=Single-Loop Learning/Planning
*=Adopted UDA
#=Mixed response

County A possess a 6:2 Double Loop Planning to Single Loop Planning ratio as compared to County C with a 3:5, where UDA adoption did not occur and City B with a 1:7 Double Loop Planning to Single Loop Planning ratio. One method of UDA completion used by County A includes the formation of a business and governance coalition, similar to Briggs' and Stone's pluralist regimes (Briggs, 2008; Stone, 1989). Planning practitioners in County A highlighted coalition building that was able to occur as a result of increased citizen participation noting.

> "Well for this small area plan there was actually a an initial kickoff session put on by the owners, various owners in the … office development, and that was the initial kickoff and visioning, and then we had other public meetings along the way we after the initial visioning we kind of worked up a draft document and some draft maps and you know had the large boards out at public meetings and gathered input, elected officials attended, elected and appointed officials attended, community leaders attended, and then once we had done that we revised the document and went through the public hearing process so the citizens were involved both at the visioning review, the initial proposal if you will, by the by the planning department, and then the public hearing process before the planning commission and the Board of Supervisors. So at least <crosstalk> Four or five times." Respondent 1, County A.

This view was further elaborated by local development professionals who established dialogue between County A planners and representative and owners of the above referenced office development.

> "But, I think it is important for you to see that the County and the owners association, representing the private sector, we formed a partnership in this planning process to figure out the very best plan that we could do for this office park and the community around us, that partnership continues things, we have been going at this for three years, and all along we have had a very strong cooperative relationship with the County. Now it doesn't mean that we haven't had issues with neighbors and go through zoning, it is a public process, not everyone agrees with your vision for the world, what future should … the owners association and the County, work at the planning level, the administrative level, the political level, we had very strong partnership relationship." Engaged Citizen 1.

Additionally noting that County planners made the process comfortable,

> "The task of any good planning process is to distill those down to their basic principles which are important to the greatest number of people. So they participated with us and then when we got through our part, we put all of that information out on our website. So that anybody could go see it, we got all this process, so we got stuff up there we have had for three years, you know… and then they started with their process, and so, as planning professionals they had their own level to work with that is different that the private practitioner, you know, I'm the boots on the ground, head in the clouds, kind of thing, and so we had to come to a common ground where the theoretical and philosophical, with the actual getting done, and so how did that make me feel comfortable? We had a dialogue, we had a true dialogue, we had a partnership in the sense that we were both going to find the best answer, and a lot of times that is not the case, when you go into a public process it is sort of a head banging contest, you know it is, they want control, and all the rest, they aren't willing to give anything up, and they just want you to do what they want you to do. And it can be very frustrating, for the private developer, individual parcel can deal with, expanded parcel more so no than yes, that didn't happen here. And I think in large part because we were dealing with an entire office park with its own administrative process, very active owner participation in the process, and so you wound up with the recognition that this is an organized body of, composed of hundreds of millions of dollars, you know there is towards a billion dollars invested in the park, it is a major piece of leverage, so I think we had a little more weight behind the private sector in this case, than you would normally find if you were, you get give acres of land and you want to build a six unit office building there. And so there was, I think the County had a organized group on one side that they could effectively community with, and we had enough heft on our side that we could effectively communicate back as well, I think that is a major piece of the puzzle, but, how they made us feel comfortable they just, we both agreed early on that what the goal was what we wanted (the office park) to become." Engaged Citizen 1.

This coalition was able to successfully lobby surrounding property owners to enable development of a mixed use office park, using the UDA designation, enabling completion of state mandates and increasing economic development and tax revenue opportunities for the County. Such coalitions were not present in County C, where increased single loop learning/planning is evident. The absence of any private community commitment to enable economic development can be seen as a consequence of County C's organization's potentially limited learning system. County C's reliance on political processes enabled some level of community engagement, but failed to lead to direct citizen participation in the comprehensive plan drafting.

> "Well since we didn't designate any (Urban Development Areas), …they weren't included in the process for specifically for Urban Development Areas. But like I said, we were updating our comprehensive plan at the time, our long range land-use chapter, and also our transportation plan. We had a sixteen member citizen committee appointed by the board, that reviewed the land-use chapter, called land-use advisory committee, and they spent about a year and a half reviewing the land-use chapter and incorporating the principles of smart growth, and developed the concept of centers of commerce and centers of community which were very similar to the goals of the UDA legislation. We also had a sixteen member mobility committee that looked at the transportation chapter, and they added a non-motorized section, they looked at transit, and added updated the transit and greatly expanded the transit section, which was also consistent, I believe, with the UDA legislation." Respondent, County C.

> "Well they made their reco- the committees made their recommendations to the planning commission and then the planning commission had work sessions on it, then public hearings and put forth their recommendations, which were different from the committees, slightly, and then we had a, after the planning commission made recommendation we had a series of town we have, we had three town hall meetings where one in the eastern end of the county, one central, one in the western end of the county, which the various supervisors from those areas came to, and also the planning commissioners, and we presented the plan in an open forum and got questions and comments from the attendees to those three meetings, it may have been four, four meetings actually, three were specifically targeted toward citizens, and then the fourth one was more targeted towards business community." Respondent, County C.

Limited political access and democratic participation education were identified during an interview with an engaged citizen who participated in County C's planning processes during the Urban Development Area mandate period. The following dialogue captures concern that the citizen has regarding political access by local citizens.

Engaged Citizen 2: Well engaging community members is always a challenge, because many times people don't, don't want to get involved until they are upset about something, many people won't get involved while they are planning, they are more reactionary, than, you know, trying to plan for the future, so that is always a problem, I think, what I am discovering is there needs to be more of an education process about citizen responsibility, not only to themselves and their families but the community as a whole, and I think many times, you know, they expect the city to provide them services such as fire, safety, law enforcement, water, sewer, and all those kinds of things that a city does, and they are quick to see a city's or county's responsibility, but not so quick to see maybe their own responsibility, and I think, you know, one of the terms we use a lot in conflict resolution is to empower people and to let them know, that we value and are open to their suggestions and concerns and incorporate those, I think one of, from a planning perspective you tend to hear from the vocal minority often, and you react to that vocal minority. Which firmly they don't represent the entire view, so I think as planners, and as professionals we have to be conscious of that and find ways to go out and engage people and make them feel valued, and incorporate what they say, you know, many times when that engagement does take place, we'll kind of listen to people and then we don't incorporate what they say, and I think that's, you know, wrong on our part, that we have to be willing to somehow incorporate what their suggestions, and their ideas, but I see it more as a matter of education, and I think it can be done on a number of different levels. I think there are groups that can do it, certainly churches can do it, schools and, and that kind of thing, but you have to, you are going to have to, you have got to make sure they get something out of it.

Interviewer: So with regards to <Interviewer identified respondent location> then, is that an area they need to work on to get citizen participation?

Engaged Citizen 2: Yes. I definitely see that they tend to react to a very small group of people, and while they are political animals, and there is political ideology, they do have a greater responsibility for the greater good, not just making their group of constituents and supporters happy, but they have a responsibility to the community as a whole. And, I don't see a lot of evidence of that, I see more of them fulfilling their own political agenda, and not taking the community as a whole.

County C's capacity to enable citizen participation is seen as disengaging as compared to other jurisdictions in the Commonwealth of Virginia. Evidence of Single Loop Planning in local jurisdictional planning organizations within the Commonwealth of Virginia, during the period of 2007 to 2008 cause this research to reject the Qualitative research hypothesis. The alternative hypothesis, Organizational Learning did affect Urban Development Area comprehensive plan document adoption, is found to have occurred. Local jurisdiction's planning practitioner's and organizations that exhibited higher incidence of Single Loop Planning were also found to have failed to comply with Urban Development Area legislation with no UDA adopted occurring in majority Single Loop Learning jurisdictions identified with D:S ratios less than 1.

Chapter 3 Conclusions

Research Conclusions

Findings from this mixed method research show that null hypotheses for the main research hypothesis Numbers 1 and 2 are rejected. Research evidence has confirmed that there was association between Single Loop Planning practice in the Commonwealth of Virginia and citizen engagement outcomes in comprhensive planning and that there are associations between Single Loop Planning practice in the Commonwealth of Virginia and jurisdictions' ability to complete state Urban Development Area comprehensive planning mandates. Population growth rates as established by the legislation were not indicative of Urban Development Area adoption, with no statistically signficant associations found between population and UDA compliance or adoption variables. This finding contradicts the UDA mandate requirement basis of the Urban Development Area legislation, whereby local jurisdictions' declinial population growth was used as the mechanism for determining required complaince with UDA mandate (Code of Virginia, 2007; 2009).

The presence of Single Loop Planning systems in the Commonwealth of Virginia is supported by qualitative data and confirms the alternative hypothesis. This finding also supports the main research alternative hypothesis; Organizational Learning did affect Urban Development Area comprehensive plan document adoption. These findings indicate that efforts should be taken to increase Model 2 organizational learning system practice within the Commonwealth of Virginia. These findings also indicate that jurisdictional comprehensive plan processes are not indicative of Urban Development

Area policy failure, with practitioner learning systems accounting for differences in Urban Development Area adoption rates.

Recommendations

Virginia's localities face multiple challenges and obstacles when planning for future jurisdictional land-uses and economies. Jurisdictional planning capacity and administrative organizational capacity are constrained as a result of external factors, organizational structures, and practitioner mechanics that enable Model 1 learning systems, limiting the jurisdictions' organizational learning systems growth. In addition to organizational structures limiting planning outcomes, the role and use of citizens in the planning process is reduced, potentially limiting the incidence of Double Loop Planning in Virginia localities. Local jurisdictions in the Commonwealth of Virginia should evaluate the performance of local planning initiatives in relation to citizen and stakeholder involvement, to determine areas for increased citizen responsibility in the comprehensive planning process.

The Commonwealth of Virginia's use of Dillon's rule limits the ability for local jurisdictions to make meaningful changes to organizational structure and provide enhanced community input processes for local comprehensive planning measures, encouraging Model 2 organization operation. The fragmented system of planning within the Commonwealth of Virginia's executive branch and the continued use of non-requirement based planning legislation, further complicates local comprehensive planning efforts as a result of limited and politically volatile incentives to coordinate planning activities within the state, as seen with jurisdictions such as Roanoke County determining non-compliance as a mechanism to enable future compliance (Commission

on Local Government, 2011). The Commonwealth's planning structure enables organizational and practitioner rationalization of plan failure to ensure organizational sustainability, at the expense of future economic development. As the Commonwealth of Virginia has an inherent interest in economic sustainability, legislation, policies, and administrative procedures should be evaluated at the state level to provide planning and organizational capacity to local jurisdictions enabling orderly growth, efficient use of resources, and effective governance. Failure to change operating conditions in the Commonwealth of Virginia's planning organizations that encourage limited learning systems will limit future local government revenues and economic competitiveness of the of the Commonwealth of Virginia.

Communication is one opportunity currently available to all jurisdictions within the Commonwealth of Virginia. Local jurisdictions' ability to interact with citizens is mandated at a minimum, with ample opportunity for increased citizen outreach and engagement. Increased communication and partnerships with stakeholders should be explored and used as a method to achieve dialogue and consensus on development issues. Local jurisdiction's planning organizations with the capacity and ability to work with a mix of business, community, and governance organizations in new ways, have increased opportunity for Double Loop Planning practice. Additional planning recourses or refocusing on plan adoption dynamics may provide incentive for engaged outreach.

Reflection

This thesis research provided an opportunity to test research protocols, and finalize research plan goals. Overall, research planning and finalization did not conclude as originally designed as a result of limited access to planning practitioners, the passage

of time affecting responses and clouding planners' memories of events, limited access to public comprehensive plan documents, incomplete comprehensive plan resources, and the general quasi-experimental protocol inherent in policy research. Increases in communication technology and increases in government transparency should provide additional opportunity for mixed methods research, with additional content available. Additional ethnographic research would provide increase qualitative understanding of comprehensive planning, and the methods available for citizen participation, in physical comprehensive planning practice.

Finally, quantitative research investigating comprehensive planning, or other similar jurisdictional planning processes should evaluate planning outcomes from wider lenses than policy completion binaries. Comprehensive planning in Virginia and other states is a dynamic process encouraging continued attention and development to text material and mapping. Providing expanded quantitative comprehensive plan completion data would enable additional opportunity for practiced double loop planning and provide additional justification and legitimization for optimal governmental structural changes ensuring economic competiveness in the future.

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Appendix A

UDA Compliance and Adoption Statistic Output

Pop >20,000 & >= 5% growth 1990-2000 * Jurisdiction Complied with UDA Legislation * Jurisdiction Type

Chi-Square Tests

Jurisdiction Type		Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
County	Pearson Chi-Square	8.370[c]	1	**.004***		
	Continuity Correction[b]	6.863	1	.009		
	Likelihood Ratio	8.642	1	.003		
	Fisher's Exact Test				.006	.004
	Linear-by-Linear Association	8.218	1	.004		
	N of Valid Cases	55				
City	Pearson Chi-Square	.006[d]	1	.938		
	Continuity Correction[b]	.000	1	1.000		
	Likelihood Ratio	.006	1	.937		
	Fisher's Exact Test				1.000	.728
	Linear-by-Linear Association	.006	1	.939		
	N of Valid Cases	17				
Town	Pearson Chi-Square	30.369[e]	1	**.000***		
	Continuity Correction[b]	16.322	1	.000		
	Likelihood Ratio	11.924	1	.001		
	Fisher's Exact Test				.003	.003
	Linear-by-Linear Association	29.984	1	.000		
	N of Valid Cases	79				
Total	Pearson Chi-Square	40.208[a]	1	**.000***		
	Continuity Correction[b]	37.542	1	.000		
	Likelihood Ratio	38.365	1	.000		
	Fisher's Exact Test				.000	.000
	Linear-by-Linear Association	39.941	1	.000		
	N of Valid Cases	151				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 10.17.

b. Computed only for a 2x2 table

c. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 11.29.

d. 3 cells (75.0%) have expected count less than 5. The minimum expected count is 1.06.

e. 3 cells (75.0%) have expected count less than 5. The minimum expected count is .13.

Pop >20,000 & >= 5% growth 2000-2010 * Jurisdiction Complied with UDA Legislation * Jurisdiction Type

Chi-Square Tests

Jurisdiction Type		Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
County	Pearson Chi-Square	13.223[c]	1	**.000***		
	Continuity Correction[b]	11.067	1	.001		
	Likelihood Ratio	15.173	1	.000		
	Fisher's Exact Test				.000	.000
	Linear-by-Linear Association	12.983	1	.000		
	N of Valid Cases	55				
City	Pearson Chi-Square	.195[d]	1	.659		
	Continuity Correction[b]	.000	1	1.000		
	Likelihood Ratio	.183	1	.669		
	Fisher's Exact Test				1.000	.579
	Linear-by-Linear Association	.183	1	.669		
	N of Valid Cases	17				
Town	Pearson Chi-Square	24.965[e]	1	.000*		
	Continuity Correction[b]	13.284	1	.000		
	Likelihood Ratio	11.016	1	.001		
	Fisher's Exact Test				**.005***	.005
	Linear-by-Linear Association	24.649	1	.000		
	N of Valid Cases	79				
Total	Pearson Chi-Square	58.671[a]	1	.000		
	Continuity Correction[b]	55.491	1	.000		
	Likelihood Ratio	59.294	1	.000		
	Fisher's Exact Test				.000	.000
	Linear-by-Linear Association	58.283	1	.000		
	N of Valid Cases	151				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 10.81.

b. Computed only for a 2x2 table

c. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 6.87.

d. 3 cells (75.0%) have expected count less than 5. The minimum expected count is .71.

e. 2 cells (50.0%) have expected count less than 5. The minimum expected count is .15.

bolded***** indicates statistical significance

Pop growth >= 15% growth 1990-2000 * Jurisdiction Complied with UDA Legislation * Jurisdiction Type

Chi-Square Tests

Jurisdiction Type		Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
County	Pearson Chi-Square	.682[c]	1	.409		
	Continuity Correction[b]	.274	1	.601		
	Likelihood Ratio	.686	1	.408		
	Fisher's Exact Test				.547	.301
	Linear-by-Linear Association	.670	1	.413		
	N of Valid Cases	55				
City	Pearson Chi-Square	.006[d]	1	.938		
	Continuity Correction[b]	.000	1	1.000		
	Likelihood Ratio	.006	1	.937		
	Fisher's Exact Test				1.000	.728
	Linear-by-Linear Association	.006	1	.939		
	N of Valid Cases	17				
Town	Pearson Chi-Square	.027[e]	1	.870		
	Continuity Correction[b]	.000	1	1.000		
	Likelihood Ratio	.027	1	.870		
	Fisher's Exact Test				1.000	.693
	Linear-by-Linear Association	.027	1	.870		
	N of Valid Cases	79				
Total	Pearson Chi-Square	2.540[a]	1	.111		
	Continuity Correction[b]	1.934	1	.164		
	Likelihood Ratio	2.629	1	.105		
	Fisher's Exact Test				.155	.081
	Linear-by-Linear Association	2.523	1	.112		
	N of Valid Cases	151				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 12.93.

b. Computed only for a 2x2 table

c. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 7.36.

d. 3 cells (75.0%) have expected count less than 5. The minimum expected count is 1.06.

e. 2 cells (50.0%) have expected count less than 5. The minimum expected count is .89.

Pop growth >= 15% growth 2000-2010 * Jurisdiction Complied with UDA Legislation * Jurisdiction Type

Chi-Square Tests

Jurisdiction Type		Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
County	Pearson Chi-Square	2.194[c]	1	.139		
	Continuity Correction[b]	1.468	1	.226		
	Likelihood Ratio	2.209	1	.137		
	Fisher's Exact Test				.181	.113
	Linear-by-Linear Association	2.154	1	.142		
	N of Valid Cases	55				
City	Pearson Chi-Square	.093[d]	1	.761		
	Continuity Correction[b]	.000	1	1.000		
	Likelihood Ratio	.094	1	.759		
	Fisher's Exact Test				1.000	.640
	Linear-by-Linear Association	.087	1	.768		
	N of Valid Cases	17				
Town	Pearson Chi-Square	2.451[e]	1	.117		
	Continuity Correction[b]	.717	1	.397		
	Likelihood Ratio	3.206	1	.073		
	Fisher's Exact Test				.204	.204
	Linear-by-Linear Association	2.420	1	.120		
	N of Valid Cases	79				
Total	Pearson Chi-Square	.074[a]	1	.786		
	Continuity Correction[b]	.005	1	.942		
	Likelihood Ratio	.074	1	.786		
	Fisher's Exact Test				.844	.471
	Linear-by-Linear Association	.073	1	.787		
	N of Valid Cases	151				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 15.68.

b. Computed only for a 2x2 table

c. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 13.25.

d. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 1.24.

e. 2 cells (50.0%) have expected count less than 5. The minimum expected count is .91.

Pop < 130000 2000 * Jurisdiction Complied with UDA Legislation * Jurisdiction Type

Chi-Square Tests

Jurisdiction Type		Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
County	Pearson Chi-Square	3.160[c]	1	.075		
	Continuity Correction[b]	1.809	1	.179		
	Likelihood Ratio	3.404	1	.065		
	Fisher's Exact Test				.101	.088
	Linear-by-Linear Association	3.102	1	.078		
	N of Valid Cases	55				
City	Pearson Chi-Square	1.121[d]	1	.290		
	Continuity Correction[b]	.095	1	.757		
	Likelihood Ratio	1.799	1	.180		
	Fisher's Exact Test				.541	.421
	Linear-by-Linear Association	1.055	1	.304		
	N of Valid Cases	17				
Town	Pearson Chi-Square	.[e]				
	N of Valid Cases	79				
Total	Pearson Chi-Square	5.322[a]	1	.021		
	Continuity Correction[b]	3.635	1	.057		
	Likelihood Ratio	4.395	1	.036		
	Fisher's Exact Test				**.036***	.036
	Linear-by-Linear Association	5.286	1	.021		
	N of Valid Cases	151				

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 2.12.

b. Computed only for a 2x2 table

c. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 2.95.

d. 3 cells (75.0%) have expected count less than 5. The minimum expected count is .71.

e. No statistics are computed because Pop < 130000 2000 is a constant.

Pop >= 130000 2000 * Jurisdiction Complied with UDA Legislation * Jurisdiction Type

Chi-Square Tests

Jurisdiction Type		Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
County	Pearson Chi-Square	3.160[c]	1	.075		
	Continuity Correction[b]	1.809	1	.179		
	Likelihood Ratio	3.404	1	.065		
	Fisher's Exact Test				.101	.088
	Linear-by-Linear Association	3.102	1	.078		
	N of Valid Cases	55				
City	Pearson Chi-Square	1.121[d]	1	.290		
	Continuity Correction[b]	.095	1	.757		
	Likelihood Ratio	1.799	1	.180		
	Fisher's Exact Test				.541	.421
	Linear-by-Linear Association	1.055	1	.304		
	N of Valid Cases	17				
Town	Pearson Chi-Square	.[e]				
	N of Valid Cases	79				
Total	Pearson Chi-Square	5.322[a]	1	.021		
	Continuity Correction[b]	3.635	1	.057		
	Likelihood Ratio	4.395	1	.036		
	Fisher's Exact Test				**.036***	.036
	Linear-by-Linear Association	5.286	1	.021		
	N of Valid Cases	151				

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 2.12.

b. Computed only for a 2x2 table

c. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 2.95.

d. 3 cells (75.0%) have expected count less than 5. The minimum expected count is .71.

e. No statistics are computed because Pop >= 130000 2000 is a constant.

Pop < 130000 2010 * Jurisdiction Complied with UDA Legislation * Jurisdiction Type

Chi-Square Tests

Jurisdiction Type		Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
County	Pearson Chi-Square	1.159[c]	1	.282		
	Continuity Correction[b]	.310	1	.577		
	Likelihood Ratio	1.205	1	.272		
	Fisher's Exact Test				.352	.292
	Linear-by-Linear Association	1.138	1	.286		
	N of Valid Cases	55				
City	Pearson Chi-Square	1.518[d]	1	.218		
	Continuity Correction[b]	.285	1	.593		
	Likelihood Ratio	2.348	1	.125		
	Fisher's Exact Test				.515	.324
	Linear-by-Linear Association	1.429	1	.232		
	N of Valid Cases	17				
Town	Pearson Chi-Square	.[e]				
	N of Valid Cases	79				
Total	Pearson Chi-Square	.845[a]	1	.358		
	Continuity Correction[b]	.249	1	.618		
	Likelihood Ratio	.761	1	.383		
	Fisher's Exact Test				.400	.291
	Linear-by-Linear Association	.839	1	.360		
	N of Valid Cases	151				

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 1.91.

b. Computed only for a 2x2 table

c. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 1.96.

d. 3 cells (75.0%) have expected count less than 5. The minimum expected count is .88.

e. No statistics are computed because Pop < 130000 2010 is a constant.

Pop >= 130000 2010 * Jurisdiction Complied with UDA Legislation * Jurisdiction Type

Chi-Square Tests

Jurisdiction Type		Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
County	Pearson Chi-Square	1.159[c]	1	.282		
	Continuity Correction[b]	.310	1	.577		
	Likelihood Ratio	1.205	1	.272		
	Fisher's Exact Test				.352	.292
	Linear-by-Linear Association	1.138	1	.286		
	N of Valid Cases	55				
City	Pearson Chi-Square	.006[d]	1	.938		
	Continuity Correction[b]	.000	1	1.000		
	Likelihood Ratio	.006	1	.937		
	Fisher's Exact Test				1.000	.728
	Linear-by-Linear Association	.006	1	.939		
	N of Valid Cases	17				
Town	Pearson Chi-Square	.[e]				
	N of Valid Cases	79				
Total	Pearson Chi-Square	2.268[a]	1	.132		
	Continuity Correction[b]	1.223	1	.269		
	Likelihood Ratio	1.963	1	.161		
	Fisher's Exact Test				.220	.136
	Linear-by-Linear Association	2.253	1	.133		
	N of Valid Cases	151				

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 2.12.

b. Computed only for a 2x2 table

c. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 1.96.

d. 3 cells (75.0%) have expected count less than 5. The minimum expected count is 1.06.

e. No statistics are computed because Pop >= 130000 2010 is a constant.

Pop >20,000 & >= 5% growth 1990-2000 * Jurisdiction gave CLG Response A with UDA Legislation * Jurisdiction Type

Chi-Square Tests

Jurisdiction Type		Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
County	Pearson Chi-Square	4.935[c]	1	**.026***		
	Continuity Correction[b]	3.689	1	.055		
	Likelihood Ratio	5.285	1	.022		
	Fisher's Exact Test				.036	.025
	Linear-by-Linear Association	4.845	1	.028		
	N of Valid Cases	55				
City	Pearson Chi-Square	1.236[d]	1	.266		
	Continuity Correction[b]	.105	1	.746		
	Likelihood Ratio	1.884	1	.170		
	Fisher's Exact Test				.515	.404
	Linear-by-Linear Association	1.164	1	.281		
	N of Valid Cases	17				
Town	Pearson Chi-Square	14.990[e]	1	.000		
	Continuity Correction[b]	3.258	1	.071		
	Likelihood Ratio	5.722	1	.017		
	Fisher's Exact Test				.063	.063
	Linear-by-Linear Association	14.800	1	.000		
	N of Valid Cases	79				
Total	Pearson Chi-Square	27.547[a]	1	**.000***		
	Continuity Correction[b]	24.850	1	.000		
	Likelihood Ratio	26.036	1	.000		
	Fisher's Exact Test				.000	.000
	Linear-by-Linear Association	27.364	1	.000		
	N of Valid Cases	151				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 6.04.

b. Computed only for a 2x2 table

c. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 6.69.

d. 2 cells (50.0%) have expected count less than 5. The minimum expected count is .71.

e. 3 cells (75.0%) have expected count less than 5. The minimum expected count is .06.

bolded* indicates statistical significance

Pop >20,000 & >= 5% growth 2000-2010 * Jurisdiction gave CLG Response A with UDA Legislation * Jurisdiction Type

Chi-Square Tests

Jurisdiction Type		Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
County	Pearson Chi-Square	4.386[c]	1	.036		
	Continuity Correction[b]	3.075	1	.080		
	Likelihood Ratio	5.271	1	.022		
	Fisher's Exact Test				**.045***	.033
	Linear-by-Linear Association	4.306	1	.038		
	N of Valid Cases	55				
City	Pearson Chi-Square	.697[d]	1	.404		
	Continuity Correction[b]	.000	1	1.000		
	Likelihood Ratio	1.153	1	.283		
	Fisher's Exact Test				1.000	.574
	Linear-by-Linear Association	.656	1	.418		
	N of Valid Cases	17				
Town	Pearson Chi-Square	12.323[e]	1	.000*		
	Continuity Correction[b]	2.595	1	.107		
	Likelihood Ratio	5.319	1	.021		
	Fisher's Exact Test				.076	.076
	Linear-by-Linear Association	12.167	1	.000		
	N of Valid Cases	79				
Total	Pearson Chi-Square	24.718[a]	1	**.000***		
	Continuity Correction[b]	22.206	1	.000		
	Likelihood Ratio	23.873	1	.000		
	Fisher's Exact Test				.000	.000
	Linear-by-Linear Association	24.554	1	.000		
	N of Valid Cases	151				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 6.42.

b. Computed only for a 2x2 table

c. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 4.07.

d. 3 cells (75.0%) have expected count less than 5. The minimum expected count is .47.

e. 2 cells (50.0%) have expected count less than 5. The minimum expected count is .08.

Pop growth >= 15% growth 1990-2000 * Jurisdiction gave CLG Response A with UDA Legislation * Jurisdiction Type

Chi-Square Tests

Jurisdiction Type		Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
County	Pearson Chi-Square	.826[c]	1	.363		
	Continuity Correction[b]	.331	1	.565		
	Likelihood Ratio	.867	1	.352		
	Fisher's Exact Test				.510	.288
	Linear-by-Linear Association	.811	1	.368		
	N of Valid Cases	55				
City	Pearson Chi-Square	.215[d]	1	.643		
	Continuity Correction[b]	.000	1	1.000		
	Likelihood Ratio	.206	1	.650		
	Fisher's Exact Test				1.000	.596
	Linear-by-Linear Association	.202	1	.653		
	N of Valid Cases	17				
Town	Pearson Chi-Square	1.273[e]	1	.259		
	Continuity Correction[b]	.013	1	.908		
	Likelihood Ratio	1.644	1	.200		
	Fisher's Exact Test				.443	.443
	Linear-by-Linear Association	1.257	1	.262		
	N of Valid Cases	79				
Total	Pearson Chi-Square	1.790[a]	1	.181		
	Continuity Correction[b]	1.183	1	.277		
	Likelihood Ratio	1.877	1	.171		
	Fisher's Exact Test				.218	.138
	Linear-by-Linear Association	1.778	1	.182		
	N of Valid Cases	151				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 7.68.

b. Computed only for a 2x2 table

c. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 4.36.

d. 2 cells (50.0%) have expected count less than 5. The minimum expected count is .71.

e. 2 cells (50.0%) have expected count less than 5. The minimum expected count is .44.

Pop growth >= 15% growth 2000-2010 * Jurisdiction gave CLG Response A with UDA Legislation * Jurisdiction Type

Chi-Square Tests

Jurisdiction Type		Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
County	Pearson Chi-Square	.463[c]	1	.496		
	Continuity Correction[b]	.147	1	.701		
	Likelihood Ratio	.463	1	.496		
	Fisher's Exact Test				.562	.351
	Linear-by-Linear Association	.454	1	.500		
	N of Valid Cases	55				
City	Pearson Chi-Square	.073[d]	1	.787		
	Continuity Correction[b]	.000	1	1.000		
	Likelihood Ratio	.072	1	.789		
	Fisher's Exact Test				1.000	.669
	Linear-by-Linear Association	.069	1	.793		
	N of Valid Cases	17				
Town	Pearson Chi-Square	1.210[e]	1	.271		
	Continuity Correction[b]	.008	1	.929		
	Likelihood Ratio	1.587	1	.208		
	Fisher's Exact Test				.456	.456
	Linear-by-Linear Association	1.194	1	.274		
	N of Valid Cases	79				
Total	Pearson Chi-Square	.023[a]	1	.879		
	Continuity Correction[b]	.000	1	1.000		
	Likelihood Ratio	.023	1	.879		
	Fisher's Exact Test				1.000	.537
	Linear-by-Linear Association	.023	1	.879		
	N of Valid Cases	151				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 9.31.

b. Computed only for a 2x2 table

c. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 7.85.

d. 2 cells (50.0%) have expected count less than 5. The minimum expected count is .82.

e. 2 cells (50.0%) have expected count less than 5. The minimum expected count is .46.

Pop < 130000 2000 * Jurisdiction gave CLG Response A with UDA Legislation * Jurisdiction Type

Chi-Square Tests

Jurisdiction Type		Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
County	Pearson Chi-Square	.059[c]	1	.808		
	Continuity Correction[b]	.000	1	1.000		
	Likelihood Ratio	.057	1	.811		
	Fisher's Exact Test				1.000	.570
	Linear-by-Linear Association	.058	1	.810		
	N of Valid Cases	55				
City	Pearson Chi-Square	.697[d]	1	.404		
	Continuity Correction[b]	.000	1	1.000		
	Likelihood Ratio	1.153	1	.283		
	Fisher's Exact Test				1.000	.574
	Linear-by-Linear Association	.656	1	.418		
	N of Valid Cases	17				
Town	Pearson Chi-Square	.[e]				
	N of Valid Cases	79				
Total	Pearson Chi-Square	.536[a]	1	.464		
	Continuity Correction[b]	.057	1	.811		
	Likelihood Ratio	.471	1	.493		
	Fisher's Exact Test				.615	.366
	Linear-by-Linear Association	.532	1	.466		
	N of Valid Cases	151				

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 1.26.

b. Computed only for a 2x2 table

c. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 1.75.

d. 3 cells (75.0%) have expected count less than 5. The minimum expected count is .47.

e. No statistics are computed because Pop < 130000 2000 is a constant.

Pop >= 130000 2000 * Jurisdiction gave CLG Response A with UDA Legislation * Jurisdiction Type

Chi-Square Tests

Jurisdiction Type		Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
County	Pearson Chi-Square	.059[c]	1	.808		
	Continuity Correction[b]	.000	1	1.000		
	Likelihood Ratio	.057	1	.811		
	Fisher's Exact Test				1.000	.570
	Linear-by-Linear Association	.058	1	.810		
	N of Valid Cases	55				
City	Pearson Chi-Square	.697[d]	1	.404		
	Continuity Correction[b]	.000	1	1.000		
	Likelihood Ratio	1.153	1	.283		
	Fisher's Exact Test				1.000	.574
	Linear-by-Linear Association	.656	1	.418		
	N of Valid Cases	17				
Town	Pearson Chi-Square	.[e]				
	N of Valid Cases	79				
Total	Pearson Chi-Square	.536[a]	1	.464		
	Continuity Correction[b]	.057	1	.811		
	Likelihood Ratio	.471	1	.493		
	Fisher's Exact Test				.615	.366
	Linear-by-Linear Association	.532	1	.466		
	N of Valid Cases	151				

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 1.26.

b. Computed only for a 2x2 table

c. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 1.75.

d. 3 cells (75.0%) have expected count less than 5. The minimum expected count is .47.

e. No statistics are computed because Pop >= 130000 2000 is a constant.

Pop < 130000 2010 * Jurisdiction gave CLG Response A with UDA Legislation * Jurisdiction Type

Chi-Square Tests

Jurisdiction Type		Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
County	Pearson Chi-Square	1.770[c]	1	.183		
	Continuity Correction[b]	.576	1	.448		
	Likelihood Ratio	2.877	1	.090		
	Fisher's Exact Test				.311	.241
	Linear-by-Linear Association	1.738	1	.187		
	N of Valid Cases	55				
City	Pearson Chi-Square	.944[d]	1	.331		
	Continuity Correction[b]	.021	1	.884		
	Likelihood Ratio	1.502	1	.220		
	Fisher's Exact Test				1.000	.485
	Linear-by-Linear Association	.889	1	.346		
	N of Valid Cases	17				
Town	Pearson Chi-Square	.[e]				
	N of Valid Cases	79				
Total	Pearson Chi-Square	1.378[a]	1	.241		
	Continuity Correction[b]	.430	1	.512		
	Likelihood Ratio	2.501	1	.114		
	Fisher's Exact Test				.603	.288
	Linear-by-Linear Association	1.368	1	.242		
	N of Valid Cases	151				

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 1.13.

b. Computed only for a 2x2 table

c. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 1.16.

d. 3 cells (75.0%) have expected count less than 5. The minimum expected count is .59.

e. No statistics are computed because Pop < 130000 2010 is a constant.

Pop >= 130000 2010 * Jurisdiction gave CLG Response A with UDA Legislation * Jurisdiction Type

Chi-Square Tests

Jurisdiction Type		Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
County	Pearson Chi-Square	1.770[c]	1	.183		
	Continuity Correction[b]	.576	1	.448		
	Likelihood Ratio	2.877	1	.090		
	Fisher's Exact Test				.311	.241
	Linear-by-Linear Association	1.738	1	.187		
	N of Valid Cases	55				
City	Pearson Chi-Square	1.236[d]	1	.266		
	Continuity Correction[b]	.105	1	.746		
	Likelihood Ratio	1.884	1	.170		
	Fisher's Exact Test				.515	.404
	Linear-by-Linear Association	1.164	1	.281		
	N of Valid Cases	17				
Town	Pearson Chi-Square	.[e]				
	N of Valid Cases	79				
Total	Pearson Chi-Square	1.541[a]	1	.214		
	Continuity Correction[b]	.560	1	.454		
	Likelihood Ratio	2.790	1	.095		
	Fisher's Exact Test				.364	.249
	Linear-by-Linear Association	1.531	1	.216		
	N of Valid Cases	151				

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 1.26.

b. Computed only for a 2x2 table

c. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 1.16.

d. 2 cells (50.0%) have expected count less than 5. The minimum expected count is .71.

e. No statistics are computed because Pop >= 130000 2010 is a constant.

Appendix B

Organizational Learning Interview Questions

Planning Practitioner Interview Questions

Question A
Category of interest: The planning practitioner's attitude of the state mandate, requiring Urban Development Areas in certain comprehensive plan documents.
Single Loop Learning/Planning interviewee response: nuisance
Double Loop Learning/Planning interviewee response: opportunity
Interview Question: What are your views of the state requiring that your jurisdiction update its Comprehensive Plan to include Urban Development Areas?
Follow-up Interview Question: Is your view reflective of your jurisdiction?
Follow-up Interview Question: Is your view reflective of the planning office?
Direct Probe Question: How were Urban Development Areas politicized in your jurisdiction?

Question B
Category of interest: The planning practitioner's establishment of Urban Development Areas.
Single Loop Learning/Planning interviewee response: narrow
Double Loop Learning/Planning interviewee response: broad
Interview Question 1: How did your jurisdiction go about establishing Urban Development Areas?
Interview Question 2: What was the overall technical approach and process?
Direct Probe Question: What was the Comprehensive Plan update process?

Question C
Category of interest: The planning practitioner's use of citizen participation.
Single Loop Learning/Planning interviewee response: discouraged
Double Loop Learning/Planning interviewee response: encouraged
Interview Question: How were stakeholders included in the planning process for Urban Development Areas?
Follow-up Interview Question: Were new participation processes used during the Comprehensive Plan revision? If so, in what ways were these new processes used?

Question D
Category of interest: The planning practitioner's incorporation of citizen input.
Single Loop Learning/Planning interviewee response: None/minimal
Double Loop Learning/Planning interviewee response: Actively sought citizen input
Interview Question: How was citizen input solicited and included in the planning process?
Direct Probe Question: In what ways were citizen comments included into the Comprehensive Plan?
Question E
Category of interest: The planning practitioner's update/review of previous planning methods.
Single Loop Learning/Planning interviewee response: similar
Double Loop Learning/Planning interviewee response: different
Interview Question: Aside from the Urban Development Area requirement, how did the comprehensive plan update process differ from previous comprehensive plan updates?

Follow-up question: What new resources were used in the Urban Development Area comprehensive plan update process?

Question F
Category of interest: The planning practitioner's identification of processes problems or errors.
Single Loop Learning/Planning interviewee response: No changes were made to the process
Double Loop Learning/Planning interviewee response: Changed or attempted to change process
Interview Question: How did you correct problems during the comprehensive plan update?
Follow-up Interview Question: How did you address problems that were encountered during the Urban Development Area comprehensive plan update process?

Question G
Category of interest: The planning practitioner's choice in outcomes.
Single Loop Learning/Planning interviewee response: No or limited choice
Double Loop Learning/Planning interviewee response: Free and informed choice (Argyris & Schön, 1974, p 87)
Interview Question: What choices did your office have in how the comprehensive plan update was completed?
Follow-up Interview Question: If so, in what ways were choices available throughout the planning process?

Question H
Category of interest: The planning practitioner's leadership.
Single Loop Learning/Planning interviewee response: Controls tasks (Argyris & Schön, 1974, p 68)
Double Loop Learning/Planning interviewee response: Different levels of leadership per task
Interview Question: What was your role in working with other groups or individuals to complete the comprehensive plan update?
Follow-up Interview Question: Were other planners in your office involved? If so, what were their roles?
Direct Probe Question: Did you have any discussion about how Urban Development Areas may be an opportunity to open the comprehensive planning process to increased citizen involvement? If so, what was discussed?

Question I
Category of interest: The planning practitioner's use of planning theory.
Single Loop Learning/Planning interviewee response: Limited exploration of new ideas
Double Loop Learning/Planning interviewee response: Active investigation
Interview Question: How do you keep informed on new planning technologies and theory?
Follow-up Interview Question: Was the Urban Development Area comprehensive plan update/review an opportunity to investigate new planning approaches? If so, how?

Engaged Citizen Questions

Question A

Category of Interest: Determining the respondent's involvement with their respective jurisdictions comprehensive planning process, and Urban Development Areas in general.
Interview Question: In what ways where you involved with <name of respondent's jurisdiction> comprehensive planning processes in the past?

Question B

Category of interest: Citizen's review of practitioner's attitude of citizen participation in the comprehensive planning process.
Single Loop Learning/Planning interviewee response: Practitioner's attitude of citizen participation was to confirm existing knowledge.
Double Loop Learning/Planning interviewee response: Practitioner's attitude of citizen participation was to provide new knowledge.
Interview Question: How did the planner make you feel comfortable with the comprehensive plan document and/or comprehensive planning process?
Follow-up Interview Question: Did you have questions or concerns about establishing Urban Development Areas or how to identify them? If so, how did the planner(s) respond to your concerns?

Question C

Category of interest: Citizen's review of participatory outcomes.
Single Loop Learning/Planning interviewee response: make changes to outcomes
Double Loop Learning/Planning interviewee response: make changes to process
Interview Question: How should <name of respondent's jurisdiction> change the planning process to engage community members?

Question D

Category of interest: Citizen's review of practitioner's use of citizen participation
Single Loop Learning/Planning interviewee response: did not incorporate citizen concerns
Double Loop Learning/Planning interviewee response: incorporated citizen concerns
Interview Question: How were citizens' concerns incorporated into the planning document?

State Official Questions

Question A
Category of Interest: Determining the respondent's involvement with Urban Development Area legislation.
Interview Question: In what ways where you/are you, involved with Urban Development Areas in the Commonwealth of Virginia.

Question B
Category of interest: Reasoning for Urban Development Areas.
Interview Question: What were the goals for the Urban Development Area comprehensive plan update requirement?
Follow-up Interview Question: How were the Commonwealth of Virginia's planning goals achieved by the Urban Development Area comprehensive plan update requirement?
Follow-up Interview Question: Which state planning goals were not achieved by the Urban Development Area comprehensive plan update requirement?

Question C
Category of Interest: Practitioner impacts.
Interview Question: How would you have preferred planners use this legislation?

Question D
Category of interest: Future local planning impacts.
Interview Question: How would/should similar legislative objectives related to land use planning, be accomplished in the future?

Appendix C

IRB Approval

VirginiaTech

Office of Research Compliance
Institutional Review Board
2000 Kraft Drive, Suite 2000 (0497)
Blacksburg, VA 24060
540/231-4606 Fax 540/231-0959
email irb@vt.edu
website http://www.irb.vt.edu

MEMORANDUM

DATE: March 27, 2013

TO: Thomas W Sanchez, John Ralph Whitmore

FROM: Virginia Tech Institutional Review Board (FWA00000572, expires May 31, 2014)

PROTOCOL TITLE: The Use of Organizational Learning Feedback Loops in the Practice of Planning: Citizen Participation and Virginia’s Urban Development Area Comprehensive Plan Requirement

IRB NUMBER: 12-1015

Effective March 27, 2013, the Virginia Tech Institution Review Board (IRB) Chair, David M Moore, approved the Amendment request for the above-mentioned research protocol.

This approval provides permission to begin the human subject activities outlined in the IRB-approved protocol and supporting documents.

Plans to deviate from the approved protocol and/or supporting documents must be submitted to the IRB as an amendment request and approved by the IRB prior to the implementation of any changes, regardless of how minor, except where necessary to eliminate apparent immediate hazards to the subjects. Report within 5 business days to the IRB any injuries or other unanticipated or adverse events involving risks or harms to human research subjects or others.

All investigators (listed above) are required to comply with the researcher requirements outlined at:

http://www.irb.vt.edu/pages/responsibilities.htm

(Please review responsibilities before the commencement of your research.)

PROTOCOL INFORMATION:

Approved As:	**Expedited, under 45 CFR 46.110 category(ies) 6,7**
Protocol Approval Date:	**December 3, 2012**
Protocol Expiration Date:	**December 2, 2013**
Continuing Review Due Date*:	**November 18, 2013**

*Date a Continuing Review application is due to the IRB office if human subject activities covered under this protocol, including data analysis, are to continue beyond the Protocol Expiration Date.

FEDERALLY FUNDED RESEARCH REQUIREMENTS:

Per federal regulations, 45 CFR 46.103(f), the IRB is required to compare all federally funded grant proposals/work statements to the IRB protocol(s) which cover the human research activities included in the proposal / work statement before funds are released. Note that this requirement does not apply to Exempt and Interim IRB protocols, or grants for which VT is not the primary awardee.

The table on the following page indicates whether grant proposals are related to this IRB protocol, and which of the listed proposals, if any, have been compared to this IRB protocol, if required.