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A NEEDS ASSESSMENT OF KNOWLEDGE, SKILLS, AND VALUES FOR URBAN PLANNING PROFESSIONALS BASED ON COMPETENCIES SET FORTH BY PROFESSIONAL PLANNING ORGANIZATIONS

by

CHADE SAGHIR

DISSERTATION

Submitted to the Graduate School

of Wayne State University,

Detroit, Michigan

in partial fulfillment of the requirements

for the degree of

DOCTOR OF PHILOSOPHY

2012

Major: INSTRUCITONAL TECHNOLOGY

Approved by:

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Advisor Date

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DEDICATION

In The Name of God, The Most Beneficent, The Most Merciful

This work is dedicated to my entire family.

To my parents for valuing education highly and offering their prayers.

To my wife, Zeinab for providing her prayers and patience.

To my children, Leannah and Ali, for providing the motivation to embark and complete this journey.

To my sister Inchad for offering her encouragement.

To my sister Fay and her husband Jamal, for offering their support and for Fay's help in proof reading this document anytime I asked her to.

To my brother Rudah, and his wife Randa for providing their constant encouragement to accomplish these tasks.

To my nieces and nephews Saad, Dena, Zainab, Laila, Suzanne, Adam, Anna, and Nina whom I hope are motivated and can set high expectations in their lives and accomplish them.

To my grandparents who guided me from above; especially my late Grandma Khadige.

To my extended family: aunts, uncles, and cousins; especially my late Aunt Souad.

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ACKNOWLEDGMENTS

This work could not be accomplished without the will and support from God. In addition, many people have influenced this accomplishment. I would like to acknowledge the following individuals and extend a warm and heartfelt gratitude for their time and patience.

First, I would like to thank my major advisor Dr. James L. Moseley for his relentless support and dedication to accomplish this task. Dr. Moseley is very particular to details and it is this level of support and guidance that I received from him that allowed me to follow my dream and accomplish this task. Your time and encouragement extended through instruction and advising are appreciated and will continue to influence me in my professional development. Thank you.

I want to offer my sincere gratitude to the members of my doctoral committee. Dr. Timothy W. Spannaus, an outstanding Program Coordinator, who taught me methods and techniques in multimedia instruction and learning management systems that proved to be valuable to my professional development. Also, Dr. Spannaus helped me link my Urban Planning experiences with Instructional Technology. Dr. Ingrid Guerra-Lopez, a stealth Performance Improvement educator and consultant, taught me practical evaluation skills that helped me get through the toughest part of this dissertation. Dr. Gary Sands, an exemplary Urban Planner, cares about the growth and development of the field as well as the practitioners in the field. Although Dr. Sands is a retired faculty member from Wayne State University, his commitment to make sure that he completes this journey with me is sincere. I want to thank each of the committee members for their support, time, and professionalism.

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Dr. Rita Richey, our past program director and mentor for her passion for Instructional Technology, helped pave the way for me to begin my journey. Dr. Richey taught me the history, foundation, and theories of Instructional Technology that will have a lasting impression. Thank you.

My friends and classmates, who are too numerous to name, for the long nights and encouragement to complete this journey. Thank you.

Michele Norris shares commitment to all students and faculty in Instructional Technology. Her knowledge of the program and protocol is what got me through this journey. Thank you for your support and encouragement.

Donna Carroll helped me setup, make changes, and administer the online questionnaire. Thank you for your time and help.

College of Education at Wayne State University for giving me the best graduate education that anyone can ask for. It is the faculty and staff that shape the future. Thank you.

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CHAPTER 1 INTRODUCTION AND STATEMENT OF THE PROBLEM

According to the American Planning Association (2011a), the field of planning, which is also referred to as, "urban planning or city and regional planning, is a dynamic profession that works to improve the welfare of people and their communities by creating more convenient, equitable, healthful, efficient, and attractive places for present and future generations" (What is Planning section, para. 1). The perceived gap between planning education and planning practice in the field of urban planning is a contentious issue. Many articles have been published concerning the education of professional planners. Two empirical studies documenting and validating planner's knowledge and skills were published by Kaufman and Simons (1995) and Ozawa and Seltzer (1999). Since then the literature has focused on generalizations of what the role of a professional planner should be.

Education and training for urban planners are bound by competencies that are defined by the Planning Accreditation Board (PAB). The PAB is a

> cooperative undertaking sponsored jointly by three organizations: the American Institute of Certified Planners (AICP), the Association of Collegiate Schools of Planning (ACSP), and the American Planning Association (APA). The planning accreditation program reflects an assumption that all parties to the planning enterprise - practitioners, educators, students, elected officials, and citizens - have a vital stake in the quality of the nation's programs of planning education (PAB, 2006, p. 5).

Tuxworth (1989), suggests that "in the case of some of the national professional associations, competency based specifications are issued as guidelines for accredited institutions" (p. 21). This is the case for universities with planning programs. The PAB is the organization that accredits university planning programs. The PAB has defined competencies in terms of knowledge, skills and values that universities must meet as part of the accreditation process. This is consistent with the International Board of Standards for Training, Performance and Instruction (IBSTPI) definition of competency as "a set of related knowledge, skills, and attitudes that enables one to

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effectively perform the activities of a given occupation or job function to the standards expected in employment" (Richey, Fields, & Foxon, 2001, p. 31). Based on PAB stated values, values and attitudes are similar.

PAB and the supporting organizations, APA, AICP, and ACSP are each well respected by planning professionals. The competencies they have set forth continue to shape the planning profession. Planners today are in need of training and education that support the knowledge, skills and values set forth by PAB. In addition, planning professionals who wish to be certified must pass a subject area exam established by AICP. AICP provides a list of general subjects (Appendix A) covered on the AICP exam. Although there has been empirical research on the knowledge, skills and values of planning professionals, empirical studies assessing the education or training needs of planning professions are not the focus of the published studies (Glasmeier and Kahn, 1989; Kaufman and Simons, 1995; Ozawa and Seltzer, 1999, and Guzzetta and Bollens, 2003). PAB lists three educational outcomes as the basis for developing competent professional planners. The three outcomes are general planning knowledge; planning skills; and values and ethics. According to PAB (2012),

> 1. General planning knowledge refers to the comprehension, representation, and use of ideas and information in the planning field, including appropriate perspectives from history, social science, and the design professions. 2. Planning skills refer to the use and application of knowledge to perform specific tasks required in the practice of planning. 3. Values and ethics refer to incorporating issues of diversity and social justice into all required courses of the curriculum (p. 9).

These three outcomes provide the foundation for specific knowledge, skills, and values criteria that university planning programs must demonstrate to the PAB to become accredited. This research is a needs assessment that will investigate training needs of planning professionals and determine the alignment between professional organizations, planning education, and planning practice. Thus the focus of this study is to conduct a needs assessment to investigate the

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specific knowledge, skills and values under each related outcome criteria (see Appendix B) defined by PAB as it relates to the training needs of planning practitioners. Using a descriptive research method three types of questions will be answered: (1) How professional planners allocate their time on various professional competencies on a typical work day? (2) What professional competencies are important in their job? and (3) What professional competencies do they feel they possess for their job?

An underlying question set forth by Ozawa and Seltzer (1999) is "whether or not academic programs should lead or be led by practice" (p. 258) This begs the question for planning education in general, should training programs and university education lead or be led by practice. Teitz (1984) states that "there will always be tensions between educators and practitioners in a profession. We need to look for ways to relax rather than exacerbate those tensions" (p.76). Thus conducting a needs assessment takes us one step further in identifying the gap(s) between professional organizations, planning education, and planning practice. Furthermore this needs assessment study will provide a better understanding between the alignment of professional organizations, planning education, and planning practice.

Kaufman (2006) distinguishes between the terms need, needs analysis, and needs assessment as follows: a "need is defined as a gap in results"(p. 177), a needs analysis "identifies possible ways and means to close the gap in results" (p. 177), and a needs assessment is "a formal process that identifies and documents gaps between current and desired and/or required results" (p. 177). An assessment will be conducted in this study to determine the current state of competence compared to the desired state of competence for planning practitioners based on standards set forth by professional planning organizations.

The needs assessment in this study will be conducted using an online questionnaire. The questionnaire (see Appendix C) has five sections consisting of (1) about your career, (2)

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knowledge, skills and values usage (3) competency profile, (4) open ended questions, and (5) about you. The questionnaire will be distributed to, and data will be collected from, planning professionals. Questions are designed to collect three types of data: (1) the current level of proficiency, (2) the required level of proficiency, (3) the difference between the two levels. The response to the survey will provide a quantitative measure for the analysis and answers to the research questions of the study. It is not the purpose of this study to ask planners themselves to identify knowledge and skills that should be provided. The study will pinpoint the competencies that planners believe are important to their professional work activity as well as the specific competencies that they believe they possess.

The knowledge, skills and values included in the questionnaire are adapted directly from a list of knowledge, skills and values from PAB and are referred to in this paper as "professional competencies" or "PAB competencies". The competency profile section of the questionnaire focuses on specific competencies compiled from Guzzetta and Bollens (2003) and Ozawa and Seltzer (1999) studies cross referenced with the list of PAB competencies (see Appendix D); these competencies are referred to as "specific competencies " in this paper.

The profession of planning can be traced back to the 18th and 19th century in response to social need to plan and develop urban and regional spaces to promote safe, clean and livable urban communities (Knox & McCarthy, 2005). The field of human performance technology provides a bridge to many professions through performance improvement interventions, processes and resources that can add value and improve the performance of professionals in a profession. Professions continue to define themselves in today's world as the world around them changes. Urban planning is a profession that is committed to creating, maintaining, and sustaining communities where people want to go and/or live. Communities rely on the planning

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professional's knowledge and skills to provide effective solutions to community problems and create plans to advance communities.

Planners must be able to adapt to change and offer communities tools and techniques that are current. Reese, Faist, & Sands (2010) offer an example of how fostering economic growth in communities has changed. While communities relied on "immobile natural resources or heavy industries" in the past, today fostering economic growth has shifted to "information and creativity" (Reese, Faist, & Sands, 2010, p. 345). This example is one of many that illustrates why it is necessary for professional planners to be current in the practice of planning and be equipped with the most up-to-date tools and techniques that are aligned with relevant competencies for the profession.

Professional planners entering the workforce decide on what type of planning specialty and environment they want to engage in. APA has identified 23 functional areas of practice including: community development, comprehensive or long range planning, development regulation or administration, economic development and revitalization, economic analysis and forecasting, educational (institutional or military facilities planning), energy policy, food system planning, growth management, hazard mitigation and disaster planning, historic preservation, housing, infrastructure, labor force or employment, land use, natural resources and the environment, parks (open space and recreation), planning law, policy planning, public services, social and health services, transportation, and urban design (American Planning Association, 2011b). APA has also identified 13 spatial areas of practice including: national level, multi-state or bi-state regions, state, sub-state region, county level planning, urban areas, suburban areas, small towns, corridors, neighborhoods, waterfronts, historic districts or areas, downtowns (American Planning Association, 2011b).

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Professional planners also decide on the work environment they want to enter into, either, private, public, or nonprofit sector. The private sector includes planning firms; the public sector includes government agencies at the local, state, regional, or federal levels; and the nonprofit sector includes community groups and organizations. Therefore, professional planners entering the workforce must possess competencies or develop and maintain competencies that will help them grow as individuals and as professionals.

With 23 functional areas, 13 spatial areas, and a public, private or nonprofit environment it is clear that the field of planning is diverse with over 897 combinations of potential employment. Therefore, identifying training needs for planners using a needs assessment methodology will be beneficial to the field of planning. Both universities and organizations that provide training to planning practitioners can benefit by pinpointing the education and training needs of planning practitioners.

Research Questions

Consistent with the stated purpose, this study will address the following research questions:

1. What are the professional and specific competencies required of planning practitioners for their profession?
2. With what frequency do planning practitioners indicate they spend time applying each of the professional competencies?
3. With what frequency do planning practitioners indicate the importance of applying each of the professional competencies?
4. What is the relationship between how frequently planning practitioners indicate they spend time verses the importance of each of the professional competencies?

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5. Are there differences among the various planning practitioners grouped by area of specialization regarding their indications of how much time they spend on each of the professional competencies?
6. Are there differences among the various planning practitioners grouped by area of specialization in their indications of how important it is applying each of the professional competencies?
7. Are there differences among the various planning practitioners grouped by work environment in their indications of how much time they spend on each of the professional competencies?
8. Are there differences among the various planning practitioners grouped by work environment in their indications of how important it is applying each of the professional competencies?
9. Are there differences among the various planning practitioners grouped by spatial area of practice in their indications of how much time they spend on each of the professional competencies?
10. Are there differences among the various planning practitioners grouped by spatial area of practice regarding their indications of how important it is applying each of the professional competencies?
11. Are there differences among specific professional competencies that planning practitioners possess for their job?

Conceptual Framework

Today's fast paced, technology driven, professionals are faced with many opportunities for training and education. It is important for professional organizations and providers of education and training services to understand the educational needs of professionals in the

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workplace. The profession of urban planning is no exception to this. Urban planners provide an important service by shaping and developing our towns and cities. From planning roads, subdivisions, public spaces, and entire towns the societal cost, of not generating and maintaining competent urban planning professional, can be substantial.

Guzzetta and Bollens (2003) state that "planning education should and will increase its relevancy and value to the extent that we enhance our understanding of the skills that professions in planning or planning-related jobs feel are most important to their current positions and future advancement" (p. 97). The perceived gap between planning education and professional practice has been documented since early 1980's in different studies (Krueckeberg, 1984; Alonso, 1986; Brooks, 1988; Glasmeier and Kahn, 1989; Baum, 1997; Hall, 1989; Ozawa and Seltzer, 1999; Guzzetta & Bollens, 2003). These studies provide the framework to suggest that a gap between planning education and planning practice exists. Now it is time to take the next step and define the perceived gap.

The tools and techniques used by performance technologist in the field of HPT are the strength for this study. This study uses a needs assessment which is a technique fundamental to performance technologists to determining the gap between the current and desired state. The needs assessment model develop for this study will establish a foundation for understanding the competencies that planning practitioners are in need of. Thus providers of planning education and training can choose to use such models to further develop their relevancy to the planning profession.

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Definition of Terms

This research uses the following terminology:

ADDIE – An acronym representing a performance improvement model consisting of five phases: analysis, design, development, implementation, and evaluation.

American Planning Association (APA) – According to the Planning Accreditation Board (2006), "APA is the national organization of professional practitioners, educators, students, elected officials, and citizens who share a common concern for APA's primary objective: to advance the art and science of planning for the comprehensive development of communities, regions, states, and the nation" (p. 6).

American Institute of Certified Planners (AICP) – According to the Planning Accreditation Board (2006), "AICP is the American Planning Association's professional institute, providing recognized leadership nationwide in the certification of professional planners, ethics, professional development, planning education, and the standards of planning practice (p.5).

Association of Collegiate Schools of Planning (ACSP) – According to the Planning Accreditation Board (2006), "ACSP is the national membership organization of educational programs which award degrees in planning. The central purpose of ACSP is to provide a means for planning schools to improve education through mutual exchange and support. ACSP holds annual meetings and publishes the *Journal of Planning Education and Research*" (p. 6).

Attitude – A mental position with regard to a fact or state (Merriam-Webster Online Dictionary, 2011).

Competency – According to McLagan (1997), competencies are tasks, results, and outputs as related to work or knowledge, skills, and attitudes as related to characteristics of people doing the work.

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Competency Model – Guerra (2001) states that competency model is a "tool that describes the key tasks and activities for effectively performing a specific job" (p. 10).

Human Performance Technology – "is a process of selection, analysis, design, development, implementation, and evaluation of programs to most cost-effectively influence human behavior and accomplishment" (Van Tiem, Moseley, & Dessinger, 2004, p.)

Knowledge – The fact or condition of knowing something with familiarity gained through experience or association (Merriam-Webster Online Dictionary, 2011).

Needs Assessment (NA) – Kaufman (2006) defines needs assessment as "a formal process that identifies and documents gaps between current and desired and/or required results" (p. 177).

Performance Improvement – Molenda and Pershing (2008), define performance improvement as " a process of using all available means to solve performance problems in organizations. Those means may include interventions such as personnel selection, incentive programs, and organizational redesign in addition to training" (p. 49).

Planning Accreditation Board (PAB) – Sponsored by ACSP, APA, and AICP, PAB is the organization that accredits university planning programs. by establishing criteria for accreditation, arranging site visits, evaluating institutions and professional programs, and conferring accreditation.

Professional Competencies – Competencies defined by the Planning Accreditation Board (also see specific competencies).

Skills – The ability to use one's knowledge effectively and readily in execution or performance (Merriam-Webster Online Dictionary, 2011).

Specific Competencies – Competencies compiled from the literature review (also see professional competencies).

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Task Competency – According to McLagan (1997), task "is a result of many years of breaking work down into manageable activities and procedures in order to lessen the amount of thinking needed, to eliminate performance variability, and to spread best practices" (p. 41).

Result Competency – Adding the word ability to a result defines a result competency (McLagan, 1997). An example in the field of planning would be the ability to communicate graphically.

Output Competency – A result that an individual or group of individuals produces, provides, or delivers (McLagan, 1997). An example in the field of planning would be the ability to produce a thematic map.

Urban Planning Practitioner or Planning Professional– Individuals "who identify their work as "planning" for a particular jurisdiction or sphere of activity and who consider themselves members of the "planning profession," a community of shared interests and activities" (Brooks, 1988, p. 241).

Values - Something (as a principle or quality) intrinsically valuable or desirable (Merriam-Webster Online Dictionary, 2011).

Significance of the Study

Due to a lack of empirical research on training needs of planning professionals, a needs assessment demonstrates the alignment and gap of knowledge and skills between professional organizations, planning education, and planning practice. This study will shed light and provide insight on the factors that influence planning education and training validated by practitioners. This study will also open the door for other disciplines or professions to conduct similar research regarding knowledge and skill and the factors that influence education and training within a profession.

Teitz (1984) states that "it is time for us [planners] to develop a more forceful and serious dialog with the profession. Such a dialog should enrich teaching practice, and help to remove

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misconceptions about who we are and what we do" (p. 75). This study will contribute to the dialog with the profession and determine the current and future state of knowledge and skills of planning professional which will enrich teaching practice.

Kaufman (2006) explains needs assessment as "a formal process that identifies and documents gaps between current and desired…" (p. 177). This study will focus on identifying the gap between planning education and planning practice from the perspective of the planning professional defined by planning organizations. As stated earlier the focus of this needs assessment is to pinpoint how planners spend their time on various professional competencies, what professional competencies are important in their job, and what professional competencies they feel they possess.

Conclusion

The statement of the problem for the study conducted in this paper entitled A Needs Assessment of Knowledge, Skills, and Values for Urban Planning Professionals Based on Competencies Set Forth by Professional Planning Organizations provides the rationale for the study. The lack of empirical research on competencies possessed by urban planning professionals is the driving force behind this study. The research questions in the study are designed to collect three types of data: (1) the current level of proficiency, (2) the required level of proficiency, (3) the difference between the two levels. It is not the purpose of this study to ask planners themselves to identify knowledge and skills that should be provided. The study will, however, pinpoint how they spend their time on professional competencies, what professional competencies are important in their job, and what professional competencies they feel they possess.

This chapter provided the significance of the study along with the research questions as well as specific terminology. The next chapter provides a review of related literature. The intent

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of the next chapter is threefold: first, to establish a philosophical view of a profession; second, to discuss the extent of research on competencies in the field of urban planning; and third, to present the tools and techniques in the field of HPT that will guide this study along with a discussion on competencies and competency development.

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CHAPTER 2 REVIEW OF RELATED LITERATURE

The first section of the literature review establishes the purpose of the study. A philosophical view of a profession is offered to establish the fundamental basis of planning as a profession. Then literature on the role of the planning professional including empirical research on planning competencies is offered to establish the basis for this study. The second section focuses on the field of HPT as it relates to this study. The HPT field and related research on needs assessments and relevant models are provided to establish the rationale for using needs assessment in this study. The term competency as it relates to the field of HPT is defined followed by a discussion of competency development.

Philosophical View of a Profession

A philosophical viewpoint of a profession establishes a criterion that allows one to consider a discipline or a field of study as a profession. The model of Technical Rationality is a philosophical approach for defining a profession. According to Schön (1997): the model of Technical Rationality suggests that "professional activity consists of instrumental problem solving made rigorous by the application of scientific theory and technique (Schön, 1997, p. 8). Schön also contends that Technical Rationality has established a paradigm on how we think "about the professions and the institutional relations of research, education, and practice" (Edwards, 1997, p. 8). Therefore, to be considered a profession applying the model of Technical Rationality, a field of study must be grounded in scientific theory and techniques.

One can analyze different fields of studies to determine whether they are grounded in scientific theory and techniques realizing that not all professions are. The field of planning was founded as a response to conditions in cities that affected the health, welfare and public safety of individuals in the 19th century (Knox & McCarthy, 2005). Glazer classifies the planning

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profession as one that is not founded or grounded in technical and scientific knowledge considering it a 'minor profession' (1974).

Glazer coined the term 'minor' profession distinguishing from a 'major' profession suggesting that a major profession, like medicine, is grounded in scientific theory while minor professions are not. Glazer argues that "the transformation of these occupations – the new "minor professions" – into professions in the older sense, and the assimilation of their programmes of training into academic institutions, have not gone smoothly" (1974, p. 346). Glazer further notes the divide between academia and practice suggesting that the knowledge obtained might not be the most useful knowledge intended for the occupation (1974). Glazer writes:

> The aspiring town planner knows he will have to deal with zoning and land plats, but a good part of his facility will consider such issues either unimportant or outside their competence as they increasingly deal with economic, political, and social trends in urban development. He is rather better off than the student-teacher or the student of divinity because at least his teachers teach him about housing and land economics and the sociology and politics of cities, and these are important in what he will do, even though he will probably have to learn the practical details of work "on the job" (1974, p. 351).

Thus the knowledge obtained at an academic institution might provide the foundation necessary for the profession; yet further knowledge gained by on the job training in the field is required to perform the tasks of a professional. Schön (1997) states that "minor professions suffer from shifting, ambiguous ends and from unstable institutional contexts of practice, and are therefore unable to develop a base of systematic, scientific professional knowledge" (p. 9). The argument that Schön makes is:

> the development of a scientific knowledge base depends on fixed, unambiguous ends because professional practice is an instrumental activity. If applied science consists of cumulative, empirical knowledge about the means best suited to chosen ends, how can a profession ground itself in science when its ends are confused or unstable? (Schön, 1997, p. 9)

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Therefore, developing a standardized knowledge base and establishing education and training programs without a clear understanding of the state of practice (means to an end) becomes difficult. According Schön (1997) a systematic knowledge base has four attributes, including specialty, firmly bounded, scientific, and standardized. Urban planning is a specialty that is firmly bounded in empirical research. Standardization can be established by understanding the means to the end of the profession by professionals. A systematic knowledge base is necessary for developing educational material for training programs and seminars to support education programs for a profession.

Professions that lack the scientific knowledge that defines a field must be bounded by competencies that define the field in practice through empirical evidence and observation. Thus establishing competencies for developing education and training programs in professional planning must be specifically related to empirical evidence related to specialty as well as the environment the planning professional is engaged in. Identifying discrepancies between planning education and planning practice becomes an important part of establishing a systematic standardized knowledge base that educators and trainers can use to develop meaningful educational and training programs that will benefit the profession.

The Role of the Urban Planning Professional

Brooks (1988) defines the urban planning profession as "that collectivity of individuals who identify their work as 'planning' for a particular jurisdiction or sphere of activity and who consider themselves members of the "planning profession," a community of shared interests and activities" (p. 241). This definition provides a general view of the urban planning professional suggesting that urban planners share common interest on two fronts: work environment and activities. There are various studies related to the urban planning profession and the type of work and environment the urban planning professionals are engaged in. In addition, these studies

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try to determine the alignment between planning education at the university level and planning practice.

These studies include: Glasmeier and Kahn's (1989) *Planners in the '80s: Who We Are, Where We Work; Does Context Matter? Do We Evolve?;* Kaufman and Simons (1995) *Quantitative and Research Methods In Planning: Are Schools Teaching What Practitioners Practice?;* Ozawa and Seltzer (1999) *Taking Our Bearings: Mapping A Relationship Between Planning Practice, Theory, And Education; and* Guzzetta and Bollens's (2003) *Urban Planners' Skills and Competencies Are We Different From Other Professions?* Each study is summarized as follows:

An empirical perspective of the urban planning profession is offered by Glasmeier and Kahn (1989) who surveyed 1,170 students whom graduated from urban planning programs between 1982 and 1986. The study was conducted to learn more about the type of employment planning graduates are engaged in, specifically traditional versus nontraditional planning fields. Glasmeier and Kahn define traditional planning employment fields as follows: land use planning, regional planning, comprehensive planning, environmental planning, physical planning, social planning, transportation planning, housing, human services planning, redevelopment, and general planning (1989).

The study was conducted in three phases and three surveys were used to collect the following information: gender, university graduated from, employer, job title, job state, agency where employed, type of employing organization, general field of planning in which the person was employed, job duties and current employment status (Glasmeier & Kahn, 1989). Glasmeier and Kahn found that 50 % of urban planners work in traditional planning fields while 38% work in nontraditional fields, the remaining 12 % work in academia, non-planning fields, or are unemployed (1989). In addition, the majority of urban planners work in the public sector and

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28% of urban planners are employed in the traditional field of land use planning (Glasmeier & Kahn, 1989).

Kaufman and Simons (1995) surveyed university planning programs in the US and Canada as well as American Institute of Certified Planners (AICP) practitioners in nonacademic positions on the teaching and use of quantitative research methods (QRM) in the field of planning, respectively. A total of 43 of the planning programs as well as 106 planning practitioners participated in the survey (Kaufman & Simons, 1995). Planning program respondents were asked to list which quantitative research methods they taught as well as to rate each quantitative skill on a 1 to 5 scale (Kaufman & Simons, 1995).

The top three skills taught in planning programs were descriptive statistics, population projections, and regression analysis while the bottom of the list was multiattribute utility theory, stochastic processes, nonlinear programming, and queuing theory (Kaufman & Simons, 1995). In terms of rating skills, the high rating skills were data collection, budget preparation, issues analysis, and scheduling (Kaufman & Simons, 1995). Planning practitioners were asked what quantitative research methods they used; at the top of the list were budget preparation, data collection, and issues analysis and at the bottom of the list were logit/probit models, shift-share analysis, and multiattribute utility theory (Kaufman & Simons, 1995).

Kaufman and Simons (1995) used a demand-supply model to analyze the results and concluded that there was an "imbalance between supply and demand" (p. 31) for QRM; specifically only 43% of quantitative research methods that were supplied by planning programs were in balance with the demand. Kaufman and Simons (1995) also site one interesting finding on prerequisites. Kaufman and Simons found that under-taught QRM such as, budget preparation, issues analysis, and scheduling, did not require prerequisites (1995). This is in

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contrast to over-taught QRM that are cumulative serving "as prerequisites to the cumulative QRM" (Kaufman & Simons, 1995, p. 31).

In their study, Ozawa and Seltzer (1999) survey planners in both the public and private sector who are responsible for hiring entry-level planners. The research questions sought by Ozawa and Seltzer are "What do practitioners view as desirable skills and competencies for planners? Do any patterns emerge from the list of desired attributes? And, what do these findings suggest for the core curriculum in graduate planning education?" (p. 258). In order to answer the research questions Ozawa and Seltzer (1999), used the work of Kaufman and Simons (1995) and Apostolides and Allor (1996) along with a review of the planning curriculum at Portland State University coupled with a survey of faculty on skills and competencies in the courses they teach.

Ozawa and Seltzer (1999) state that "from these sources we developed a list of 45 skills and competencies divided into six groups" (p. 261). Based on the list that was developed, a survey was sent to planning practitioners who hire entry-level planners to answer demographic questions in addition to ranking the list of skills and competence and adding any additional skills and competencies to the mix (Ozawa & Seltzer, 1999). The result from 143 planning practitioners in southwest Washington and the Portland metropolitan ranked skills related to communication the highest (Ozawa & Seltzer, 1999). Ozawa and Seltzer(1999) state that their research suggests that planning employers seeking entry level planners are looking for "planners with technical skills, but skills of synthesis and communication rather than merely analysis and dissemination" (p. 264). This suggests that the job of a planner "is an interactive one" (Ozawa & Seltzer, 1999, p. 264).

Guzzetta and Bollens (2003) compare skills and competencies for planners to other occupations. Guzzetta and Bollens (2003) used a sample of "638 urban planners, planning-related, and nonplaninng respondents in Southern California" (p. 96). Guzzetta and Bollens

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(2003) were seeking to answer three questions: first, compare urban planners to other professions to determine which skills, if any, differ across these disciplines; second, compare urban planning skills between public and private sector planners; and third, determine whether skills deemed important by planners changed based on length of employment. Guzzetta and Bollens (2003) sent 2,670 mail surveys with a response from 638.

The results suggest "that planners bear both similarities and differences compared to those in planning-related and nonplanning jobs" (p. 101). The difference between planning and other professions lies in the details. For instance, communication skills are valued highly across planning and other professions but the type of communication, such as written, was more valued among planners (Guzzetta & Bollens, 2003). In terms of public versus private sector planners, the major finding was that public sector planners valued written communication, presentation skill, law, and policy more than planners in the private sector (Guzzetta & Bollens, 2003). Lastly in terms of changing the value of skills and competencies over time the researchers found that over time planner's values of skills change (Guzzetta & Bollens, 2003). One example is early career planners value verbal and written communication much more then senior planners (Guzzetta & Bollens, 2003). Guzzetta and Bollens (2003) identified 23 urban planning competencies in their research study (see Appendix D).

The HPT Field

The human performance technology (HPT) field is broader than the related field of instructional technology. Instructional technology focuses on "ways in which technology can enhance educational interventions in ways that improve human performance" (Molenda & Pershing, 2008, p. 49). HPT is much broader "combining instructional interventions with motivational, ergonomic, environmental, organizational, and other interventions into coordinated initiatives that can dramatically improve productivity" (Molenda & Pershing, 2008, p. 77).

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Pershing agrees that HPT goes beyond instructional interventions suggesting "there are many different sorts of interventions that may be used in the workplace to improve performance such as tools, incentives, organizational change, cognitive support, and job redesign, in addition to instruction" (as cited in Januszewski & Molenda, 2008, p.7). Therefore, one can conclude that HPT is broader in the sense that it incorporates both instructional and non-instructional interventions. The International Society for Performance Improvement (ISPI) provides the following definition for HPT:

> A systematic approach to improving productivity and competence, uses a set of methods and procedures and a strategy for solving problems for realizing opportunities related to the performance of people. More specific, it is a process of selection, analysis, design, development, implementation, and evaluation of programs to most cost-effectively influence human behavior and accomplishment. It is a systematic combination of three fundamental processes: performance analysis, cause analysis, and intervention selection, and can be applied to individuals, small groups, and large organizations. (International Society for Performance Improvement, 2011)

The driving force behind the HPT field is the Performance Improvement/HPT Model. The current version of the model is the 2012 Performance Improvement/HPT Model (Van Tiem, Moseley, & Dessinger, 2012). According to VanTiem, Moseley, and Dessinger, the model is "organized in system based phases: Performance Analysis, Intervention Selection, Design, Development, Intervention Implementation and Maintenance; and Evaluation (2012, p. 42). A noteworthy difference between the 2004 ISPI HPT Model and the 2012 Performance Improvement/HPT Model is the change from Implementation and Change to Implementation and Maintenance to stress the importance of sustainable performance improvement interventions (Van Tiem, Moseley, & Dessinger, 2012). Change management now permeates the entire model.

The model is both linear and iterative. Linear in the sense that you must conduct a performance analysis then select an intervention followed by design and development before implementation of the intervention, in that order. It does not make sense to establish cause before

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you identify the problem or implement an intervention before you select an intervention. The Performance Improvement/HPT Model is also iterative in the sense that evaluation is a part of each element. Therefore, it is best to view the Performance Improvement/HPT Model as a systematic approach to improve productivity, hence the definition of HPT.

Providing a definition of HPT and an explanation of the Performance Improvement/HPT Model is relevant to this study. The HPT field provides the tools to conduct the research presented. The fundamental basis for this research is a needs assessment to determine the gap between competencies important to planning practice and competencies taught in planning education. Needs assessment would be conducted in the performance analysis stage of the Performance Improvement/HPT Model. The performance analysis stage of the Performance Improvement/HPT Model determines the needs of the organization by identifying gaps between the current and desired state of individual or organizational performance.

Specific to this research, a needs assessment will be conducted to determine the gap between the current and desired state of planning competencies based on input from planning practitioners. Therefore, gaps will be identified for the organization in this case defined by the organization of planning practitioners. The following discussion will provide a review of the literature that is relevant to the research presented, specifically a definition of needs assessment and relevant models.

Definition of Needs Assessment

As a concept, needs assessments have been around for many years. Witkin (1994) traces needs assessments literature to 1965 as related to the Elementary and Secondary Education Act (ESEA). According to Trimby (1979), information and data from a needs assessment, conducted in an educational setting, are used to "design, implement, and evaluate instructional products or programs" (p. 24). Early writings, in the field of HPT, on needs assessment can be traced back

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to Kaufman (1972), Price et al. (1977) and Warheit, Bell, and Schwab (1979). Numerous definitions of needs assessment can be found as it relates to the field of education (Mrowicki, 1986, Richards & Rodgers, 2001, and Schneck, 1978).

Many scholars suggest that needs assessments are confused with terms such as: concerns, problems, evaluations, or analysis. (Trimby, 1979, Altschuld, 2004, Kaufman, 2006, and Guerra –Lopez, 2007). Although needs assessments are not concerns, problems, evaluations, or analyses they are conceptually related. Concerns are beliefs that differences exist between existing and desired conditions, where a needs assessment validates or refutes the concerns (Price, 1977). Kaufman (2006) states that "a problem is a need selected for elimination or reduction" (p. 94). Evaluations compare the present to the past, while a needs assessment compares the present to the future (Witkin, 1975). Guerra –Lopez (2007) distinguishes between assessment and analyses by stating "while assessment identifies the what, analysis identifies the why" (p. 4). In order to further discuss the concept of needs assessment as it relates to the field of HPT the terms needs, needs analysis, and needs assessment must be defined.

Kaufman (2006) defines need as a "gap between current results and desired or required results: a noun" (p. 94). Altschuld (2004) agrees that the word *need*, in the context of needs assessment, must be looked at as a noun not a verb. Many scholars agree to using need as a verb since it suggests a solution rather than measured discrepancies or gaps (Witkin, 1994; Kaufman 2006; and Altschuld, 2004. Kaufman uses the means to ends argument to make the case for using the term needs as a noun, where means are solutions and ends are results, stating that using needs as a verb focuses on the means or solutions rather than the gap in results (2006).

The term needs analysis is defined by Kaufman (2006) as "identifying possible ways and means to close the gap in results" (p. 177). This is in contrast to a needs assessment which is defined as "a formal process that identifies and documents gaps between current and desired

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and/or required results" (Kaufman, 2006, p. 177). The formal process of a needs assessment is a"systematic, rational means of determining goals and priorities for program planning and evaluation" (Witkin, 1994, p. 17). Thus a needs analysis focus on the solution while needs assessment is the process of identifying gaps in results, current versus desired. Watkins et al (1998) states "by determining the solution before identifying the performance problem a needs assessment frequently becomes a needs analysis (p. 41). Trimby (1979), further states that needs assessment is the first step in many evaluation models to determine the goals and establish general direction. Thus "an assessment identifies and prioritizes needs while an analysis breaks-down needs into their component parts and root cause and includes the selection of solutions" (Watkins, Leigh, Platt, & Kaufman, 1998, p. 53).

There are numerous definitions of needs assessment. Yet there is a common theme among the different definitions. Many scholars agree that needs assessment is a process that identifies gaps or discrepancies in current and desired results (Trimby, 1979, Kaufman (2006), Altschuld (2004), and Guerra –Lopez, 2007). In addition, most definitions suggest the identified gaps must be ranked. Price (1977) suggests rating according to pre-determined criteria. Kaufman (2006) suggests ranking based on cost while Altschuld (2004) suggests ranking by high to low priority.

The definition of needs assessment provides the foundation for conducting a needs assessment for this study. The needs assessment in this study will investigate education and training needs of planning professionals and determine the alignment between professional organizations, planning education, and planning practice. This will be accomplished by evaluating the time spent and the importance of competencies defined by the planning accreditation board. If a planning professional spends little or no time on a competency but nevertheless views the competency as important, this situation can be an identified as a gap.

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Needs Assessment Models

From the previous discussion on the definition of needs assessment it is clear that needs assessment must be done at the beginning of the process or must be the first step in an evaluation. A needs assessment focuses on identifying gaps in results and not the solutions. The most basic model in Performance Improvement is ADDIE (Analysis, Design, Development, Implementations, and Evaluation). ADDIE is the foundation for most performance improvement models. Scholars agree that most performance improvement models can be traced back to the ADDIE model (Molenda, 2003 and Guerra, 2003). Guerra (2003) argues that analysis, the first step in the ADDIE model, implies that "needs" are being analyzed. Thus Guerra (2003) suggests adding another "A" (assessment) to the conventional ADDIE model, results in the A^2DDIE model. A^2DDIE model is relevant to this discussion on needs assessment as it relates to assessments being the first step in an evaluation. Blake and Moseley (2010), take the model one step further by adding "M", thus, A^2DDIE+M. Each step of the A^2DDIE must be managed.

In his book, *Change, Choices, and Consequences: A Guide to Mega Thinking and Planning* (2006), Kaufman suggests three guides "to define and achieve organizational success and to provide the rationale for useful choices" (p. 37). The first guide is the Organizational Elements Model (OEM) that focuses on five levels of results: Mega (Outcomes), Macro (Outputs), Micro (Products), Process, Input (Kaufman, 2006). The terms Mega, Macro, and Micro in the OEM are not reference to size or scope, but rather a reference to focus. Kaufman (2006) states that all organizational elements are equally important and must be "attended to and linked" (p. 37). Therefore, each level of results contributes to the success of the organization. Related to the OEM is the second guide Six Critical Success Factors (CSFs) for Mega-level strategic planning. The 6 CSFs are:

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> 1. Don't assume that what worked in the past will work now. Get out of your comfort zone and be open to change; 2. Differentiate between ends (what) and means (how); 3. Use all three levels of planning and results (Mega/Outcomes; Macro/Outputs; Micro/Products); 4. Prepare all objectives – including the Ideal Vision and mission – to include precise statements of both where you are headed as well as the criteria for measuring when you have arrived. Develop "smarter" objectives; 5. Define need as a gap in results (not as insufficient levels of resources, means, or methods). 6. Use an Ideal Vision (what kind of worked, in measurable performance terms, we want for tomorrow's child) as the underlying basis for planning and continuous improvement. (Kaufman, 2006, p. 47).

The third and final guide is the Six-Step Problem-Solving Process (SSPSP) "which will guide you as you go from needs assessment to evaluation and continual improvement" (p. 50). The six-steps in the problem solving process are:

> 1. Needs Assessed that defines the gaps in results at the Mega, Macro, and Micro levels and places them in priority order; 2. Needs Analyzed that finds the causes of the needs, determines detailed solution requirements to meet the needs, and identifies (but not yet selects) solution alternatives; 3. Means Selected that involves selecting solutions from among alternatives based on the costs and consequences for the available alternatives; 4. Implemented that consists of designing and developing the means and methods that are required to meet the needs, and then putting those to work; Evaluated where results are compared with the intensions from needs analyzed; Revise as Required that involves the continuous improvement (at each and every step) when the required results are not being accomplished or when progress toward meeting the needs are falling short (Kaufman, 2006, p. 49).

The three guides, OEM, CSF's, and the SSPSP, Kaufman (2006) suggests are tools organizations can use to make sound decisions based on sound and relevant facts. Also the guides provide the needed foundation for this needs assessment study. The needs assessment in this study will determine gaps in results at the Macro-level (outputs) focusing on planning professional training needs. In order to relate this study to Mega-level strategic planning linking the needs assessment in this study to the mission of the America Planning Association would be relevant at the Mega-level (outcomes). The mission of the APA is:

> "The American Planning Association is an independent, not-for-profit educational organization that provides leadership in the development of vital communities by advocating excellence in community planning, promoting education and citizen

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> empowerment, and providing the tools and support necessary to meet the challenges of growth and change " (APA Mission and Vision section, 2011c, para. 1).

Also linking to the micro-level (products) such as the actual plans produced or even the development of the community based on the plans would validate the evaluation at all three levels of results. This study, however, will focus on conducting the needs assessment as the initial step in evaluating gaps in competencies set forth by planning organizations.

In addition to Kaufman's (2006) OEM, other performance improvement models relevant to needs assessment include Harless' (1975) front-end analysis model defined as a deficiency between the actual situation and a model situation. Trimby suggests that the deficiency is actually a discrepancy similar to other needs assessment models, such as Kaufman's needs assessment model (1979). Trimby (1979) compares four needs assessment models including: Kaufman's needs assessment; Coffing's client need assessment; Lee's needs assessment; and Harless' front-end analysis. Trimby (1979) suggests that the common thread between these models is they are all discrepancy models that are concerned with either problem-solving, decision making or both. In addition, all four models are education based, although Kaufman and Harless suggest that their models can be used in different sectors such as: business, industry, military and government (Trimby, 1979).

The needs assessment proposed in this study is consistent with the models described. The primary purpose of this study is to find discrepancies between competencies defined by the planning association board and planning practice. This is the initial step in determining the alignment between professional institutions, planning education and planning practice. Discrepancies that are identified in this study can be useful to the planning profession in terms of both problem solving and decision making. The planning profession encompasses both business

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and government employment opportunities, which are sectors consistent with Kaufman's and Harless' models.

Competencies

McLagan (1997) suggests that competencies take on two meanings: either related to work or related to characteristics of people doing the work. Task, result, and output competencies are related to work, while knowledge, skill, and attitude competencies are characteristics of people doing the work (McLagan, 1997). Mansfield (1989) describes competencies in terms of inputs and outcomes. Inputs focus on content while outcomes focus on standards (Mansfield, 1989). Outcome based competencies are broader and more aligned to the changing work environment. Competencies in today's work environments must be looked at holistically. Being competent in adapting to change separates those that will succeed versus those that will not. The point here is not suggesting that specific tasks or skills are not valuable. The point is the ability to transfer specific tasks, results, and outputs or knowledge, skills, and attitudes to a constantly changing work environment are more valuable.

Competency Defined

The concept of competencies has been around for centuries. McLagan (1997) suggests that competencies can be traced back to medieval guilds where apprentices acquired skills working with a master. Modern uses of competence can be traced back to the 1970's with a focus on competency-based education for teacher and K-12 education (Richey et al., 2001). McClelland's (1973) thesis on aptitude tests, considered early research, defines competencies as personality variables such as communication skills, patience, moderate goal setting, and ego development. In contrast to McClelland's research, in the field of instructional or educational technology, as related to instructional design, which are elements of human performance technology (HPT), competencies are considered statements of behavior and not personality traits or personal beliefs

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(Richey et al., 2001). ID competencies were primarily guided by general systems theory, behavioral learning theory, cognitive theory, and theories associated with performance improvement (Richey et al., 2001).

The common thread between different points of views on competencies, important to this study, is that an individual can develop competencies through education and training. Therefore, one can develop, through education, the knowledge, skills, and attitudes necessary to perform and be successful in a profession. McClelland (1973) suggests that personal traits, or fixed inherited aptitudes as psychologists refer to them, can be changed through training. Most psychologists, however, disagree with McClelland stating that "any trait, like racial prejudice, is unmodifiable by training" (McClelland, 1973, p. 8). Instructional technologies state that competencies that focus on knowledge, skills, and attitudes can be learned through education and training (Richey et al., 2001).

This study will rely on the International Board of Standards for Training, Performance and Instruction (IBSTPI) definition of competency, which is "a set of related knowledge, skills, and attitudes that enable one to effectively perform the activities of a given occupation or job function to the standards expected in employment" (Richey, et al., 2001, p. 31). IBSTPI's definition of competency "combines two of McLagan's competency definition models – that of job tasks and of an accumulation of knowledge, skills and attitudes" (Richey, et al., 2001, p. 31).

IBSTPI definition provides the bridge between professional organization, planning education, and planning practice, as related to competencies and competency development. To focus on personal traits and beliefs is outside the bounds of this study. Consistent with the definition provided, many researchers in the field of instructional technology, agree that competency involves knowledge, skills, and attitudes (Kahane, 2008, Lucia & Lepsinger, 1999, McLagan, 1997, Parry, 1998, and Spencer & Spencer, 1993).

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In addition to knowledge, skills, and attitudes which focus on characteristics of people doing the work, this study will also consider tasks, results and outputs. McLagan (1997) coined the term *bundle of attributes* or *attribute bundle* to refer to a collection of work related competencies or competencies that focus on characteristics of people doing the work. This study will also consider competencies developed by both content (inputs) and standards (outcomes) which will result in a holistic view of competencies for planning professionals.

Competency Development

The uses of competencies in the work and educational environment can be beneficial. McLagan (1997) suggests that competencies can be used for learning (education and training), membership (workforce planning), reward (work evaluation), output management (work design), and assessments (feedback). Richey, Fields, and Foxon, (2001) also suggest that competencies can be used to interview prospective employees, to conduct performance appraisals, writing job descriptions, develop university courses, assess students, and develop training programs relevant to a profession.

Various scholars have suggested that individuals can develop competencies through education and training (Burke, 1989, Evers, Rush, & Berdrow, 1998, Richey et al., 2001, Doll, 1984, Tuxworth, 1989). The concept of developing competencies through education and training can be traced back to the 1920's to the idea "of educational reform linked to industrial/business models centered on specification of outcomes in behavioral objectives form" (Tuxworth, p. 11, 1989). According to Tuxworth (1989), demand for competency based education reenergized in the mid 1960's, coined the term competency based education and training (CBET). Tuxworth (1989) states that "the demand for greater accountability in education, for increased emphasis on the economy, and towards more community involvement in decision-making gave a great impetus to the concept of CBET" (p. 11).

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Compared to other professions, CBET has been varied. In terms of applying competency based notions to training and professional development, the health care industry has been a leader. The planning profession has used competency based notions to accredit university planning programs and to some degree as part of the American Institute of Certified Planners (AICP) exam. However, a wider more structured dependency on competency based training could prove beneficial to the continued professional development of planning professionals.

Competency Models

Guerra (2001) states that competency models are tools "that describes the key tasks and activities for effectively performing a specific job" (p. 10). Mansfield (1989) states that competency models are either input or outcomes based models. Input based models focus on "aptitudes, knowledge and skills which individuals possess" (Mansfield, 1989, p. 27). Outcome based models "describe aspects of work roles which are not confined to descriptions of individual knowledge and skills" (Mansfield, 1989, p. 27). Economic success in today's professions requires elements of both input and outcome based competency models. Focusing on one type will result in either too narrow or too broad scope in defining competencies. Therefore, the competencies presented to planning professions in this needs assessment study will be both input and outcome based competencies.

Conclusion

This chapter presented a review of related literature. A philosophical view of a profession was presented to distinguish between a minor and major profession such that, a major profession is grounded in scientific theory while minor profession is not. Then research on competencies in the field of urban planning was presented to build upon the research and establish a rationale for the study in this paper. A discussion on tools and techniques in the field of HPT specifically, needs assessment was presented since this study uses a needs assessment as the basis for the

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study. Finally a definition of competency was provided along with a discussion on competency development as it relates to HPT.

The next chapter provides the methodology for conducting a survey for this study. The target population is presented along with an introduction to the survey instrument. Both reliability and validity of the pilot study and the study are outlined to provide credibility to the study. Once the data are collected via the survey, a description of how data will be analyzed is offered. In addition, the methodology section establishes that the survey instrument will address the research questions of this study.

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CHAPTER 3 METHODOLOGY

The overarching purpose of this study is to determine the alignment between professional planning organizations, planning education and planning practice. Planning practitioners will be asked to respond to a questionnaire asking two types of questions, the amount of time spent as well as the importance of competencies defined by the PAB. Conducting a needs assessment will gauge how relevant competencies defined by PAB are in terms of current planning practice.

This is the case for university planning programs. In order to qualify for accreditation PAB prescribes knowledge, skills, and values as guidelines that planning programs must meet for accreditation. However, PAB does not dictate specifically how to incorporate the competencies in the planning curriculum, but the planning program must demonstrate that the competencies are a part of the program.

Target Population

Planning practitioners were the target population for this research. The research focused on planning practitioners in the United States. In order to solicit planning practitioners to participate, in the web based survey via Zoomerang, an e-mail list of professional planners was purchased from Email Marketing List, an online company that sells email lists by standard industrial classification (SIC) code. The SIC code purchased was 953204: City Government Urban Planning and Development. The list contains 5,404 e-mail addresses of urban planning practitioners across the country in private, public and nonprofit sectors. Of the 5,404 e-mail addresses, only 3,452 were valid. The other e-mails were either duplicates or not valid. Therefore, 3,452 was the target population for this study. With 270 respondents to the survey and a 95% confidence level, a calculated margin of error is +/- 5.73%. This is within the target margin of error of 5 to 6% set by the researcher of this study.

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An incentive was offered in the form of a prize to respondents who completed the web based survey in its entirety and who provided a valid e-mail address. The e-mail addresses were separated from the responses to the survey questions to maintain confidentiality. A raffle was drawn and 5 participants received one of five $50 VISA cards. The incentive was offered in hopes of increasing participation in the survey. Of the 270 respondents who completed the questionnaire 75.6% entered a valid e-mail address placing them in the drawing. Offering a prize has been used to entice participation in surveys. A study conducted by Bosnjak and Tuten (2003) on web based surveys, concluded that web based surveys generate quality data with higher response rates if a prize is offered compared to no incentive. Bosnjak and Tuten (2003) also found that web surveys that offer a prize tend to have less incomplete surveys compared to no incentives offered.

Instrument

A web based questionnaire using Zoomerang was used in this study to survey planning practitioners. Denscombe (2007) defines a web based questionnaire as "designed as a web page and located on a host site where visitors to the site can access it" (p. 155). According to Guerra-Lopez (2007) "questionnaires are geared toward informed opinions such as those based on the target group's personal experience, knowledge, background, and vantage point for observation" (p. 80). Denscombe (2007) agrees with Guerra-Lopez suggesting that questionnaires are used to collect facts and opinions. Facts are straightforward information such as demographic information and opinions are "attitudes, views, beliefs, preferences" (Denscombe, p. 155, 2007).

There are many advantages for using a questionnaire including: economical, standardized answers, wide coverage both participants and geographic, relatively inexpensive, completed at respondents convenience and pace, and can be anonymous (Guerra-Lopez, 2007, Denscombe,

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2007). For all the advantages of a questionnaire one can site disadvantages such as poor response rate, incomplete answers, limit nature of answers, and difficult to check truthfulness (Denscombe, 2007). Although Guerra-Lopez (2007), states that professional experience and judgment "may help ensure any advantages and reduce the effects of inherent flaws of questionnaires" (p. 81).

The questionnaire in this study is modeled from a needs assessment questionnaire in *ASTD Trainer's Toolkit: Needs Assessment Instrument* (Allen, 1990). The questionnaire was originally used by an engineering firm to determine and prioritize training needs of engineers in an organization (Allen, 1990). Rather it asks practitioners to identify training that should be provided. The questionnaire is intended to ask practitioners how they spend their time on professional competencies, what professional competencies are important in their job, and what professional competencies they possess (Allen, 1990). This questionnaire format will "determine the required level of proficiency, the current level of proficiency, and the difference between the two levels. The difference comprises the training needs" (Allen, p. 59, 1990).

The final version of the questionnaire contained five sections consisting of (a) About your career, Demographic Information including: years of experience in planning, education level, primary work responsibility, professional organization affiliation, work environment, and spatial area of practice, (b) Knowledge, Skills and Values Usage: this section of the survey uses a Likert-type format questions focusing on time spent and importance of knowledge, skills, and values defined by the PAB, (c) Competency Profile: also uses Likert-type format questions focusing on which competencies planning practitioners possess for their job, (d) Open Ended Questions: this section allows planning practitioners to elaborate on any previous question or competencies in general, (e) About you: section is the final section focusing on demographic

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information such as: gender, age, and race. A sample paper survey instrument is provided in Appendix C.

The knowledge, skills and values included in the questionnaire to determine the time spent and importance of each competency are adapted directly from list of knowledge, skills and values from PAB. The competency profile section of the survey instrument was derived from specific skills defined by PAB and cross referenced with competencies indentified in studies by Guzzetta and Bollens (2003) and Ozawa and Seltzer (1999). Cross referencing skills from PAB with other studies provide more depth to the research.

Validity

According to Guerra-Lopez (2007), validity "is the degree to which a test measures a hypothetical construct" (p. 90). Thus in order to establish content validity for this study the survey instrument must measure the content it claims to measure. In the case of this study the survey is intended to measure the time spent and the importance of competencies defined by the Planning Accreditation Board of planning practitioners. 16 experts in the field of planning were asked to review the survey instrument to determine if the questions are valid for this study. Experts were chosen from the private, public and nonprofit sectors of the planning field. Experts were currently employed in the planning field and had a minimum of 10 years of professional planning experience. Of the 16 experts who were asked to participated as expert reviewers 14 responded and provided constructive feedback. The survey was modified to account for changes the experts deemed necessary.

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Reliability

As stated earlier the instrument for this study was adapted from a needs assessment questionnaire in *ASTD Trainer's Toolkit: Needs Assessment Instrument* (Allen, 1990). Reliability was established by relying on experts in the field of planning to pilot test the survey to ensure clarity of the questions and the format of the questionnaire as well as time to compete the survey. The pilot survey was conducted from May 16, 2012 to June 29, 2012. Conducting a pilot test helps develop a reliable survey instrument (Fink, 2006). 16 expert reviewers were asked to participate in the pilot survey and 14 responded. The expert reviewers were asked to focus on three aspects, clarity of questions, time to complete the survey, and technology problems accessing or filing the survey. As in validity, the survey instrument was modified to address the concerns the expert reviewers encountered with the questionnaire.

The second step in reliability was conducted upon completion of the survey process of administering the questionnaire and data collection. The statistical method for establishing reliability at this stage is Cronbach's alpha. Cronbach's alpha is a coefficient of reliability. Cronbach's alpha measures reliability or internal consistency. According to Guerra-Lopez (2007), "internal consistency measures are only appropriate if the test contains similar items that measure only one concept (p.91). The questionnaire in this study contains similar questions related to one concept, competency. Therefore, Cronbach's alpha is utilized. The higher the correlation suggests good split-half reliability (Guerra-Lopez, 2007). The results of Cronbach's alpha are presented in Chapter 4.

Data Analysis

Three main purposes of research are to describe, explain, and validate findings. Therefore, a descriptive research method, non-parametric statistic methods, and qualitative

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research method will be used to analyze data for this study. According to Knupfer, “descriptive statistics utilize data collection and analysis techniques that yield reports concerning the measures of central tendency, variation, and correlation” (Knupfer &McLellan, 1996). Descriptive research can be either quantitative or qualitative (Knupfer &McLellan, 1996). Descriptive studies are aimed at finding out "what is"; therefore, observational and survey methods are frequently used to collect descriptive data (Borg & Gall, 1989).

Parametric statistical methods are preferred over non-parametric methods because they are more robust (Plonsky, 2011). But data that does not follow a normal distribution require the use of non-parametric statistics (Plonsky, 2011). The data collected in this study do not follow a normal distribution; thus, non-parametric statistics will be used. For the open ended questions a qualitative research method, taxonomy, will be used. According to Spradley “taxonomy is a set of categories organized on the basis of a single semantic relationship” (1980, p. 112). Semantic relationships for the open ended questions on the online questionnaire will be key words or phrases related to urban planning competencies.

Data analysis for descriptive statistics, non-parametric statistic, and qualitative statistical methods will be conducted using a combination of Microsoft Access 2007 (MS Access) for organizing data and developing various queries; Microsoft Excel 2007 (MS Excel) for summarizing data; and IBM Statistical Package for the Social Sciences 12.0.1 (SPSS) for statistical analysis. Table 1 summarizes the data analysis techniques for each of the research questions. A more detailed description of each method is provided in Chapter 4 of this study.

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Table 1

Summary of Questionnaire Data Item, Research Questions, and Data Analysis Techniques

Questionnaire Data Item	Data Type	Research Question	Data Analysis Technique(s)
Items 1 – 9	Nominal	Informational	Descriptive Statistics: Frequency
Items 10 to 27	Likert-type scale: Ordinal	2 and 3	Descriptive Statistics: Median and Mode
Items 10 to 27	Likert-type scale: Ordinal	4	Nonparametric Statistic: Spearman correlation coefficient
Items 5, and 10 to 27	Likert-type scale: Ordinal	5 and 6	Nonparametric Statistic: Kruskal-Wallis H Test
Items 8, and 10 to 27	Likert-type scale: Ordinal	7 and 8	Nonparametric Statistic: Kruskal-Wallis H Test
Items 9, and 10 to 27	Likert-type scale: Ordinal	9 and 10	Nonparametric Statistic: Kruskal-Wallis H Test
Item 28	Likert-type scale: Ordinal	11	Descriptive Statistics: Median and Mode
Items 29 to 33	Open Ended Question: Text	Informational	Qualitative Statistics: Taxonomy
Item 34	Open Ended Question: Numeric	Informational	Descriptive Statistics: Median and Mode
Items 35 – 38	Nominal	Informational	Descriptive Statistics: Frequency
Item 39	Open Ended Question: Text	Informational	NA
Item 40	Text	Informational	NA

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Summary

The methodology for conducting the study was presented in this chapter. The target population section defined the participants who were targeted for this research. The instrument section describes the areas on the online questionnaire that planning practitioners are asked to complete. The validity and reliability sections cover the steps the research took to ensure the survey instrument used in the study was validated and reliable. The data analysis section summarized the descriptive research method that will be used to analysis the data collected from the online questionnaire. The next chapter, Chapter 4, will discuss the results from the online questionnaire. The descriptive research method outlined will be the driving force for Chapter 4. The results will be both quantitative and qualitative and the appropriate statistical methods will be used for each of the eleven research questions.

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CHAPTER 4 RESULTS

The overarching purpose of this study is to conduct a needs assessment to determine the alignment between professional planning organizations, planning education and planning practice. The needs assessment questionnaire contained five sections consisting of 40 questions broken down as follows: nine questions about the planning professionals career; 18 Likert-type scale questions on the planning professionals knowledge, skills and values usage; one Likert-type scale question with 26 sub categories on planning professionals competency profile; six open ended questions; and six questions about the planning professional. The five sections are described in more detail in Chapter 3. Planning practitioners were invited to participate in an online survey, which contained the 40 questions, via three e-mail blasts sent over a one month period. This chapter will provide the statistical results of the 40 questions posed in the online survey.

Survey Administration

Prior to the launch of the web based survey, an approval letter from the Institutional Review Board (IRB) at Wayne State University was granted (see Appendix E). Upon approval from the IRB a pilot survey and expert review was initiated to a group of 16 urban planning experts, as described in Chapter 3. The expert reviewers were contacted via e-mail (see Appendix F). The pilot survey and expert review ran for just over a month, and feedback was provided form 14 expert reviews. The feedback that was received from the experts was helpful to make minor adjustments to the online questionnaire. Upon completion of the pilot survey and expert review the web based questionnaire was launched to the target population via e-mail (see Appendix G). The survey ran through mid August with two additional e-mail reminders.

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Participant Profile

An important aspect of a survey is to obtain a good understanding of the survey participants. A total of 270 planning professionals responded to the survey questionnaire. Descriptive statistics for the participant profiles were compiled from sections one (about your career) and section five (about you) from the online questionnaire. Participant profile section will be divided into three sub-sections participant demographics, participant education, and participant career.

Participant Demographics

Table 2 shows the number of female and male participants in the survey broken down by age. 35 percent of the respondents were female while 65 percent were male. Table 1 also shows a good distribution of participants by age for both males and females. 50% of the participants were between the age of 35 and 54.

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Table 2

Particpant Profile – Age and Gender

Age Group	Female	Male	Percentage
Under 25	0	1	0.4
25-29	11	4	5.6
30-34	17	24	15.2
35-39	14	16	11.1
40-44	15	24	14.4
45-49	8	31	14.4
50-54	12	17	10.7
55-59	13	29	15.6
60-64	3	19	8.1
65 or older	2	8	3.7
No response	0	2	0.7
Total	95	175	

Table 3 shows the race of participants in the survey. The majority (85.2%) of participants identified themselves as white. The distribution by race is consistent with the American Planning Association (APA) 2012 salary survey in which 91% of the 10,182 participants identified themselves as white (American Planning Association, 2012). According to the APA race distribution has remained consistent to prior surveys administered by APA (American Planning Association, 2012).

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Table 3

Particpant Profile – Race

Race	Responses	Percentage
White	230	85.2
Black, African American	12	4.4
Asian, Native Hawaiian, or Pacific Islander	6	2.2
Spanish, Hispanic, or Latino	4	1.5
American Indian or Alaska Native	3	1.1
Other	9	3.3
No response	6	2.2
Total	270	

In terms of participant demographics the participants are quite diverse in gender and age. Although race is not as diverse as gender and age, it is representative of the current makeup of practicing planners. Data collected on age, gender, and race are strictly for informational purposes only.

Participant Education

Table 4 shows degree earned by participants. The majority of the participants have a master's degree as their highest degree with bachelor's degree ranking second. Respondents were able to select more than one degree. Some participants have multiple master's degrees.

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Table 4

Particpant Profile – Degree Earned

Degree Earned	Responses	Highest Degree
High School Diploma	124	2
Associate Degree	21	2
Bachelor's Degree	197	72
Master's Degree	203	179
Law Degree	3	3
Doctorate	9	9
No Response	3	3
Total		270

Table 5 shows the field in which participants have the highest degree. The majority of participants indicated that they have a planning degree with geography and public administration tying for a distant second. Geography and public administration are fields that complement the field of planning. Included in the other category are business administration, architecture, law, environmental studies, education, economic, and communication which bottomed down the list with less than five respondents each.

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Table 5

Particpant Profile – Highest Degree Field

Field	Responses	%
Planning	163	60.4
Geography	23	8.5
Public Administration	23	8.5
Landscape Architecture	10	3.7
Engineering	10	3.7
Other	39	14.4
No Response	2	0.7
Total	270	

In terms of participant education, participants in this survey are well educated in the field of planning. The majority of participants indicated that they received a master's degree in the planning field. The participant's education profile is a good fit as it relates to the goals of this needs assessment which is concerned with professional planner's education.

Participant Career

Table 6 shows the year(s) of experience in the field of planning for the participants. Table 5 shows that there is a good distribution in the years of experience of the participants in the survey. The median years of experience were 17 years, mode was 15 years, and the maximum was 51 years amongst the participants.

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Table 6

Particpant Profile – Years of Experiance

Years	Responses	Percentage
Less than 1 year	4	1.5
1-5	30	11.1
6-10	45	16.7
11-15	49	18.1
16-20	44	16.3
21-25	33	12.2
26-30	27	10.0
More than 30 years	34	12.6
No Response	4	1.5
Total	270	

Table 7 shows participants' area of specialization. Specialization was led by community development and redevelopment, transportation planning, and land-use or code enforcement. This is consistent with the top three specializations in the 2012 APA salary survey (American Planning Association, 2012). Included in the other category are environmental and natural resource planning; urban design; housing; facilities and infrastructure planning; sustainability; preservation; spatial planning; information technology; parks and recreation planning; planning law; planning methods; and health and human services planning which had less than eight respondents each.

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Table 7

Particpant Profile – Area of Specialization

Specialization	Responses	Percentage
Community development and redevelopment	80	29.6
Transportation Planning	39	14.4
Land-use or code enforcement	37	13.7
Economic planning and development	20	7.4
Planning management, budgeting and finance	12	4.4
Other	80	29.6
No response	2	0.7
Total	270	

Table 8 shows the work environment of the participants. A majority of the participants indicated that their work environment was public, meaning working for a unit of government followed by private and nonprofit. In the other category, participants indicated multiple work environments, universities, and utilities.

Table 8

Particpant Profile – Work Enviornment

Environment	Responses	Percentage
Public (unit of government)	192	71.1
Private (planning firm)	48	17.8
Nonprofit (community group)	19	7.0
Other	9	3.3
No Response	2	0.7
Total	270	

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Table 9 shows the spatial area of practice for the participants. The top three spatial areas of practice are urban, suburban, and county or regional level planning areas. Included in the other category are corridors, rural areas, multi state, historic districts, waterfronts, and multiple spatial areas.

Table 9

Particpant Profile – Spatial Area of Practice

Field	Responses	Percentage
Urban areas	67	24.8
Suburban areas	61	22.6
County or Regional level planning	49	18.1
Downtowns Small towns	15	5.6
Neighborhoods	13	4.8
National level State	12	4.4
Sub-state region	10	3.7
Other	41	15.2
No Response	2	0.7
Total	270	

Table 10 shows participants' professional memberships. Although there were only 270 participants 201 indicated that they had multiple memberships. Individuals that have AICP must also maintain APA membership. Most individuals that have APA membership also subscribe to a local chapter of APA. In the other category, participants indicated membership in project management institute, professional community planner, institute of transportation engineers, congress for the new urbanism, and more specific memberships related to participants' specific positions.

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Planners were not asked directly in what state they practice planning, although, planners that indicated they hold local chapter memberships were asked in what state their local chapter was affiliated. This resulted in showing that planners from 28 different states from Alaska to Wyoming participated in this survey. One fact worth noting is the majority of planners who participated in the online questionnaire were from the state of Michigan. One explanation for this could be the researcher in this study is from Michigan, and the university, Wayne State University, is located in the state of Michigan. Therefore, planners in the state of Michigan were probably more likely to respond to the survey.

Table 10

Particpant Profile – Professional Memberships

Membership	Responses
American Planning Association (APA)	208
Local Chapter of APA	193
American Institute of Certified Planners (AICP)	146
Other	86
No Membership	33
No Response	3

In terms of participant careers, the respondents provide a rich cross section with respect to area of specialization, work environment, spatial area of practice, and professional memberships. In addition, research questions 4 through 9 are broken down by and are dependent on the area of specialization, work environment, and spatial area of practice. Professional membership is for informational purpose only.

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Instrument Reliability

As noted in Chapter 3, Cronbach's Alpha reliability coefficient will be used to establish internal consistence for the scaled items in the survey instrument. Two sections of the survey in which Cronbach's Alpha will be applied are Section 2: Knowledge, Skills, and Values Usage; and Section 3: Competency Profiles. Both sections contain scaled items using Likert-type scale questions which are appropriate for using Cronbach's Alpha for testing reliability (Gliem and Gliem, 2003). The range of Cronbach's Alpha is 0 to 1 and according to Gliem and Gliem "the closer Cronbach's Alpha is to 1 the greater the internal consistency of the items in the scale" (p. 87, 2003). George and Mallery (2003) suggest that an alpha greater than .7 is acceptable, an alpha greater than .8 is good, and an alpha greater than .9 is excellent.

Table 11 summarizes the calculated Cronbach's Alpha for time spent and importance questions in Section 2: knowledge, skills, and values usage section of the online questionnaire. There are a total of 18 questions in this section divided into three competency elements: general planning knowledge, planning skills, and values and ethics. Cronbach's Alpha coefficient was calculated for each element by time spent and importance. The Alpha coefficients for time spent are in the range of .853 to .885 and for importance between .797 and .860. An Alpha coefficient was also calculated for all competency elements and yielded a Cronbach's Alpha coefficient of .944 for time spent and .929 for importance.

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Table 11

Reliability Test of Survey Instrument (N=270)

Competency Element	Survey Questions	# of Items	Cronbach's Alpha	
			Time spent	Importance
General planning knowledge	10 to 16	7	.863	.854
Planning skills	17 to 21	5	.853	.797
Values and ethics	22 to 27	6	.885	.860
Total scale	10 to 27	18	.944	.929

As for Section 3, Competency Profile of the online questionnaire the Cronbach's Alpha coefficient was calculated using 28 items yielding an Alpha coefficient of .898. The fact that all, except one, Cronbach's Alpha coefficient are greater than .8 and the two Alpha coefficients for the questionnaire as a whole are greater than .9 suggests evidence of internal consistency for the online questionnaire. Therefore, the calculated Alpha's suggests that the items in the Likert-type format on the online questionnaire are related enough to combine into a scale or index.

Findings

The overarching purpose of this study is to conduct a needs assessment to determine the alignment between planning education and professional planning practice. Professional competencies for this study are from the Planning Accreditation Board (PAB) list of competencies which are used by PAB to accredit university planning programs. In addition, specific competencies were also identified from the literature review. The first of 11 research questions to be answered was: w*hat are the professional and specific competencies required of planning practitioners for their profession?*

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These competencies were then incorporated into a needs assessment questionnaire which professional planners were asked to complete. The two dependent variables identified on the online questionnaire are “time spent” and “importance”. The scale for time spent and importance on the online questionnaire is from 0 to 5. The scale was re-coded for this analysis to 1 to 6. Planning practitioners were asked to comment on the time spent and importance of each professional competency identified. In addition to collecting data on the relationship between time spent and importance, the data collected will allow for grouping planning practitioners into various groups to determine if there are significant differences amongst the different groups.

Data Analysis Related to Research Questions

This section will describe the method and results of the data analysis in relation to each research questions.

Research Question 1: What are the professional and specific competencies required of planning practitioners for their profession?

A total of 18 professional competencies grouped within three educational outcomes including: general planning knowledge, planning skills, and values and ethics, were identified from the Planning Accreditation Board list of competencies (see Appendix H for complete list) and used on the online questionnaire. A total of 26 specific competencies grouped within three categories including: management, communication, and technical skills were compiled from the literature review (see Appendix I for complete list) and used on the online questionnaire.

Research Question 2: With what frequency do planning practitioners indicate they spend time applying each of the professional competencies?

For research questions 2 and 3 the data analyzed are Likert-type format where the dependent variables, time spent and importance, are ordinal scale. Thus the median and mode would be the most appropriate statistic to measure central tendency for ordinal scale data

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(Guerra-Lopez, 2007). Table 12 provides the median, mode and gap scores for each of the professional competencies on the survey questionnaire, items 10 to 27, as it relates to time spent and importance, respectively. The median scores will be assessed based on how frequently planning practitioners indicate that they spent time on each of the competencies or how important each competency was to their job.

The median scores, with respect to time spent, across the PAB competencies ranged from 2 to 4. The competency that received the lowest median score was competency Item 16: knowledge of interactions, flows of people and materials, cultures, and differing approaches to planning across world regions. Nine competency items received a median score of 3 while 8 items received a median score of 4. The mode which reports the most frequently occurring value ranged from 2 to 6. Half the items had a mode of 2, five items had a mode of 3, three items had a mode of 4 and one item had a mode of 6.

Research Question 3: With what frequency do planning practitioners indicate the importance of applying each of the professional competencies?

Similar to research question 2, the median score will be used to assess how frequent planning practitioners indicate how important each of the PAB competencies is for the work they perform. Table 12 summarizes the median scores for each of the competencies as it relates to importance. With respect to importance, median scores ranged from 3 to 6. The competency that received the lowest median score of 3 was competency Item 16: knowledge of interactions, flows of people and materials, cultures, and differing approaches to planning across world regions. Two competencies received a median score of 4 while fourteen competency items received a median score of 5. Item 18: knowledge of preparing clear, accurate and compelling text, graphics and maps for use in documents and presentations received the highest median score of 6. The data for

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the mode ranged from 2 to 6. One item had a mode of 2, fourteen items had a mode of 5, and two items hand a mode of 6.

Table 12

Median, Mode, and Gap Scores for Survey Questionnaire Items 10 to 27

	Time Spent			Importance			Gap
Survey Questionnaire Item	N	Mdn	Mode	N	Mdn	Mode	Mdn
18. Knowledge of preparing clear, accurate and compelling text, graphics and maps for use in documents and presentations.	265	4	6	265	6	6	2
12. Knowledge of the legal and institutional contexts within which planning occurs.	265	4	3	262	5	6	1
11. Knowledge of the behaviors and structures available to bring about sound planning outcomes.	266	4	2	265	5	5	1
15. Knowledge of potential methods of design, analysis, and intervention to influence the future.	263	4	4	260	5	5	1
19. Knowledge of data collection, analysis and modeling tools for forecasting, policy analysis, and design of projects and plans.	266	4	3	264	5	5	1
20. Knowledge of integrative tools useful for sound plan formulation, adoption, and implementation and enforcement.	263	4	4	262	5	5	1
21. Knowledge of tools for stakeholder involvement, community engagement, and working with diverse communities.	262	4	4	261	5	5	1
24. Knowledge of the roles of officials, stakeholders, and community members in planned change.	262	4	3	263	5	5	1
23. Knowledge of key issues of planning ethics and related questions of the ethics of public decision-making, research, and client representation.	266	3	2	264	5	6	2
10. Knowledge of why planning is undertaken by communities, cities, regions, and nations, and the impact planning is expect to have.	268	3	2	267	5	5	2

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13. Knowledge of the growth and development of places over time and across space.	270	3	3	264	5	5	2
14. Knowledge of the relationships between past, present, and future in planning domains.	266	3	2	266	5	5	2
22. Knowledge of tools for attention, formation, strategic decision-making, team building and organizational / community motivation.	262	3	3	261	5	5	2
25. Knowledge of natural resource and pollution control factors in planning, and understanding of how to create sustainable futures.	265	3	2	267	5	5	2
26. Knowledge of economic, social, and cultural factors in urban and regional growth and change.	267	3	2	264	5	5	2
17. Knowledge of tools for assembling and analyzing ideas and information from prior practice and scholarship, and from primary and secondary sources.	263	3	2	258	4	5	1
27. Knowledge of equity concerns in planning	266	3	2	267	4	5	1
16. Knowledge of interactions, flows of people and materials, cultures, and differing approaches to planning across world regions.	266	2	2	264	3	2	1

Research Question 4: What is the relationship between how frequently planning practitioners indicate they spend time verses the importance of each of the professional competencies?

Table 12 also summarizes the difference (gap) between the median scores for time spent and importance. The gap is derived by subtracting the median score between time spent and importance for each of the professional competencies. Since the median score for importance was always higher than the respective time spent, the absolute value was calculated. The largest gap score of 2 with respect to the median was for items: 10, 13, 14, 18, 22, 23, 25, and 26. The remaining 10 items received the lowest median gap score of 1.

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In addition to the gap between the median and mean scores, Spearman's correlation coefficient (r_s) (see Table 13) was used to analyze the relationship between the independent variables (time spent and importance) and dependent variable (PAB competency item). The closer Spearman's correlation coefficient is to 1 or -1, the greater the relationship between the items being analyzed; the closer to 0 suggests a weaker correlation between the items. With respect to time spent and importance, for the PAB competency items on the online questionnaire, Spearman's correlation coefficient ranged from .507 to .738 which suggests that all items received at least a moderate positive correlation between time spent and importance.

With respect to the PAB competencies on the online questionnaire, the items that have a relatively high correlation corresponding to time spent and importance are item 16, knowledge of interactions, flows of people and materials, cultures, and differing approaches to planning across world regions (r_s = .738); item 17, knowledge of tools for assembling and analyzing ideas and information from prior practice and scholarship, and from primary and secondary sources (r_s = .683); item 22, knowledge of tools for attention, formation, strategic decision-making, team building and organizational / community motivation (r_s = 668); and item 27, knowledge of equity concerns in planning (r_s = .651). Items that have a moderately high correlation are items 20, 26, 19, 14, 15, 12. The remaining items, 18, 24, 25, 23, 13, 21, 11, and 10, are moderately correlated.

Table 13

Relationship between Time Spent and Importance for PAB Competencies

Survey Questionnaire Item (PAB Competencies)	r_s
10. Knowledge of why planning is undertaken by communities, cities, regions, and nations, and the impact planning is expect to have.	.507*
11. Knowledge of the behaviors and structures available to bring about	.548

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sound planning outcomes.

12. Knowledge of the legal and institutional contexts within which planning occurs.	.612
13. Knowledge of the growth and development of places over time and across space.	.550
14. Knowledge of the relationships between past, present, and future in planning domains.	.614
15. Knowledge of potential methods of design, analysis, and intervention to influence the future.	.613
16. Knowledge of interactions, flows of people and materials, cultures, and differing approaches to planning across world regions.	.738
17. Knowledge of tools for assembling and analyzing ideas and information from prior practice and scholarship, and from primary and secondary sources.	.683
18. Knowledge of preparing clear, accurate and compelling text, graphics and maps for use in documents and presentations.	.590
19. Knowledge of data collection, analysis and modeling tools for forecasting, policy analysis, and design of projects and plans.	.616
20. Knowledge of integrative tools useful for sound plan formulation, adoption, and implementation and enforcement.	.648
21. Knowledge of tools for stakeholder involvement, community engagement, and working with diverse communities.	.549
22. Knowledge of tools for attention, formation, strategic decision-making, team building and organizational / community motivation.	.668
23. Knowledge of key issues of planning ethics and related questions of the ethics of public decision-making, research, and client representation.	.565
24. Knowledge of the roles of officials, stakeholders, and community members in planned change.	.577
25. Knowledge of natural resource and pollution control factors in planning, and understanding of how to create sustainable futures.	.571
26. Knowledge of economic, social, and cultural factors in urban and regional growth and change.	.619
27. Knowledge of equity concerns in planning	.651

* $p < .01$

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Research questions 5 through 10 will determine if there is a significant difference on how professional planners in different groupings (area of specialization, work environment, and spatial area of practice) indicate how much time they spend or how important a competency was. Since the data collected for these research questions do not follow a normal distribution, a non-parametric statistic such as Kruskal-Wallis test will be used. For research questions 5 through 11 the Kruskal-Wallis test will be used to determine if there is a significant difference within each grouping.

The data collected to answer these questions meet the assumptions for using the Kruskal-Wallis test. To run the Kruskal-Wallis test two variables are required: one dependent variable that is ordinal scale; and one independent variable that consists of three or more independent categories (Pallant, 2005). For research questions 5 through 11 the data collected for the dependent variables (competencies) are ordinal and the independent variable (the groups being analyzed) have at least three independent categories. Categories with less than three responses were eliminated from the analysis.

Research Question 5: Are there differences among the various planning practitioners grouped by area of specialization regarding their indications of how much time they spend on each of the professional competencies?

The areas of specialization on the online questionnaire are based on categories defined by the American Planning Association. To find out significant differences between how professional planners in different areas of specialization indicated how much time they spend on each of the PAB competency, a Kruskal-Wallis H test was preformed. The Kruskal-Wallis test revealed that there was a significant difference ($p < .05$) between the amount time spent on competencies by area of specialization for the following competency items: 10, 11, 13, 16, 18, 21, 22, 24, 25, 26, and 27. Planning law, health and human services planning, and planning

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methods area of specialization were eliminated from the analysis since there were less than three responses for each category. Table 14 summarizes the results of the Kruskal-Wallis H test for items that have a significant difference at the $p < .05$ level.

In addition, the mean ranks by area of specialization for each competency that had a significant difference based on the Kruskal-Wallis H test for time spent was compiled (see Appendix J). With respect to the 11 competences had significant differences, with respect to time spent and area of specialization, practitioners who specialize in Urban Design ranked the 11 competencies higher than practitioners who specialize in Housing and Preservation.

Table 14

PAB Competencies with Significant Differences among Area of Specialization for Time Spent

Competency		Chi-Square	*p*
10.	Knowledge of why planning is undertaken by communities, cities, regions, and nations, and the impact planning is expect to have.	25.546	0.030
11.	Knowledge of the behaviors and structures available to bring about sound planning outcomes.	27.581	0.016
13.	Knowledge of the growth and development of places over time and across space.	26.469	0.023
16.	Knowledge of interactions, flows of people and materials, cultures, and differing approaches to planning across world regions.	32.058	0.004
18.	Knowledge of preparing clear, accurate and compelling text, graphics and maps for use in documents and presentations.	35.478	0.001
21.	Knowledge of tools for stakeholder involvement, community engagement, and working with diverse communities.	32.585	0.003
22.	Knowledge of tools for attention, formation, strategic decision-making, team building and organizational / community motivation.	27.193	0.018
24.	Knowledge of the roles of officials, stakeholders, and community members in planned change.	26.802	0.020

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25.	Knowledge of natural resource and pollution control factors in planning, and understanding of how to create sustainable futures.	41.432	0.000
26.	Knowledge of economic, social, and cultural factors in urban and regional growth and change.	26.766	0.021
27.	Knowledge of equity concerns in planning	26.670	0.021

Research Question 6: Are there differences among the various planning practitioners grouped by area of specialization in their indications of how important it is applying each of the professional competencies?

Same procedure as research question 5, the Kruskal-Wallis H test, was used for research question 6. The Kruskal-Wallis test revealed that there was a significant difference ($p < .05$) on the importance of competencies by area of specialization for competency items 21 and 25. Table 15 summarizes the results of the Kruskal-Wallis H test for items that have a significant difference at the $p < .05$ level. In addition, the mean ranks by area of specialization for each competency that had a significant difference based on the Kruskal-Wallis H test for importance was compiled (see Appendix K).

Table 15

PAB Competencies with Significant Differences among Area of Specialization for Time Spent

Competency		Chi-Square	*p*
21.	Knowledge of tools for stakeholder involvement, community engagement, and working with diverse communities.	34.121	0.002
25.	Knowledge of natural resource and pollution control factors in planning, and understanding of how to create sustainable futures.	27.726	0.015

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Research Question 7: Are there differences among the various planning practitioners grouped by work environment in their indications of how much time they spend on each of the professional competencies?

The work environment categories on the online questionnaire are based on categories defined by the American Planning Association. Determining the significant differences between how professional planners in different work environments indicated how much time they spend on each competency was determined by running the Kruskal-Wallis H test. The Kruskal-Wallis test revealed that there was a significant difference ($p < .05$) on the amount time spent on competencies by work environment for competency items 17, 18, and 21.

Table 16 summarizes the results of the Kruskal-Wallis H test for items that have a significant difference at the $p < .05$ level. In addition, the mean ranks by work environment for each competency that had a significant difference based on the Kruskal-Wallis H test for time spent was compiled (see Appendix L).

Table 16

PAB Competencies with Significant Differences among Work Environment for Time Spent

Competency	Chi-Square	*p*
17. Knowledge of tools for assembling and analyzing ideas and information from prior practice and scholarship, and from primary and secondary sources.	9.607	0.022
18. Knowledge of preparing clear, accurate and compelling text, graphics and maps for use in documents and presentations.	11.767	0.008
21. Knowledge of tools for stakeholder involvement, community engagement, and working with diverse communities.	11.008	0.012

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Research Question 8: Are there differences among the various planning practitioners grouped by work environment in their indications of how important it is applying each of the professional competencies?

Same procedure as research question 7, the Kruskal-Wallis H test, was used for research question 8. The Kruskal-Wallis test revealed that there was a significant difference ($p < .05$) on the importance of competencies for competency items 15, 18, and 23. Table 17 summarizes the results of the Kruskal-Wallis H test for items 15, 18, and 23 that had a significant difference at the $p < .05$ level. In addition, the mean ranks by work environment for each competency item that had a significant difference based on the Kruskal-Wallis H test for importance was compiled (see Appendix M).

Table 17

PAB Competencies with Significant Differences among Work Environment for Importance

Competency		Chi-Square	*p*
15.	Knowledge of potential methods of design, analysis, and intervention to influence the future.	10.721	0.013
18.	Knowledge of preparing clear, accurate and compelling text, graphics and maps for use in documents and presentations.	14.065	0.003
23.	Knowledge of key issues of planning ethics and related questions of the ethics of public decision-making, research, and client representation.	10.062	0.018

Research Question 9: Are there differences among the various planning practitioners grouped by spatial area of practice in their indications of how much time they spend on each of the professional competencies?

The spatial areas of practice categories defined on the online questionnaire are based on categories defined by the American Institute of Certified Planners. Determining the significant

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differences between how professional planners in different spatial areas of practice indicated how much time they spend on each competency was determined by running the Kruskal-Wallis H test. The Kruskal-Wallis test revealed that there was a significant difference ($p < .05$) on the amount time spent on competencies for the following competency items: 11, 12, 16, 19, 21, 22, 23, 26, and 27.

Table 18 summarizes the results of the Kruskal-Wallis H test for items that have a significant difference at the $p < .05$ level. In addition, the mean ranks by spatial area of practice for each competency that had a significant difference based on the Kruskal-Wallis H test for time spent was compiled (Appendix N).

Table 18

PAB Competencies with Significant Differences among Spatial Area of Practice for Time Spent

Competency		Chi-Square	*p*
11.	Knowledge of the behaviors and structures available to bring about sound planning outcomes.	20.271	0.042
12.	Knowledge of the legal and institutional contexts within which planning occurs.	21.939	0.025
16.	Knowledge of interactions, flows of people and materials, cultures, and differing approaches to planning across world regions.	21.259	0.031
19.	Knowledge of data collection, analysis and modeling tools for forecasting, policy analysis, and design of projects and plans.	29.099	0.002
21.	Knowledge of tools for stakeholder involvement, community engagement, and working with diverse communities.	28.827	0.002
22.	Knowledge of tools for attention, formation, strategic decision-making, team building and organizational / community motivation.	23.153	0.017
23.	Knowledge of key issues of planning ethics and related questions of the ethics of public decision-making, research, and client representation.	26.298	0.006

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26.	Knowledge of economic, social, and cultural factors in urban and regional growth and change.	23.504	0.015
27.	Knowledge of equity concerns in planning	28.143	0.003

Research Question 10: Are there differences among the various planning practitioners grouped by spatial area of practice regarding their indications of how important it is applying each of the professional competencies?

Same procedure as research question 9, the Kruskal-Wallis H test, was used for research question 10. The Kruskal-Wallis test revealed that there was a significant difference ($p < .05$) on the importance of competencies for the following competency items: 13, 15, 20, 23, 24, 26, and 27. Table 19 summarizes the results of the Kruskal-Wallis H test for the competency items that had a significant difference at the $p < .05$ level. In addition, the mean ranks by work environment for each competency item that had a significant difference based on the Kruskal-Wallis H test for importance was compiled (see Appendix O).

Table 19

PAB Competencies with Significant Differences among Spatial Area of Practice for Importance

Competency		Chi-Square	*p*
13.	Knowledge of the growth and development of places over time and across space.	19.980	0.046
15.	Knowledge of potential methods of design, analysis, and intervention to influence the future.	20.053	0.045
20.	Knowledge of integrative tools useful for sound plan formulation, adoption, and implementation and enforcement.	25.410	0.008
23.	Knowledge of key issues of planning ethics and related questions of the ethics of public decision-making, research, and client representation.	27.193	0.004
24.	Knowledge of the roles of officials, stakeholders, and community members in planned change.	26.660	0.005

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26.	Knowledge of economic, social, and cultural factors in urban and regional growth and change.	21.778	0.026
27.	Knowledge of equity concerns in planning	26.877	0.005

Research Question 11: Are there differences among specific professional competencies that planning practitioners possess for their job?

Specific professional competencies were identified by conducting a literature review and a list was compiled and used on the online questionnaire (see Appendix I). The specific competencies that were identified were sent to experts in the field of planning for review and a final list of specific competencies was complied. Table 20 summarizes the median and mode scores how competent professional planners stated they were for each of the specific competencies. The range for the median score for the specific competencies was between 3 and 6. The competencies with median scores of 6 are verbal communication and problem solving skills. The competencies with a median score of 3 were communication using social media, competency in linear regression, and forecasting modeling skills. The range for the mode scores was from 3 to 6. Two specific competencies scored a mode of 3, five competencies scored a mode of 4, 11 competencies scored a mode of 5, and 8 competencies scored a mode of 6.

Table 20

Median and Mode Scores for Specific Competencies

Competency	N	Mdn	Mode
1. Leadership skills	269	5	5
2. Management Skills	269	5	5
3. Organizational development skills	270	5	5
4. Ability to complete quality work on time and within budget	268	5	6
5. Advanced policy analysis skills	267	5	5

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6. Negotiation/mediation skills	267	5	5
7. Verbal communication skills	269	6	6
8. Presentation skills	269	5	6
9. Communicating formally with elected officials	270	5	5
10. Communicating formally with the public	267	5	5
11. Collaborating with peers to produce a plan or planning product	268	5	5
12. Ability to communicate graphically	269	5	5
13. Communication using social media	268	3	3
14. Ability to work with diverse communities	270	5	5
15. Geographic information system skills	270	4	4
16. Competency in basic computer programs	269	5	6
17. Report writing skills	269	5	6
18. Problem solving skills	268	6	6
19. Writing for the public skills	270	5	6
20. Quantitative research skills	266	4	4
21. Qualitative research skills	266	4	4
22. Competency in linear regression	265	3	3
23. Forecasting / modeling skills	269	3	4
24. Understanding public needs	268	5	5
25. Scenarios development skills	270	4	4
26. Familiarity with laws, ordinances, and policy	270	5	6

Analysis of Open-Ended Questions

In addition to the demographic data and the Likert-type format questions, questions 29 to 34 were open ended questions on the online questionnaire for professional planners to comment on various aspects of competencies. Open ended questions allow the participants to express their

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thoughts using their own words and expressions. Thus analyzing open ended questions requires some qualitative techniques. Questions 29 to 33 will be analyzed using a taxonomy method described earlier in this paper. The researcher looked for possible commonalities, themes, or patterns based on key words or phrases in written responses. Table 21 summarizes the findings of key words or phrases in written responses for open ended questions 29 to 33.

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Table 21

Key Words or Phrases for Responces to Open Ended Questions 29 to 33

Open-Ended Question	Key Words or Phrases in Written Responses	Response Frequency
29. Thinking back to your first professional planning job what was the most important professional competency you possessed that got you hired?	Communication	61
	Writing	40
	Planning Degree	21
	Graphics	16
	Geographic Information System (GIS)	10
30. In terms of time spent, what professional competency has changed over the years since you got your first professional planning job?	Technology / Computer / GIS	60
	Management	43
	Communication	30
	Writing	16
	Data analysis	12
31. In terms of importance, what professional competency has changed over the years since you got your first professional planning job?	Technology / Computer / GIS	77
	Communication	37
	Communicating with the Public	30
	Management	18
32. Once professional planners begin taking on some responsibility in their jobs, new planners often lament that there are a variety of things which they wish they would have been taught in planning school. Identify anything that would fit in that category for you.	Communicating with the Public	47
	Politics	24
	Geographic Information System	17
	Writing	16
	Management	14
33. Are there any particular aspects of professional planning work where you feel additional training or practice would make new planners more effective in what they do?	Writing	39
	Communication	31
	Geographic Information System	15
	Management	15

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Median and mean scores were calculated for survey question 34 on professional planner training categories and are summarized in Table 22. The median scores suggests that writing and communication skills ranked highest with the same median score of 20, while analysis skills scored a median of 15, and the remaining three skills, design, management, and planning foundations scored a median of 10. Training categories, writing, communication, and analysis, all scored a mode of 20. Design, management, and planning foundation scored a mode of 10. The mean was calculated to allow ranking of the training categories from highest to lowest for informational purpose. The mean ranks from greatest to least are as follows: communication, writing, analysis, planning foundations, management, and design.

Table 22

Median and Mean Scores for Professional Planner Training Categories

Training Categories	Mdn	M
Writing Skills	20	20.30
Communication Skills	20	23.20
Analysis Skills	15	17.72
Design	10	11.20
Management	10	12.45
Planning Foundation	10	13.03

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Summary

Results of the statistical analyses were presented in this chapter. This chapter was divided into the following sections: survey administration, participant profile, instrument reliability, findings, data analysis related to research questions, and analysis of open-ended questions. Survey administration section provided detailed account on conducting the survey. Survey administration section explains the process for conducting the online survey for this study. Upon approval from the IRB an expert review of the survey questionnaire was conducted followed by the launch of the survey to planning practitioners.

Participant profile section provided descriptive statistics on participant demographics, education, and career. In general the planning practitioners who participated in the survey were 65% male, 35% female, 85% white, 66% held a masters' degree, majority of the participants highest degree was in planning, relatively normal distribution for years of experience, 30% specialized in community development and redevelopment, 71% worked in the public sector, 65% worked in urban, suburban, or regional levels of planning, and 77% held membership with the American Planning Association. It was also noted that the demographics for this questionnaire are consistent with the demographics on the American Planning Association salary survey. Although participants for at least 28 states are represented in this, the majority of planners who are members of the local chapter of the APA were also from the state of Michigan.

Instrument reliability section discusses the methodology for establishing a reliable survey. The instrument is considered to be reliable based on a Cronbach's Alpha score greater than .9 for the questionnaire overall. Under the findings section, the foundation for the study was presented to lead into the data analysis related to research questions section. Under the data analysis related to research questions section each research question was analyzed with the

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appropriate statistic. Research question 1 was addressed by conducting a literature review. Research questions 2 and 3 were addressed using descriptive statistics, specifically the median and the mode. Research question 4 was addressed by performing Spearman correlation coefficient. Research questions 5 through 10 were addressed by performing Kruskal-Wallis H test. Finally, research question 11 was addressed using descriptive statistics, specifically median and mode. Analysis of open-ended questions section provided a summary of the comments made by the participants of the survey.

The following chapter, Chapter 5, is the final chapter that discusses the results from Chapter 4. The discussion will focus on key findings based on the statistical analysis provided. In addition to the discussion, limitations of the study, implications to Instructional Technology and Performance Improvement, recommendations for future research, and concluding statement will be provide.

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Chapter 5 DISCUSSION AND RECOMMENDATIONS

In this chapter the results of the research will be discussed. Limitations of the research, implication for performance improvement, and recommendations for future research will also be presented.

Discussion

The purpose of this study, entitled A Needs Assessment of Knowledge, Skills, And Values for Urban Planning Professionals Based on Competencies Set Forth by Professional Planning Organizations, is to determine the alignment between planning organizations, planning education and planning practice. The performance improvement tool that was the driver of this study was a needs assessment. A needs assessment is a powerful performance improvement tool that determines the gaps or discrepancies between current and desired results (Kaufman, 2006). It is not the purpose of a needs assessment to find solutions to remedy indentified gaps; the purpose of a needs assessment is to document identified gaps (Kaufman, 2006). Therefore, this discussion will document discrepancies based on the findings from the needs assessment administered to professional planners.

The online questionnaire contained two parts related to the needs assessment. The first part asked professional planners to state the "time spent" on and the "importance" of competencies defined by the Planning Accreditation Board (PAB). The second part asked professional planners to state their level of knowledge for specific competencies compiled from the literature review. Reliability of the survey was established by calculating the Cronbach's alpha. The Cronbach's alpha for both parts of the survey was calculated to be greater than 0.70, which establishes reliability (George & Mallery, 2003).

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There have been many articles published concerning the education of professional planners. In addition, two empirical studies documenting and validating planner's knowledge and skills were published by Kaufman and Simons (1995) and Ozawa and Seltzer (1999). However, after a review of the related literature, this is the first needs assessment study conducted to determine the discrepancies between competencies established by the planning accreditation board and planning practice.

The expected response rate, which was a concern in the initial write-up on limitations for this survey, was achieved with 270 questionnaires completed by the close of the online survey. With a response of 270 surveys out of 3,452 e-mails sent, and a 95% confidence level, a calculated margin of error is +/- 5.73%. This is within the target margin of error of 5 to 6% set by the researcher of this study.

Professional and Specific Competencies

The first research question was to determine the professional and specific competencies required of planning practitioners. The review of related literature concerning competencies for planning professionals exposed both professional and specific competencies required of planning practitioners. For professional competencies the list of competencies defined by the planning accreditation board was used. For specific competencies, a list was compiled from urban planning studies focused on competencies and competency development (Guzzetta & Bollens, 2003; Kaufman and Simons, 1995; Glasmeier and Kahn, 1989; and Ozawa & Seltzer, 1999).

Frequency Planning Practitioners Indicate They Spend Time and Importance of Applying Each of the Professional Competencies

Related to research questions 2 and 3 is the frequency which planning practitioners indicated they spend time and the importance of applying the professional competencies to their

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job. Surprising, in this needs assessment study, for all competencies the median scores for importance were always greater than the median score for time spent. This is similar to Guerra (2001) findings where performance improvement professionals "consistently indicated that they apply key competencies less often than what they think they should" (p. 114). In addition, the median scores for importance are on the higher end of the scale and for time spent are in the lower end of the scale. Therefore, the results suggest that the planning professionals consider PAB competencies more important to their job than the amount of time they spend on each of the competencies.

The scale item never for "time spent", and scale items not part of the job or not important to the job for "importance", were never selected by any planner. Professional planners indicated that they spend some time on each of the PAB competencies, the lowest selection on the time spent scale was 2, seldom. In addition, planners indicated that each of the professional competencies has some level of importance to their job, the lowest selection for importance was 3, little important to the job. This also suggests that planning professionals value the professional competencies set forth by the planning accreditation board.

Of the 18 PAB competences, 8 competencies scored high with a median score for time spent of 4, and a median score for importance of 5 and 6. The competency that planners indicated that they spend most of their time on as well as viewed as most important to their job, is competency item 18, knowledge of preparing clear, accurate and compelling text, graphics and maps for use in documents and presentations. This is consistent with Guzzetta and Bollens study which found that planners valued written communication and presentation skills highly (2003). It is also consistent with the open ended questions on time spent and importance where communication and writing skills were frequently referred to by planning professionals.

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There were 3 PAB competencies that scored low amongst practitioners, with a median score of 2 and 3 for time spent, and 3 and 4 for importance. The competency that scored the lowest median for both time spent and importance was item 16, knowledge of interactions, flows of people and materials, cultures, and differing approaches to planning across world regions. The remaining 7 competencies ranked moderately with the majority of the majority representing the greatest gap between the median for time spent and importance.

Relationship between How Frequently Planning Practitioners Indicate They Spend Time Verses the Importance of Each of the Professional Competencies

According to Kaufman (2006) the primary purpose of a needs assessment is to document identified gaps in results. The results of this study have identified 8 competency items that had the greatest gap between time spent and importance as competency items 10, 13, 14, 18, 22, 23, 25, and 26. The median score for important always ranked higher than the median for amount of time spent. This suggests that similar to other professions, planners view these competencies more important to their job than the amount of time they actually spend on them. A further analysis of these 8 competencies with the greatest gap suggests that gaps are prevalent in two of the three educational outcomes defined by the planning accreditation board, general planning and values and ethics (PAB, 2012). Competency items 10, 13, and 14 are grouped under planning knowledge; competency item 18 is grouped under planning skills; and competency items 22, 23, 25, and 26 are grouped under values and ethics.

The results with respect to gaps in frequency suggest that planning professionals place high value on the competencies set forth by the planning accreditation board. Although many authors have speculated on the perceived gap between planning education and professional practice, the results of this study shows that a gap does exist with respect to time and importance for PAB competencies. (Krueckeberg, 1984; Alonso, 1986; Brooks, 1988; Glasmeier and Kahn,

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1989; Baum, 1997; Hall, 1998; Ozawa and Seltzer, 1999; Guzzetta & Bollens, 2003). Over 60% of the respondents in this study indicated that their highest degree was in planning. This leads to a fundamental question of why do planning professionals value PAB competencies more than the amount of time they spend on the competencies, if PAB is using these competencies as part of the accreditation criteria of planning schools? Many factors, such as time, funding, education, or politics to name a few, can influence decisions made by professional planners to go against what they view as more important. This would make for a potential future research topic.

Differences Amongst Planning Practitioners grouped by Area of Specialization, Work Environment, and Spatial Area of Practice in their Indications of How Much Time is Spent and How Important Each of the Professional Competencies Are

The results for research questions 5 through 10 specifies significant differences on how professional planners in different groupings (area of specialization, work environment, and spatial area of practice) indicated how much time they spent and how important professional competencies are to their job, respectively.

Area of specialization refers to the specialization in which individuals inherently develop expertise in specific areas (Apostolides and Allor, 1996). Therefore, it is not surprising that significant differences were found for 11 of the 18 competency items (10, 11, 13, 16, 18, 21, 22, 24, 25, 26, and 27) based on area of specialization and time spent. Urban designers rated these competencies higher than housing and preservation specialists. Transportation planners and community development and redevelopment specialists rated these competencies moderately compared to other planning specialists, with an exception of a few that were rated higher. This suggests that depending on the type of planning that a professional planner is engaged in could require a different investment of time with respect to different competencies.

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Although area of specialization can result in significant differences for various competencies, it does not suggest that it is the sole reason for the difference. With respect to area of specialization and importance to the job only two competency items (21 and 25) were found to be significantly different. Therefore, regardless of the type of planning a professional planner is engaged in, planners value the importance of the majority of PAB competencies with no significant difference. Parks and recreation, spatial planning, and urban design specialist rated competency item 21 higher than information technology and preservation specialists. Spatial planning, environmental and natural resource planning, sustainability, and urban design specialist rated competency item 25 higher than economic planning and development, and information technology specialists.

Work environment refers to public, private, or nonprofit sectors of employment. With respect to work environment, the results of this study showed that competency items (17, 18, and 21) resulted in a significant difference with respect to time spent, and competency items (15, 18, and 23) resulted in significant difference with respect to importance. Practitioners employed in the private sector rated the competencies with significant differences for time spent and importance higher than either private or nonprofit sector practitioners.

The fact that there are only three competency items for time spent and importance suggests that the PAB competencies do not vary significantly across different work environment sectors. This is in contrast to other competency studies that show there are significant differences as it relates to competencies among planners in different work environments (Guzzetta & Bollens, 2003). It should be noted that 71% of planners in this survey indicated that they were in the public sector, while 18 % indicated private, and 7 % indicated non-profit. Thus the lack of significance in this study can be attributed to skewed response rate by work environment.

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Spatial area of practice refers to the geographic responsibility of a planning professional. This can include planning at a national, regional, or even a neighborhood level. There are no other studies in the literature that look at spatial area of practice thus comparisons are limited. The findings for this study show a moderate number of competencies were significantly different with respect to spatial area of practice for time spent and importance. Nine competency items (11, 12, 16, 19, 21, 22, 23, 26, and 27) resulted in a significant difference for time spent and seven competency items (13, 15, 20, 23, 24, 26, and 27) were determined significantly different with respect to importance.

With respect to time spent, practitioner's rankings in different spatial area of practice varied with respect to the competencies with significant differences. Although, practitioners who focus on corridor area, rated competencies higher than practitioners who focus on historic districts and small towns. With respect to importance, practitioners who focus on urban areas and neighborhoods rated the competencies higher than practitioners who focus on rural areas and multi-state regions. Additionally, planners who focus on suburban areas and historic districts rated the competencies moderately compared to practitioners in other categories.

Possible reasons for a greater number of significant differences, with respect to spatial area, can stem from the different types of tools that professional planners use across different spatial areas. For example, planners at a regional level could be engaged in technical activities such as modeling and forecasting, while a planner at a neighborhood level might use information from the regional level planner but not actually run a model or conduct a forecast. Therefore, at different levels for spatial areas of practice, the degree of engagement within a specific task can be different.

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Differences among specific professional competencies that planning practitioners possess for their job

The final research question was to find out the level of competency that planners possessed for their job. The fact that professional planners were asked to self-report the level of competency they possessed suggests that the scores could be higher than expected. The three specific competencies that scored the lowest median scores were linear regression, forecasting / modeling skills, and communication using social media. The common thread between the competencies with the lowest scores is they are all technical. Linear regression and forecasting / modeling skills require a certain degree of mathematical knowledge. It is not surprising that communicating using social media is on the lower end of the scale due to the fact that the technology is relatively new. In addition, professions continue to determine the appropriate social media outlets that make sense for their profession. (Kaplan & Haenlein, 2010).

Professional planners scored verbal communication skill and problem solving skills the highest. This is not surprising since the planning profession, in general, requires good communication and problem solving skills as shown in other competency studies (Guzzetta & Bollens, 2003; Kaufman and Simons, 1995; Glasmeier and Kahn, 1989; and Ozawa & Seltzer, 1999).

Limitations of the Study

The purpose of this research is to survey urban planning practitioners to determine the time spent and importance of competencies defined by the planning accreditation board. This research is bounded by literature from two disciplines, human performance technology and urban planning. However, limitations are inherent to this study.

The first limitation to this study is the target sample used to represent the population for the study. Using a purchased e-mail list comes with limitations for generalizing results. The fact

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of the matter is that a purchased e-mail list does not allow for an equal chance to be randomly selected from the target population. Therefore, future researchers should find other outlets that provide lists of urban planning professions.

In addition, related to the first limitation, is the composition of the participants. The demographic data showed that the survey drew from a diverse group as it is related to age, gender, education, and specialization. Other demographics indicated that this study was skewed to planners in the state of Michigan in the public sector. This limitation, however, should not overshadow the fact that participants from 29 states participated in the survey.

The second limitation is the time frame for completing this study. Time is an innate limitation to researchers in general. This study is no exception. Time constraints were dictated by deadlines that were placed by the researcher to complete the study in a reasonable time. Given more time and resources could have resulted in greater sample size and potentially follow-up to participants that participated to close loose ends. However, this gives opportunities for future research to be conducted concerning competency development for planning professionals.

The third limitation for this study is the nature of self-reporting studies is subject to misinterpretation and perception from different individuals. This research relies on the planning practitioners' self-reporting of survey data concerning their knowledge of competencies in the field of planning. Thus, this study is subject to individual interpretations and bias.

The final limitation is the adaption of the survey instrument from the A*STD Trainer's Toolkit* without documentation that the original survey instrument was validated. Steps to validate the survey used in this study included an expert review and a pilot survey. Thus changes were made to the instrument based on the expert review and the pilot survey to ensure that all items on the survey were clear and easy to follow, since, survey research approaches are vulnerable for respondents to misinterpret some of the items.

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Implications for Instructional Technology and Performance Improvement

Within the discipline of Instructional Technology (IT) which provides the technologies in the form of methods and tools for creating effective instruction lies the field of Human Performance Technology (HPT). HPT broadens the field of IT by going beyond instructional interventions, such as training, for improving performance. Therefore, HPT incorporates both instructional as well as non-instructional interventions for the benefit of improving performance in the workplace. The field of HPT can address any human performance (Geis, 1986). This needs assessment study focuses on the performance of planning professionals which further broadens the field of HPT.

In addition, this needs assessment study contributes to the body of literature as it relates to competency and competency development. The fact of the matter is that through education, training, and other interventions used by instructional technologist and performance improvement professional, individuals can build or develop competencies. Therefore, using a needs assessment to identify gaps in competencies for planning professionals will allow future researchers to determine the appropriate interventions to minimize or eliminate the gaps.

The fundamental business of instructional technologists and performance improvement professionals is to do just that, find appropriate instructional and non-instructional interventions to reduce identified gaps in results. It was the epitome of pioneers such as James Finn, Donald Ely, and Robert Gagne' in the discipline of Instructional Technology and Thomas Gilbert the founder of HPT that provided the foundation to develop tools and techniques for the facilitation of human learning and improving performance. A profession is defined by the application of scientific theory and techniques (Schön, 1997). It is the purpose of this paper to apply the techniques, specifically a needs assessment, to further the body of literature as it relates to needs assessments and competencies.

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Recommendations for Practice

The first recommendation for practice is to further analyze the competencies with the greatest gaps between time spent and importance and move to a needs or causal analysis. The causal analysis will determine why the gap exists which is the first step for improving and building upon the stated competencies. PAB will have to determine if the gap is either a knowledge or behavioral gap. A knowledge gap will lead to more education and training while a behavioral gap will result in better understanding why the workplace does not emphasize the competencies.

The second recommendation is to determine the value of the three competencies that rated low amongst planning practitioners. The need to further analyze these three competencies will help determine how relevant these competencies are to practice. The fact of the matter is that the competencies may not be relevant to practice but can be relevant to education such that planning programs offer a well rounded education to planning students. Regardless of the outcome these three competencies warrant further investigation.

The third recommendation to PAB is with respect to significant differences. Significant differences were found with respect to specialization and spatial area of practice. This suggests that planners in different specializations and spatial areas of practice value competencies differently. This also suggests that it is unlikely that anyone planning practitioner master all the competencies set forth by the PAB. Thus PAB must take into consideration specialization as well as spatial area of practice when applying these competences.

The fourth recommendation is the need for lifelong learning for planning professionals. This research shows that planning professionals value competencies beyond the tasks that they perform for their job. Thus, lifelong learning will add value to the profession as well as

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practitioners in the field. Currently, only planners that are AICP certified are required to complete continuing education courses to maintain their certification. Thus a wider more structured dependency on competency based training within a framework of lifelong learning could prove beneficial for the professional development of planning practitioners.

Recommendations for Future Research

The end of the journey in conducting a research study allows one to reflect on issues and concerns that future researchers can use in developing their research. Upon completion of this journey the researcher offers the following recommendations. First and foremost, is the target sample used to represent the population for the study. Although listed as a limitation, future researchers should find other outlets that provide lists of urban planning professions. The researcher in this study did reach out to the American Planning Association (APA) and the local chapter to get the e-mail list of members but it was the policy of APA to not give out the list. This issue should be revisited to broaden the scope between planning organizations and research.

Second recommendation is selecting or developing an appropriate validated survey instrument for the study that is being conducted. This study relied on a needs assessment instrument found in the A*STD Trainer's Toolkit.* The instrument was modified and validated to fit the study. Upon analyzing the data the researcher realized that certain aspects of the survey could further be modified. For example, the survey instrument focused on "time spent" and "importance" which were both scale data but the categories within the scales were different. The generalizations were based on the assumption that magnitudes of the scales, 0 to 5, were the same even though the categories were different. Therefore, future researchers should determine the appropriate scale and categories to make meaningful generalizations. In addition, this could make for a future research topic.

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The third recommendation related to competencies is that future researchers should consider researching one set of competencies. This study took into account PAB competencies and specific competencies on the survey questionnaire. This can be problematic because it increases the length of the questionnaire which can turn away participants. In addition, it can lead to misinterpretations within the questionnaire. Therefore, in the future one set of competencies should be tested by the researcher to ensure better understanding and a potential increased response rate. In addition, related to the third recommendation is limiting the number of research questions. The fact that two sets of competencies were used resulted in answering 11 research questions. Future researchers should consider eliminating or consolidating research questions.

Summary

This chapter provided the discussion drawn from the results of Chapter 4. Several key findings from this study can be drawn from the discussion. The following is a summary of findings from this study:

1. Planning practitioners' value planning accreditation board competencies more than the amount of time they actually spend on them in their job. Therefore, PAB competencies are relevant. Of the 18 PAB competencies, 8 competences scored, 7 competencies scored moderate, and 3 competences scored low among planning practitioners.
    a. Planning practitioners ranked knowledge of preparing clear, accurate and compelling text, graphics and maps for use in documents and presentations the highest among the planning accreditation board competencies.
    b. Planning practitioners ranked knowledge of interactions, flows of people and materials, cultures, and differing approaches to planning across world regions the lowest among the planning accreditation board competencies.

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2. The planning accreditation board competencies with the greatest gap with respect to "time spent" and "importance" are as follows:
    a. Knowledge of why planning is undertaken by communities, cities, regions, and nations, and the impact planning is expect to have.
    b. Knowledge of the growth and development of places over time and across space.
    c. Knowledge of the relationships between past, present, and future in planning domains.
    d. Knowledge of preparing clear, accurate and compelling text, graphics and maps for use in documents and presentations.
    e. Knowledge of tools for attention, formation, strategic decision-making, team building and organizational / community motivation.
    f. Knowledge of key issues of planning ethics and related questions of the ethics of public decision-making, research, and client representation.
    g. Knowledge of natural resource and pollution control factors in planning, and understanding of how to create sustainable futures.
    h. Knowledge of economic, social, and cultural factors in urban and regional growth and change.
3. With respect to work environment on how professional planners in different groupings (area of specialization, work environment, and spatial area of practice) indicated how much time they spend and how important professional competencies are to their job, respectively, we note the following:
    a. Significant differences were prevalent with respect to area of specialization and time spent. Urban designers rated the 11 competencies with significant differences higher than housing and preservation specialists.

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b. There were few significant differences with respect to area of specialization and importance. Only two competencies had significant differences. Rankings varied by specialization.

c. The majority (71%) of respondents were from the public sector therefore, determining significant differences with respect to work environment were inconclusive. Although for the few competencies that had significant differences, practitioners employed in the private sector rated each of the competences higher than practitioners in public or nonprofit sectors.

d. Half of the competencies were found to be significantly different with respect to spatial area of practice and time spent. Practitioners who focus on corridor area, rated competencies higher than practitioners who focus on historic districts and small towns.

e. Seven competencies were found to be significantly different with respect to spatial area of practice and importance. Practitioners who focus on urban areas and neighborhoods rated the competencies higher than practitioners who focus on rural areas and multi-state regions.

4. Specific competencies that planners indicated that they were the most competent in were verbal communication skill and problem solving skills.

5. Specific competencies that planners indicated that they were least competent were linear regression, forecasting / modeling skills, and communication using social media.

These key findings are the first step for determining the alignment between planning organizations, planning education, and planning practice. These findings are subject to further analysis with respect to competency and competency development for planning professionals. The next appropriate step to analyze the key findings is to conduct a needs analysis to determine

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possible solutions, ways and means, to diminish the gap between time spent and importance (Kaufman, 2006). The needs assessment in this study was conducted to document identified gaps in results.

Conclusion

The overarching purpose of this study was to determine the alignment between planning organizations, planning education, and planning practice. Based on the findings of this study, there is evidence that an alignment exists between planning organization and planning education. In addition, there is evidence that an alignment exists between planning organization and planning practice but the alignment needs to be strengthened. The strength between planning organization and planning practice is reflected in 8 out of 18 competencies, or 44% of the competences, scoring high among practitioners. Thus the PAB should further investigate the competencies that scored moderate or low and find means to strengthen the number of relevant competences to planning practice by conducting further research to determine the proper interventions.

Human Performance Technology is "the science and art of improving people, process, performance, organizations, and ultimately society" (Van Tiem, Moseley, and Dessinger, 2012, p. 5). Additionally, the American Planning Association, states that planning "is a profession that works to improve the welfare of people and their communities by creating more convenient, equitable, healthful, efficient, and attractive places for present and future generations" (What is Planning section, para. 1). The common thread between HPT and Planning is the positive impact that both fields want to achieve for improving society. Although it is not the field that improves society, it is practitioners competent in the tools and techniques that are offered by the fields who will have an ultimate impact on society.

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This needs assessment was conducted to document the discrepancies between "time spent" and "importance" for competencies defined by the Planning Accreditation Board with respect to planning practitioners. Based on the responses from 270 planning practitioners from 26 states the goals of this needs assessment were accomplished. Needs assessment is the initial stage in conducting a performance analysis as outlined in the Performance Improvement/HPT model. Without a needs assessment the focus would be on the end results with disregard to the means. Therefore this study provides the foundation by identifying results that are important for the future design and development of planning education and training and performance improvement.

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APPENDIX A

General Subject Areas Covered in American Institute of Certified Planners Exam

1. Theory and Law
    a. History of planning
    b. Planning law
    c. Theory of planning
2. Plan Making and Implementation
    a. Visioning and goal setting
    b. Quantitative and qualitative research methods
    c. Collecting, organizing, analyzing, and reporting data and information
    d. Demographics and economics
    e. Natural and built environment
    f. Land use and development regulations
    g. Application of legal principles
    h. Environmental analysis
    i. Growth management techniques
    j. Budgets and financing options
    k. GIS/spatial analysis and information systems
    l. Policy analysis and decision making
    m. Development plan and project review
    n. Program evaluation
    o. Communications techniques
    p. Intergovernmental relationships
    q. Stakeholder relationships
    r. Project and program management
3. Functional Areas of Practice
    a. Community development
    b. Comprehensive or long range planning
    c. Development regulation or administration
    d. Economic development and revitalization
    e. Economic analysis and forecasting
    f. Educational, institutional, or military facilities planning
    g. Energy policy
    h. Food system planning
    i. Growth management
    j. Hazard mitigation and disaster planning
    k. Historic preservation
    l. Housing
    m. Infrastructure
    n. Labor force or employment
    o. Land use
    p. Natural resources and the environment
    q. Parks, open space and recreation
    r. Planning law
    s. Policy planning

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   t. Public services
   u. Social and health services
   v. Transportation
   w. Urban design
4. Spatial Areas of Practice
   a. Planning at national level
   b. Planning for multi-state or bi-state regions
   c. Planning for state
   d. Planning for sub-state region
   e. Planning at county level
   f. Planning for urban areas
   g. Planning for suburban areas
   h. Planning for small town
   i. Corridors
   j. Neighborhoods
   k. Waterfronts
   l. Historic districts or areas
   m. Downtowns
5. Public Participation and Social Justice
   a. Public involvement planning
   b. Public participation techniques
   c. Identifying, engaging, and serving underserved groups
   d. Social justice issues, literature, and practice
   e. Working with diverse communities
   f. Coalition building
6. AICP Code of Ethics and Professional Conduct

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APPENDIX B

Planning Accreditation Board Educational Outcomes

1. General planning knowledge:
Elements:
A. Purpose and Meaning of Planning: appreciation of why planning is undertaken by communities, cities, regions, and nations, and the impact planning is expect to have.
B. Planning Theory: appreciation of the behaviors and structures available to bring about sound planning outcomes.
C. Planning Law: appreciation of the legal and institutional contexts within which planning occurs.
D. Human Settlements: understanding of the growth and development of places over time and across space.
E. The Future: understanding of the relationships between past, present, and future in planning domains, as well as the potential for methods of design, analysis, and intervention to influence the future.
F. Global Dimensions of Planning: appreciation of interactions, flows of people and materials, cultures, and differing approaches to planning across world regions.
2. Planning Skills
Elements:
A. Research: tools for assembling and analyzing ideas and information from prior practice and scholarship, and from primary and secondary sources.
B. Written, Oral and Graphic Communication: ability to prepare clear, accurate and compelling text, graphics and maps for use in documents and presentations.
C. Quantitative and Qualitative Methods: data collection, analysis and modeling tools for forecasting, policy analysis, and design of projects and plans.
D. Plan Creation and Implementation: integrative tools useful for sound plan formulation, adoption, and implementation and enforcement.
E. Planning Process Methods: tools for stakeholder involvement, community engagement, and working with diverse communities.
F. Leadership: tools for attention, formation, strategic decision-making, team building, and organizational/community motivation.
3. Values and ethics
Elements:
A. Professional Ethics and Responsibility: appreciation of key issues of planning ethics and related questions of the ethics of public decision-making, research, and client representation (including principles of the AICP Code of Ethics and other related principles, as appropriate).
B. Governance and Participation: appreciation of the roles of officials, stakeholders, and community members in planned change.
C. Sustainability and Environmental Quality: appreciation of natural resource and pollution

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control factors in planning, and understanding of how to create sustainable futures.
D. Growth and Development: appreciation of economic, social, and cultural factors in urban and regional growth and change.
E. Social Justice: appreciation of equity concerns in planning.

From PAB "Revised Accreditation Standards and Criteria – clean copy of final draft dated March 7, 2012" by Planning Accreditation Board, 2012, p. 8-9. Copyright 2012 by Planning Accreditation Board.

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APPENDIX C

Professional Development of Planning Professionals

I. About your career

1. Are you an urban planning professional?

____ Yes

_____ No (Survey ends if no is selected)

2. How many years of experience in the planning field do you have?

Enter Here_____

3. What degree(s) have you earned? select all that apply:
___ High school diploma or equivalent
___ Associate's degree
___ Bachelor's degree
___ Master's degree – urban planning
___ Master's degree – public administration
___ Master's degree – business administration
___ Master's degree – other
___ Law degree
___ Doctorate
___ Other: please specify_____

4. In what field is your highest degree? select one:
___ Planning
___ Architecture
___ Business Administration
___ Engineering
___ Environmental Studies
___ Geography
___ Landscape Architecture
___ Public Administration
___ Law
___ Other: please specify_____

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5. What is your primary work responsibility? select one:
   ___ Community development and redevelopment
   ___ Economic planning and development
   ___ Environmental and natural resource planning
   ___ Facilities and infrastructure planning
   ___ Health and human services planning
   ___ Housing
   ___ Information technology
   ___ Land-use or code enforcement
   ___ Parks and recreation planning
   ___ Participation and empowerment
   ___ Planning law
   ___ Planning management, budgeting and finance
   ___ Planning methods
   ___ Preservation
   ___ Spatial planning
   ___ Sustainability
   ___ Transportation Planning
   ___ Urban design
   ___ Other: please specify_____

6. What professional memberships do you currently hold? select all that apply:
   ___ American Planning Association (APA)
   ___ Local Chapter of APA
   ___ American Institute of Certified Planners (AICP)
   ___ Association of Collegiate Schools of Planning (ACSP)
   ___LEED
   ___USGBC
   ___ None
   ___ Other: please specify_____

7. If you answered Local Chapeter of APA for number 6 above, please specify state:
   _____

8. What is your work environment? select one:
   ___ Private (Planning firm)
   ___ Public (unit of government)
   ___ Nonprofit Agency
   ___ Other: please specify _____

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9. What is your spatial area of practice? select one:
   ___ Corridors
   ___ County or Regional level planning
   ___ Downtowns Small towns
   ___ Historic districts or areas
   ___ Multi-state or bi – state regions
   ___ National level State
   ___ Neighborhoods
   ___ Sub-state region
   ___ Suburban areas
   ___ Urban areas
   ___ Waterfronts
   ___ Other: please specify _____

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II. Knowledge, Skills, and Values Usage

This section of the survey asks you to consider each competency (Knowledge, Skill, or Value) below and then to assign two ratings for each: time spent and importance. Note that all planners are not expected to perform all the competencies listed. Please do not think of how the present competency "should be," but rather how your CURRENT POSITION is actually performed. A definition of the two ratings and their associated scales are provided below.

Time Spent: Your first rating is a relative measure of time spent on the particular task or skill area. Estimate the amount of time spent relative to the amount of time spent on other tasks using the following scale:

Importance: Your second rating is a relative measure of the importance of each task or skill area. In this context, importance refers to the contribution of the job component to the effective operations of your organization. It should also include consideration to the seriousness of the consequences which would arise from inadequate or incorrect performance of the job component. In estimating importance please use the scale below:

0. Never
1. Seldom
2. About a quarter of my time
3. About half of my time
4. More than half my time
5.Always

0. Not part of the job
1. Not important to the job
2. Little important to the job
3. Somewhat important to the job
4. Important to the job
5. Very Important to the job

Time Spent	Competency	Importance
0 1 2 3 4 5	10. Knowledge of why planning is undertaken by communities, cities, regions, and nations, and the impact planning is expect to have.	0 1 2 3 4 5
0 1 2 3 4 5	11. Knowledge of the behaviors and structures available to bring about sound planning outcomes.	0 1 2 3 4 5
0 1 2 3 4 5	12. Knowledge of the legal and instructional contexts within which planning occurs.	0 1 2 3 4 5
0 1 2 3 4 5	13. Knowledge of the growth and development of places over time and across space.	0 1 2 3 4 5
0 1 2 3 4 5	14. Knowledge of the relationships between past, present, and future in planning domains.	0 1 2 3 4 5
0 1 2 3 4 5	15. Knowledge of potential methods of design, analysis, and intervention to influence the future.	0 1 2 3 4 5
0 1 2 3 4 5	16. Knowledge of interactions, flows of people and materials, cultures, and differing approaches to planning across world regions.	0 1 2 3 4 5

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0. Never
1. Seldom
2. About a quarter of my time
3. About half of my time
4. More than half my time
5.Always

0. Not part of the job
1. Not important to the job
2. Little important to the job
3. Somewhat important to the job
4. Important to the job
5. Very Important to the job

Time Spent	Competency	Importance
0 1 2 3 4 5	17. Knowledge of tools for assembling and analyzing ideas and information from prior practice and scholarship, and from primary and secondary sources.	0 1 2 3 4 5
0 1 2 3 4 5	18. Knowledge of preparing clear, accurate and compelling text, graphics and maps for use in documents and presentations.	0 1 2 3 4 5
0 1 2 3 4 5	19. Knowledge of data collection, analysis and modeling tools for forecasting, policy analysis, and design of projects and plans.	0 1 2 3 4 5
0 1 2 3 4 5	20. Knowledge of integrative tools useful for sound plan formulation, adoption, and implementation and enforcement.	0 1 2 3 4 5
0 1 2 3 4 5	21. Knowledge of tools for stakeholder involvement, community engagement, and working with diverse communities.	0 1 2 3 4 5
0 1 2 3 4 5	22. Knowledge of tools for attention, formation, strategic decision-making, team building and organizational / community motivation.	0 1 2 3 4 5
0 1 2 3 4 5	23. Knowledge of key issues of planning ethics and related questions of the ethics of public decision-making, research, and client representation.	0 1 2 3 4 5
0 1 2 3 4 5	24. Knowledge of the roles of officials, stakeholders, and community members in planned change.	0 1 2 3 4 5
0 1 2 3 4 5	25. Knowledge of natural resource and pollution control factors in planning, and understanding of how to create sustainable futures.	0 1 2 3 4 5
0 1 2 3 4 5	26. Knowledge of economic, social, and cultural factors in urban and regional growth and change.	0 1 2 3 4 5
0 1 2 3 4 5	27. Knowledge of equity concerns in planning.	0 1 2 3 4 5

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III. Competency Profiles

28. This section of the survey asks you to once again consider the list of competencies. This time, however, you are to assess the typical level of competence required in your job. Keep in mind that all responses are anonymous so please be as candid and objective as you can. Use the following scale:

0. No competence whatsoever
1. A very low level of competence
2. A low level of competence
3. An average level of competence
4. A high level of competence
5. A very high level of competence

Competency	Level of Competence
1. Leadership skills	0 1 2 3 4 5
2. Management Skills	0 1 2 3 4 5
3. Organizational development skills	0 1 2 3 4 5
4. Ability to complete quality work on time and within budget	0 1 2 3 4 5
5. Advanced policy analysis skills	0 1 2 3 4 5
6. Negotiation/mediation skills	0 1 2 3 4 5
7. Verbal communication skills	0 1 2 3 4 5
8. Presentation skills	
9. Communicating formally with elected officials	0 1 2 3 4 5
10. Communicating formally with the public	0 1 2 3 4 5
11. Collaborating with peers to produce a plan or planning product	
12. Ability to work with diverse communities	
13. Communication using social media (face book, twitter, or apps)	0 1 2 3 4 5
14. Ability to communicate graphically (graphs and charts)	0 1 2 3 4 5
15. Geographic information system skills (mapping)	0 1 2 3 4 5
16. Competency in basic computer programs (word processor, spreadsheets, etc)	0 1 2 3 4 5
17. Report writing skills	0 1 2 3 4 5
18. Writing for the public skills	0 1 2 3 4 5
19. Problem solving skills	0 1 2 3 4 5
20. Quantitative research skills	0 1 2 3 4 5
21. Qualitative research skills	0 1 2 3 4 5
22. Competency in linear regression	
23. Forecasting / modeling skills	0 1 2 3 4 5
24. Understanding public needs	0 1 2 3 4 5
25. Scenarios development skills	0 1 2 3 4 5
26. Familiarity with laws, ordinances, and policy	0 1 2 3 4 5

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IV. Open Ended Questions

29. Thinking back to your first professional planning job what was the most important professional competency you possessed that got you hired?

30. In terms of how your time is spent, what professional competencies have changed over the years since you got your first job? In what ways?

31. In terms of how your time is spent, what professional competencies have changed over the years since you got your first job? In what ways?

32. New planners often lament that there are a variety of things which they wish they would have been taught in planning school. Identify anything that would fit in that category for you.

33. Are there any particular aspects of professional planning work where you feel additional training or practice would make new planners more effective in what they do?

34. If you could divide 100% of professional planner training efforts among the following categories, how would you do so?

a. Writing Skills _____%
b. Communication Skills _____%
c. Analysis Skills _____%
d. Design _____%

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e. Management _____%
f. Planning Foundations _____%
g. Other (please specify_____) _____%

V. About you

35. Your Gender? select one:

___ Female
___ Male

36. Your Age? select one:

___ Under 25
___ 25 – 29
___ 30 – 34
___ 35 – 39
___ 40 – 44
___ 45 – 49
___ 50 – 54
___ 55 – 59
___ 60 – 64
___ 65 or older

37. Are you Spanish, Hispanic or Latino (regardless of race)?

___ Yes
___ No

38. Your race?

___ American Indian or Alaska Native
___ Asian, Native Hawaiian, or Pacific Islander
___ Black, African American
___ Spanish, Hispanic, or Latino
___ White
___ Other please specify: _____

39. Any Comments?

Please use this space to provide any additional information or comments.

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40. Please enter your e-mail address below to enter your name in the drawing for one of five $50 Visa Cards. Entering your e-mail will also remove you from reminders to compete this survey. Your e-mail address will not be used for any other purpose or disclosed to others.

    Email: _____

Thank you for your valuable time.

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APPENDIX D

Urban Planning Competencies

Defined by Guzzetta, J. D. & Bollens, S. A. (2003) and Ozawa C.P. & Seltzer E.P. (1999)

Guzzetta, J. D. & Bollens, S. A. (2003)	2. Leadership 3. Organizational development 4. Advanced policy analysis 5. Negotiation/mediation 6. Verbal/written communication 7. Electronic/Web-based communication 8. Communication 9. Understanding public needs 10. Understanding client needs 11. Technical skills 12. Quantitative skills 13. Quantitative analysis 14. Report writing 15. Familiarity with laws, ordinances, and policy 16. Effective presentation 17. Writing for the public 18. Familiarity with laws, ordinances, and policy 19. Effective presentation 20. Management
Ozawa C.P. & Seltzer E.P. (1999)	1. Clear, concise in-house memo writing 2. Ability to write findings, draft ordinances, legislation, etc. 3. Ability to write project reports, lengthier documents 4. Ability to synthesize and reduce four pages into one paragraph 5. Ability to write informative, engaging short pieces for the general public 6. Working well with colleagues (within the organization) 7. Coordinating a multidisciplinary team 8. Working with the general public (those less familiar with planning methods and process 9. Understanding what the public/client wants 10. Speaking formally and informally with public and elected officials 11. Ability to communicate graphically 12. Ability to think and respond on their feet 13. Ability to express the collective good 14. Understanding and articulating the “rationale of planning” 15. Ability to “ follow a thin thread” to collect data and information from many and diverse sources in creative ways 16. Clear, linear thinking 17. Ability to see multiple perspectives and to reconcile into a single product 18. Ability to access and synthesize secondary data 19. Ability to conduct primary data collection 20. Ability to perform qualitative and quantitative reasoning

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	21. Understanding of law, legal institutions, codes, ordinances, etc. 22. Comfort and willingness to work with numbers 23. Competency in basic computer programs (data base, spreadsheets, etc) 24. Competency in GIS 25. Competency in multiple linear regression 26. Ability to use land records and blueprints 27. Knowledge of the limitations of modes and forecasts and understanding of the useful aspects of models and forecasts 28. Ability to read a zoning code and interpret its application to a case 29. Understanding of basic microeconomic theory and its application 30. Familiarity with the interaction of planning, implementation, and markets 31. Understanding of space, issues conceding the built environment 32. Ability to conceptualize planes in 3 dimensions 33. Competency with scenario techniques 34. Understanding of physical planning alternatives, what others have tried 35. Competency in site analysis 36. Self-starter 37. Ability to complete quality work on time and within budget 38. Ability to develop and maintain budgets 39. Understanding of the planning process (who's involved and timing and dynamics of involvement) 40. Knowledge of the evolution of different urban forms as a result of economic, political and social forces 41. Understanding of the urban structure and space dynamics of a city 42. Familiarity with laws, ordinances, policies and accompanying institutional structures for implementation 43. Familiarity with the development process 44. Understanding of contemporary urban issues and potential alternative strategies for addressing them 45. Awareness of institutional politics

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APPENDIX E

Concurrence of Exemption

WAYNE STATE UNIVERSITY

IRB Administration Office
87 East Canfield, Second Floor
Detroit, Michigan 48201
Phone: (313) 577-1628
FAX: (313) 993-7122
http://irb.wayne.edu

CONCURRENCE OF EXEMPTION

To: Chade Saghir
College of Education
656 W. Kirby Avenue, 3198 Fab

From: Dr. Scott Millis S. Millis, PhD
Chairperson, Behavioral Institutional Review Board (B3)

Date: May 01, 2012

RE: IRB #: 044112B3X

Protocol Title: A Needs Assessment of Knowledge, Skills, and Values for Urban Planning Professionals Based on Competencies Set Forth by Professional Planning Organizations

Sponsor:

Protocol #: 1204010804

The above-referenced protocol has been reviewed and found to qualify for **Exemption** according to paragraph #2 of the Department of Health and Human Services Code of Federal Regulations [45 CFR 46.101(b)].

- Revised Protocol Summary Form (received in the IRB Office 04/25/2012)
- Protocol (received in the IRB Office 04/10/2012)
- The request for a waiver of the requirement for written documentation of informed consent has been granted according to 45 CFR 46.117(1)(2). Justification for this request has been provided by the PI in the Protocol Summary Form. The waiver satisfies the following criteria: (i) The only record linking the participant and the research would be the consent document, (ii) the principal risk would be potential harm resulting from a breach of confidentiality, (iii) each participant will be asked whether he or she wants documentation linking the participant with the research, and the participant's wishes will govern, (iv) the consent process is appropriate, (v) when used requested by the participants consent documentation will be appropriate, (vi) the research is not subject to FDA regulations, and (vii) an information sheet disclosing the required and appropriate additional elements of consent disclosure will be provided to participants not requesting documentation of consent.
- Research Information Sheet (dated 04/25/2012)
- Data collection tools: Survey Instrument

This proposal has not been evaluated for scientific merit, except to weigh the risk to the human subjects in relation to the potential benefits.

- Exempt protocols do not require annual review by the IRB.
- All changes or amendments to the above-referenced protocol require review and approval by the IRB **BEFORE** implementation.
- Adverse Reactions/Unexpected Events (AR/UE) must be submitted on the appropriate form within the timeframe specified in the IRB Administration Office Policy (http://irb.wayne.edu/policies-human-research.php).

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APPENDIX F

E-Mail Correspondent Sent to Expert Reviewers

May 16, 2012

Hello Planning Professional,

My name is Chade Saghir. I am a doctoral candidate of Instructional Technology at Wayne State University, Detroit, Michigan. Dr. James L. Moseley (moseley@wayne.edu) is my dissertation advisor.

I will be conducting a needs assessment survey concerning urban planning competencies. As a professional planner I would like to invite you to review the questionnaire prior to conducting the survey. Your opinion is valued and this expert review will allow me to validate my survey and make changes to the questionnaire based on your comments.

As a planning practitioner for the past 18 years I am interested in the professional development of planning professionals. This study will focus on the alignment between planning organizations, planning education, and planning practice.

I have attached a PDF copy of the questionnaire entitled Professional Development of Planning Professional to this e-mail as well as a link below to the actual web based survey. Here is a guideline on what I'm looking for in your expert review, but please do not limit your comments to the questions below any feedback you provide will be valuable.

Your initial thoughts on the questionnaire?, Are the questions clear and concise?, What questions or line of questions did you like/dislike?, Are there other questions concerning competencies that should be included?

The link below will take you to the actual web based survey if you can consent to taking the survey and send me the time it took as well as any technology problems you encountered would be appreciated.
http://coe.wayne.edu/Professional.php

As a participant and/or expert reviewer of this survey, there may be no direct benefit to you; however, information from this study may benefit other people now or in the future. If you consent to this review please send me your comments by Friday May 25, 2012.

A Research Information Sheet is attached to this e-mail if you plan on participating in the survey. All information you send or your response to the survey will be confidential and your information will not be shared with anyone.

Please e-mail me if you have questions on participating in or learning more about this needs assessment. I can be reached at chade1970@gmail.com. If you would like to receive a summary of the results of this survey, please ask me.

Sincerely,
Chade Saghir
Doctoral Candidate
Wayne State University

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APPENDIX G

E-Mail Correspondent Sent to Planning Professionals

July 11, 2012

Dear Planning Professional,

My name is Chade Saghir. I am a doctoral candidate of Instructional Technology at Wayne State University, Detroit, Michigan. Dr. James L. Moseley (moseley@wayne.edu) is my dissertation advisor.

As an urban planning professional, I would like to invite you to participate in a web based questionnaire of a needs assessment of urban planning competencies. It will take you approximately 10 -15 minutes to complete this questionnaire. All responses will be anonymous and only aggregate results will be published.

As a further token of appreciation, all respondents will be entered into a drawing for one of five $50 VISA cards. If you provide your e-mail address for the prize drawing for one of five $50 VISA cards your e-mail address will be separated from the data.
To participate click on this link or copy and paste this link in your web browser –

http://coe.wayne.edu/Professional.php

As a planning practitioner for the past 18 years I am interested in the professional development of planning professionals. This study will focus on the alignment between planning organizations, planning education, and planning practice. Your participation in this survey is crucial to the findings of this study. I believe the findings of this study will benefit our profession as well as continue to have an open dialogue between planning education and planning practice.

A Research Information Sheet is attached to this e-mail if you plan on participating in the survey. As a note it is my intent to keep all information you provide confidential.

By completing the questionnaire you are agreeing to participate in this study. Please e-mail me if you have questions on participating in or learning more about this needs assessment. I can be reached at chade1970@gmail.com. If you would like to receive a summary of the results of this survey, please ask me.

Sincerely
Chade Saghir
Doctoral Candidate
Wayne State University

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APPENDIX H

Planning Accreditation Board Competencies Identified

1. General planning knowledge:
Elements:
1. Knowledge of why planning is undertaken by communities, cities, regions, and nations, and the impact planning is expect to have.
2. Knowledge of the behaviors and structures available to bring about sound planning outcomes.
3. Knowledge of the legal and institutional contexts within which planning occurs.
4. Knowledge of the growth and development of places over time and across space.
5. Knowledge of the relationships between past, present, and future in planning domains.
6. Knowledge of potential methods of design, analysis, and intervention to influence the future.
7. Knowledge of interactions, flows of people and materials, cultures, and differing approaches to planning across world regions.
2. Planning Skills
Elements:
1. Knowledge of tools for assembling and analyzing ideas and information from prior practice and scholarship, and from primary and secondary sources.
2. Knowledge of preparing clear, accurate and compelling text, graphics and maps for use in documents and presentations.
3. Knowledge of data collection, analysis and modeling tools for forecasting, policy analysis, and design of projects and plans.
4. Knowledge of integrative tools useful for sound plan formulation, adoption, and implementation and enforcement.
5. Knowledge of tools for stakeholder involvement, community engagement, and working with diverse communities.
3. Values and ethics
Elements:
1. Knowledge of tools for attention, formation, strategic decision-making, team building and organizational / community motivation.
2. Knowledge of key issues of planning ethics and related questions of the ethics of public decision-making, research, and client representation.
3. Knowledge of the roles of officials, stakeholders, and community members in planned change.
4. Knowledge of natural resource and pollution control factors in planning, and understanding of how to create sustainable futures.
5. Knowledge of economic, social, and cultural factors in urban and regional

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growth and change.
6. Knowledge of equity concerns in planning

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APPENDIX I

Specific Competencies Identified in the Literature Review

Management
1. Leadership skills
2. Management Skills
3. Organizational development skills
4. Ability to complete quality work on time and within budget
5. Advanced policy analysis skills
6. Negotiation/mediation skills
7. Understanding public needs
8. Familiarity with laws, ordinances, and policy
Communication
9. Verbal communication skills
10. Presentation skills
11. Communicating formally with elected officials
12. Communicating formally with the public
13. Collaborating with peers to produce a plan or planning product
14. Ability to work with diverse communities
15. Communication using social media (face book, twitter, or apps)
16. Ability to communicate graphically (graphs and charts)
17. Report writing skills
18. Writing for the public skills
Technical
19. Geographic information system skills (mapping)
20. Competency in basic computer programs (word processor, spreadsheets, etc)
21. Problem solving skills
22. Quantitative research skills
23. Qualitative research skills
24. Competency in linear regression
25. Forecasting / modeling skills
26. Scenarios development skills

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APPENDIX J

Mean Ranks Attributed by Area of Specialization Groups for Competencies with Significant Differences in Time Spent Responses

Item	Area of Specialization	N	Mean Rank
10	Community development and redevelopment	80	153.61
	Economic planning and development	20	121.00
	Environmental and natural resource planning	7	131.21
	Facilities and infrastructure planning	6	123.08
	Housing	6	79.25
	Information technology	3	161.83
	Land-use or code enforcement	37	114.22
	Other	34	130.15
	Parks and recreation planning	3	158.50
	Planning management, budgeting and finance	12	97.13
	Preservation	3	37.00
	Spatial planning	3	116.00
	Sustainability	4	110.75
	Transportation Planning	39	129.18
	Urban design	6	192.92
	Total	263	
11	Community development and redevelopment	80	150.04
	Economic planning and development	20	122.33
	Environmental and natural resource planning	7	112.93
	Facilities and infrastructure planning	6	110.33
	Housing	6	66.17
	Information technology	3	138.17
	Land-use or code enforcement	37	98.77
	Other	34	135.34
	Parks and recreation planning	3	194.33
	Planning management, budgeting and finance	11	99.45
	Preservation	3	83.67
	Spatial planning	2	145.00
	Sustainability	4	171.75
	Transportation Planning	39	134.67
	Urban design	6	177.33
	Total	261	
13	Community development and redevelopment	78	128.34
	Economic planning and development	20	147.93
	Environmental and natural resource planning	7	185.07
	Facilities and infrastructure planning	6	136.67
	Housing	6	35.92

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	Information technology	3	99.00
	Land-use or code enforcement	37	123.59
	Other	34	132.97
	Parks and recreation planning	3	193.83
	Planning management, budgeting and finance	12	112.13
	Preservation	3	99.00
	Spatial planning	2	68.25
	Sustainability	4	130.25
	Transportation Planning	38	128.92
	Urban design	6	199.75
	Total	259	
16	Community development and redevelopment	80	137.02
	Economic planning and development	19	132.92
	Environmental and natural resource planning	7	121.21
	Facilities and infrastructure planning	6	147.00
	Housing	6	83.75
	Information technology	3	149.50
	Land-use or code enforcement	37	94.20
	Other	34	139.06
	Parks and recreation planning	3	149.50
	Planning management, budgeting and finance	12	85.83
	Preservation	3	66.67
	Spatial planning	2	126.00
	Sustainability	4	154.13
	Transportation Planning	39	154.83
	Urban design	6	203.92
	Total	261	
18	Community development and redevelopment	78	142.94
	Economic planning and development	19	137.37
	Environmental and natural resource planning	7	175.71
	Facilities and infrastructure planning	6	85.42
	Housing	6	77.33
	Information technology	3	60.50
	Land-use or code enforcement	37	126.43
	Other	35	107.99
	Parks and recreation planning	3	122.33
	Planning management, budgeting and finance	12	87.58
	Preservation	3	72.83
	Spatial planning	2	164.00
	Sustainability	4	190.75
	Transportation Planning	39	134.78
	Urban design	6	223.50
	Total	260	
21	Community development and redevelopment	79	141.19
	Economic planning and development	19	143.66
	Environmental and natural resource planning	7	156.21

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	Facilities and infrastructure planning	6	92.33
	Housing	6	96.75
	Information technology	3	43.33
	Land-use or code enforcement	37	102.09
	Other	34	145.00
	Parks and recreation planning	3	117.50
	Planning management, budgeting and finance	11	114.41
	Preservation	3	27.00
	Spatial planning	2	133.00
	Sustainability	4	160.63
	Transportation Planning	38	120.84
	Urban design	6	211.58
	Total	258	
22	Community development and redevelopment	77	130.37
	Economic planning and development	20	161.88
	Environmental and natural resource planning	7	144.14
	Facilities and infrastructure planning	6	110.25
	Housing	6	107.17
	Information technology	3	40.50
	Land-use or code enforcement	36	101.88
	Other	34	139.28
	Parks and recreation planning	3	139.17
	Planning management, budgeting and finance	12	128.88
	Preservation	3	50.17
	Spatial planning	2	124.50
	Sustainability	4	208.50
	Transportation Planning	38	124.99
	Urban design	6	182.00
	Total	257	
24	Community development and redevelopment	78	146.68
	Economic planning and development	20	144.28
	Environmental and natural resource planning	7	141.57
	Facilities and infrastructure planning	6	97.25
	Housing	6	76.75
	Information technology	3	56.67
	Land-use or code enforcement	37	110.51
	Other	32	128.80
	Parks and recreation planning	3	161.33
	Planning management, budgeting and finance	12	100.13
	Preservation	3	39.83
	Spatial planning	2	102.00
	Sustainability	4	180.50
	Transportation Planning	38	122.53
	Urban design	6	170.67
	Total	257	
25	Community development and redevelopment	80	127.36

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	Economic planning and development	20	139.45
	Environmental and natural resource planning	7	217.71
	Facilities and infrastructure planning	5	136.10
	Housing	6	75.25
	Information technology	3	63.33
	Land-use or code enforcement	37	110.38
	Other	34	120.60
	Parks and recreation planning	3	213.00
	Planning management, budgeting and finance	12	99.08
	Preservation	3	79.00
	Spatial planning	2	116.75
	Sustainability	4	215.50
	Transportation Planning	38	144.30
	Urban design	6	213.00
	Total	260	
26	Community development and redevelopment	80	136.11
	Economic planning and development	20	154.60
	Environmental and natural resource planning	7	150.71
	Facilities and infrastructure planning	6	102.08
	Housing	6	94.83
	Information technology	3	64.33
	Land-use or code enforcement	37	103.34
	Other	34	130.24
	Parks and recreation planning	3	174.00
	Planning management, budgeting and finance	12	99.21
	Preservation	3	64.33
	Spatial planning	2	104.75
	Sustainability	4	163.88
	Transportation Planning	39	149.78
	Urban design	6	196.50
	Total	262	
27	Community development and redevelopment	79	133.53
	Economic planning and development	20	132.38
	Environmental and natural resource planning	7	144.71
	Facilities and infrastructure planning	6	127.25
	Housing	6	95.83
	Information technology	3	45.50
	Land-use or code enforcement	37	96.93
	Other	34	134.50
	Parks and recreation planning	3	155.33
	Planning management, budgeting and finance	12	121.08
	Preservation	3	67.67
	Spatial planning	2	155.25
	Sustainability	4	158.38
	Transportation Planning	39	156.27
	Urban design	6	197.83

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	Total	261	

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APPENDIX K

Mean Ranks Attributed by Area of Specialization Groups for Competencies with Significant Differences in Importance Responses

Item	Area of Specialization	N	Mean Rank
21	Community development and redevelopment	80	140.28
	Economic planning and development	19	105.92
	Environmental and natural resource planning	7	130.71
	Facilities and infrastructure planning	6	125.08
	Housing	6	139.67
	Information technology	3	63.33
	Land-use or code enforcement	37	109.54
	Other	34	161.37
	Parks and recreation planning	3	216.00
	Planning management, budgeting and finance	11	113.09
	Preservation	3	63.33
	Spatial planning	2	216.00
	Sustainability	4	150.63
	Transportation Planning	39	108.73
	Urban design	6	184.17
	Total	260	
25	Community development and redevelopment	80	133.08
	Economic planning and development	20	101.95
	Environmental and natural resource planning	7	202.50
	Facilities and infrastructure planning	6	147.25
	Housing	6	104.92
	Information technology	3	97.33
	Land-use or code enforcement	37	105.76
	Other	34	136.54
	Parks and recreation planning	3	120.83
	Planning management, budgeting and finance	12	117.83
	Preservation	3	161.83
	Spatial planning	2	233.00
	Sustainability	4	197.25
	Transportation Planning	39	137.41
	Urban design	6	185.67
	Total	262	

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APPENDIX L

Mean Ranks Attributed by Work Environment Groups for Competencies with Significant Differences in Time Spent Responses

Item	Work Environment	N	Mean Rank
17	Nonprofit (community group)	19	134.87
	Private (planning firm)	46	157.97
	Public (unit of government)	188	123.31
	Other	9	160.22
	Total	262	
18	Nonprofit (community group)	19	112.47
	Private (planning firm)	48	158.03
	Public (unit of government)	189	130.43
	Other	8	75.81
	Total	264	
21	Nonprofit (community group)	19	130.76
	Private (planning firm)	47	160.51
	Public (unit of government)	187	122.91
	Other	9	160.00
	Total	262	

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APPENDIX M

Mean Ranks Attributed by Work Environment Groups for Competencies with Significant Differences in Importance Responses

Item	Work Environment	N	Mean Rank
15	Nonprofit (community group)	19	137.71
	Private (planning firm)	47	152.55
	Public (unit of government)	184	121.31
	Other	9	173.61
	Total	259	
18	Nonprofit (community group)	19	99.87
	Private (planning firm)	48	157.94
	Public (unit of government)	189	131.22
	Other	8	87.50
	Total	264	
23	Nonprofit (community group)	19	80.74
	Private (planning firm)	47	136.86
	Public (unit of government)	188	136.25
	Other	9	126.00
	Total	263	

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APPENDIX N

Mean Ranks Attributed by Spatial Area of Practice Groups for Competencies with Significant Differences in Time Spent Responses

Item	Spatial Area of Practice	N	Mean Rank
11	Corridors	7	152.93
	County or Regional level planning	49	123.76
	Downtowns Small towns	15	81.23
	Historic districts or areas	3	103.00
	Multi-state or bi – state regions	3	63.17
	National level State	11	100.00
	Neighborhoods	13	110.58
	Other, please specify	22	133.09
	Rural area	5	130.80
	Sub-state region	10	162.15
	Suburban areas	60	146.88
	Urban areas	66	145.08
	Other	22	133.09
	Total	264	
12	Corridors	7	151.79
	County or Regional level planning	49	113.23
	Downtowns Small towns	15	89.63
	Historic districts or areas	3	113.33
	Multi-state or bi – state regions	3	78.33
	National level State	11	119.86
	Neighborhoods	13	103.15
	Other, please specify	22	145.23
	Rural area	4	144.13
	Sub-state region	10	143.35
	Suburban areas	60	160.03
	Urban areas	66	132.11
	Other	22	145.23
	Total	263	
16	Corridors	7	199.71
	County or Regional level planning	49	131.08
	Downtowns Small towns	15	90.90
	Historic districts or areas	3	37.50
	Multi-state or bi – state regions	3	138.00
	National level State	11	126.23
	Neighborhoods	13	164.12
	Rural area	5	90.90
	Sub-state region	9	116.28

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	Suburban areas	60	132.10
	Urban areas	67	136.85
	Other	22	143.23
	Total	264	
19	Corridors	7	166.00
	County or Regional level planning	49	164.72
	Downtowns Small towns	15	87.87
	Historic districts or areas	3	35.00
	Multi-state or bi – state regions	3	113.67
	National level State	12	110.38
	Neighborhoods	13	147.42
	Rural area	5	73.80
	Sub-state region	10	128.30
	Suburban areas	60	121.88
	Urban areas	66	128.92
	Other	21	155.62
	Total	264	
21	Corridors	6	152.50
	County or Regional level planning	47	115.94
	Downtowns Small towns	15	103.00
	Historic districts or areas	3	82.50
	Multi-state or bi – state regions	3	80.50
	National level State	12	83.63
	Neighborhoods	13	180.85
	Rural area	5	101.00
	Sub-state region	9	183.33
	Suburban areas	59	123.60
	Urban areas	67	141.16
	Other	22	160.59
	Total	261	
22	Corridors	6	164.58
	County or Regional level planning	48	123.18
	Downtowns Small towns	15	105.37
	Historic districts or areas	3	93.50
	Multi-state or bi – state regions	3	51.67
	National level State	11	85.18
	Neighborhoods	13	172.73
	Rural area	5	80.10
	Sub-state region	9	141.39
	Suburban areas	59	124.25
	Urban areas	66	143.80
	Other	22	151.66
	Total	260	
23	Corridors	7	159.50
	County or Regional level planning	49	130.58
	Downtowns Small towns	15	69.63

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	Historic districts or areas	3	95.17
	Multi-state or bi – state regions	3	91.17
	National level State	11	87.32
	Neighborhoods	13	122.58
	Rural area	5	68.60
	Sub-state region	10	143.05
	Suburban areas	60	145.98
	Urban areas	67	143.32
	Other	21	151.10
	Total	264	
26	Corridors	7	177.21
	County or Regional level planning	49	144.05
	Downtowns Small towns	15	88.30
	Historic districts or areas	3	42.50
	Multi-state or bi – state regions	3	122.33
	National level State	11	88.36
	Neighborhoods	13	142.58
	Rural area	5	105.40
	Sub-state region	10	172.05
	Suburban areas	60	122.49
	Urban areas	67	142.56
	Other	22	143.32
	Total	265	
27	Corridors	6	186.50
	County or Regional level planning	49	128.76
	Downtowns Small towns	15	86.60
	Historic districts or areas	3	68.17
	Multi-state or bi – state regions	3	102.83
	National level State	11	113.09
	Neighborhoods	13	170.15
	Rural area	5	79.10
	Sub-state region	10	171.70
	Suburban areas	60	116.06
	Urban areas	67	146.21
	Other	22	155.09
	Total	264	

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APPENDIX O

Mean Ranks Attributed by Spatial Area of Practice Groups for Competencies with Significant Differences in Importance Responses

Item	Spatial Area of Practice	N	Mean Rank
13	Corridors	7	124.00
	County or Regional level planning	48	121.26
	Downtowns Small towns	15	115.67
	Historic districts or areas	3	123.67
	Multi-state or bi – state regions	3	72.00
	National level State	11	117.41
	Neighborhoods	13	128.15
	Rural area	5	55.30
	Sub-state region	9	101.44
	Suburban areas	60	127.78
	Urban areas	66	156.67
	Other	21	144.12
	Total	261	
15	Corridors	6	133.92
	County or Regional level planning	48	121.69
	Downtowns Small towns	15	103.37
	Historic districts or areas	3	123.33
	Multi-state or bi – state regions	3	33.17
	National level State	11	118.32
	Neighborhoods	13	141.12
	Rural area	5	51.70
	Sub-state region	9	138.94
	Suburban areas	58	126.57
	Urban areas	66	143.72
	Other	21	155.95
	Total	258	
20	Corridors	7	86.14
	County or Regional level planning	48	124.30
	Downtowns Small towns	15	112.03
	Historic districts or areas	3	47.00
	Multi-state or bi – state regions	3	49.83
	National level State	11	74.64
	Neighborhoods	13	146.88
	Rural area	5	105.30
	Sub-state region	9	116.83
	Suburban areas	58	141.59
	Urban areas	66	146.68

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	Other	22	144.91
	Total	260	
23	Corridors	7	114.00
	County or Regional level planning	49	119.57
	Downtowns Small towns	15	116.67
	Historic districts or areas	2	118.50
	Multi-state or bi – state regions	3	45.33
	National level State	11	59.91
	Neighborhoods	13	103.96
	Rural area	5	113.50
	Sub-state region	10	125.70
	Suburban areas	59	150.37
	Urban areas	67	145.98
	Other	21	151.69
	Total	262	
24	Corridors	7	121.50
	County or Regional level planning	48	132.16
	Downtowns Small towns	15	120.93
	Historic districts or areas	3	90.67
	Multi-state or bi – state regions	3	39.33
	National level State	11	51.86
	Neighborhoods	13	123.27
	Rural area	5	97.70
	Sub-state region	10	158.60
	Suburban areas	59	138.98
	Urban areas	67	136.65
	Other	20	159.50
	Total	261	
26	Corridors	7	149.50
	County or Regional level planning	49	130.29
	Downtowns Small towns	15	89.37
	Historic districts or areas	3	62.17
	Multi-state or bi – state regions	3	101.33
	National level State	11	95.14
	Neighborhoods	13	159.08
	Rural area	5	129.30
	Sub-state region	10	164.65
	Suburban areas	60	117.95
	Urban areas	65	146.95
	Other	21	150.26
	Total	262	
27	Corridors	7	148.21
	County or Regional level planning	49	129.79
	Downtowns Small towns	15	95.57
	Historic districts or areas	3	93.67
	Multi-state or bi – state regions	3	102.00

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	National level State	11	104.36
	Neighborhoods	13	147.00
	Rural area	5	55.90
	Sub-state region	10	188.30
	Suburban areas	60	118.88
	Urban areas	67	146.92
	Other	22	165.00
	Total	265	

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ABSTRACT

A NEEDS ASSESSMENT OF KNOWLEDGE, SKILLS, AND VALUES FOR URBAN PLANNING PROFESSIONALS BASED ON COMPETENCIES SET FORTH BY PROFESSIONAL PLANNING ORGANIZATIONS

by

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December 2012

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Continuing education and training is pivotal in today's fast-paced technology driven society. A profession is defined by the theories and techniques that competent practitioners utilize in their everyday work. Therefore, determining the competencies that practitioners must possess for any given profession is a prerequisite for a respected profession. Most professions are bounded by competencies that are dictated by professional organizations and education programs, yet the real test is how practitioners view these competencies as they relate to their job. For a profession to reach the ultimate goal of improving society the first step is to align professional organization, education, and practice.

This research is a needs assessment that investigates education and training needs of planning professionals and determines the alignment between professional organizations, planning education, and planning practice. Thus the focus of this study is to conduct a needs assessment to investigate the specific knowledge, skills and values under each related outcome criteria defined by the Planning Accreditation Board as it relates to the training needs of planning practitioners, as well as specific competencies defined in the review of related literature.

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Using a descriptive research method three types of questions were answered: (1) How professional planners allocate their time on various professional competencies on a typical work day? (2) What professional competencies are important in their job? and (3) What professional competencies do they feel they possess for their job? The web based survey drew 270 planning practitioners from 26 states to participate in the survey. The results of this study indicate that planning professionals valued competencies defined by PAB more than the amount of time they spend on each of the competencies. In addition, the needs assessment revealed 8 out of 18 competences that had the greatest gap between the amount of time practitioners stated they spend on the competences compared to how important they felt the competencies were to their job. Finally, planning practitioners indicated that they were the most competent in verbal communication skills and problem solving skills, while, stating they were least competent in linear regression, forecasting / modeling skills, and communication using social media.

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