Undergraduate Competencies in Family Science: An Exploratory Study

Paul L. Schvaneveldt
Pamela B. Payne
Daniel S. Hubler
Chloe D. Merrill
Weber State University

ABSTRACT. The purpose of the study was to explore the ratings of core competencies for undergraduate students in Family Science. Identifying the competencies which are viewed as most important is necessary to effectively prepare undergraduate students for professions or other . A sample of 113 Family Science professionals was asked to rate the importance of undergraduate students possessing 18 differing core competencies related to Family Science. A rank order of importance was identified. Variations were also identified by gender and type of institution (i.e., teaching focused university or research focused university). Implications for curriculum, teaching pedagogies, assessment, and future research are discussed.

*Keyword*s: family science, pedagogy, assessment, competencies

Family Science is a field of study in which "the primary goals are the discovery, verification, and application of knowledge about the family" (National Council on Family Relations Task Force on the Development of the Family Science Discipline, 1988, p. 48). Born in the early twentieth century, Family Science has evolved into a unique discipline (Burr & Leigh, 1983; NCFR Task Force, 1988). While many disciplines, including family and consumer sciences, sociology, psychology, religion, education, communication, anthropology, law, and political science "contributed valuable insights into family structure and process" (Hollinger, 2002, p. 300), the field of Family Science helped to integrate existing knowledge that was previously fragmented and disconnected (Burr, 1992). Similarly, some have argued that as a unique and separate domain of the human experience, the family, and interactions within it, require distinct examination (Beutler, Burr, Bahr, & Herrin, 1989), using particular assumptions, paradigms and

_____

Direct correspondence to Paul Schvaneveldt: pschvaneveldt@weber.edu

methodologies (Burr, Day, & Bahr, 1993). Burr and Leigh's (1983) conclusion still holds true today: "the family field has entered a unique historical era because it has a bona fide family discipline and also complex interdisciplinary ties… It is [both] a discipline *and* an interdisciplinary area" (p. 470). This relatively new and interdisciplinary identity often makes it challenging to effectively communicate the distinctiveness of Family Science to students interested in social sciences, as well as other scholars and potential employers of family science graduates (Hamon & Smith, 2014).

Recognizing the unique contributions of professionals educated in Family Science, considerable attention has been paid to the many programs that offer professional training in this area (Day, Quick, Leigh, & McKenry, 1988; Hans, 2005). Despite the prevalence of such programs, including the growing number of family programs at international universities (Hollinger, 2002), departmental names used to describe the discipline are often varied, contributing to identity ambiguity in the discipline (Burr & Leigh, 1983; Hans, 2013). After discussion and debate, the NCFR Task Force on the Development of the Family Science Discipline (1988) recommended using the term *Family Science* for the discipline.

Defining Family Science

Some recent publications (Eiklenborg, Bayley, Cassidy, Davis, Hamon, Florence-Houk, & Tymes, 2004; Hamon & Smith, 2014; Hollinger, 2002) help to define the field of Family Science and delineate a code of ethics for professionals within it (Adams, Dollahite, Gilbert, & Keim, 2001; AAFCS, 2013). So too, the National Council on Family Relations, as a result of its development of the certification in family life education, has solidified ten substance areas thought to be critical for family scientists and family life educators. They include: families in society; internal dynamics of families; human growth and development over the life span; human sexuality; interpersonal relations; family resource management; parent education and guidance; family law and public policy; ethics; and family life education methodology (Buck, Campbell, Chatelain, Higginson, & Merrill, 1999; Powell & Cassidy, 2001). More recently, faculty in Family Science graduate programs have further identified skills and competencies necessary for graduate-level professionals in the field of Family Science (Benson, Allen, Few, Roberto, Blieszner, Meszaros, & Henderson, 2006; Koblinsky, Kuvalanka, & McClintock-Comeaux, 2006).

One possible theoretical approach to exploring competencies follows Vygotsky's socio-cultural theory which highlights the importance of interpersonal, cultural-historical and individual factors in learning and education (Tudge & Scrimsher, 2003; Vygotsky, 1978). This approach melds well with the field of Family Science which stresses the importance of context in understanding people as they navigate various relationships with parents, partners, and communities (Benson, et al. 2006). By using this theory, we highlight the importance in the field of understanding the cultural context and social environment in which students will enter after

obtaining varied levels of education. In order to apply the principles of Vygotsky's sociocultural theory, we must, as a field, understand the competencies, which are valued by the context in which we exist. By assessing competencies, we can begin to determine how we are meeting these goals.

General Competencies

The idea of competency-based education is common in primary education (K-12) and in many high performing nations (e.g., Singapore and New Zealand) (National Education Association, 2013), but in higher education, aside from Carnegie rankings, there is little in the way of common competencies for students. The current trend in U.S. education is moving from a knowledge-based orientation to a competency-based education (CBE) (Achtenhagen, 2001; Arguelles & Gonczi, 2000; Barnett, 1994; Hatcher, Fouad, Campbell, McCutcheon, Grus, & Leahy, 2013; Levesque, Lauen, Teitelbaum, Alt, Librera, & MPR Associates, 2000; Samuelowicz, 2001; Vermunt & Verloop, 1999). The goal of CBE is to provide students with knowledge, skills, and attitudes that enable them to solve and recognize complex problems in a specific domain of study or work (Hatcher et al., 2013). This differs from knowledge-oriented education, which focuses on questions of what should be taught and learned in relation to concepts (Hoogveld, Paas & Jochems, 2005). This change in foci alters not only the curriculum, but also the role of instructor from "knowledge transmitter" to "coach" who guides students to understand tasks rather than discrete content (Enkenberg, 2001; Hoogveld, et al., 2005; Kerr, 1996; Pratt, 1998; Samuelowicz, 2001).

In addition to this shift in the role of educators, CBE is based on six critical components (Van der Horst & McDonald, 1997): (a) explicit learning outcomes with respect to the required – text skills and concomitant proficiency (standards assessment), (b) a flexible time frame to master these skills, (c) a variety of instructional activities to facilitate learning, (d) criterion-referenced testing of the required outcomes, (e) certification based on demonstrated learning outcomes, and 6) adaptable programs to ensure optimum learner guidance. These six components provide a broad framework from which various domains can establish their discipline-specific competencies.

At the university level, common competencies include written and oral communication, problem solving, critical thinking, diversity competence, personal growth, multi-disciplinary knowledge, subject mastery, application of knowledge, and life-long learning (Schvaneveldt, 2013). In addition to the common competencies, it is important that each discipline establish competencies within its particular domain.

Competencies in Related Fields

Although Family Science has yet to establish competencies, some related fields have begun the legwork to develop them for their domains. Family Psychology, for example, has identified eight family specific competencies in the areas of application of scientific knowledge to practice, psychological assessment, psychological intervention, consultation and inter-professional - collaboration, supervision, professional development, ethics and legal issues, and

individual and cultural diversity (Kaslow, Celano, & Stanton, 2005). While these eight competencies may not apply directly to Family Science, Family Psychology is paving the way for the study of competencies to evaluate students and professionals.

Identifying Competencies in Family Science

As a distinct field of study, it is important to understand and evaluate outcomes for student learning and knowledge. In fields such as Family Science, where the clientele are adults, children, or the family unit as a whole, it is necessary to ensure that those serving the public are receiving the needed   information and skills that will allow them to adequately provide meaningful and useful services to their clientele. In order for this to happen, it is crucial to evaluate the outcomes, or competencies, students acquired during their studies.

Many ways exist for a field to obtain a sense of what the competencies or outcomes should be. One possible method, is to poll students, professionals, instructors, and the communities where students use their academically acquired skills. This study aims to begin the process of understanding competencies in Family Science through an exploratory study aimed at professionals and instructors in the field of Family Science. Specifically, the research goals were to explore how scholars in the Family Science field ranked, according to importance, various competencies for undergraduate students.

Method

Subjects

IRB approval was obtained prior to data collection. Data were collected via an online questionnaire. Respondents were recruited through the National Council on Family Relations' (NCFR) e-mail listserv.

Sample. The majority of the sample (n=113) consisted of 88 female (25 male) respondents. Twenty respondents reported being under 30 years old, 45 respondents were between ages 30 to 45 years, 38 were between 46 and 59 years, and 10 were 60 years or older. Thirteen respondents reported a bachelor's degree as their highest level of education, 30 reported a master's degree or currently enrolled in graduate studies and 70 reported a doctorate degree as their highest level of education. The professional affiliation of the sample varied in that 25 respondents self-identified as graduate students, 57 as university tenure-track faculty, nine as therapists or human services practitioners, eight as extension faculty/staff, four as full-time instructors at a university level, and two as members of the clergy. Professional affiliation was measured by asking participants to self-identify as working at a primarily research or teaching focused university, hospital setting, private practice/human service agency, or a religious organization. The majority of the respondents self-identified themselves as teaching at a research-focused university (64), 36 self-identified as working at a teaching-focused university, eight worked in a hospital setting, seven were employed in private practice/human service agencies, and two worked in a religious organization.

Instrumentation

        Rating of Family Science student competencies. After basic demographic questions were answered, respondents were asked to rate on a scale from 1 to 10 (1 indicating a rating of extremely low importance and 10 indicating a rating of extremely high importance) the importance of the following 18 competencies to be developed by an undergraduate Family Science student. *Oral Communication Skills* refers to competencies such as public speaking, presentations, and ability to effectively communicate orally. *Written Communication Skills* refers to the capacity for quality writing. *Critical Thinking* refers to the ability to use analysis, judgment, problem solving, and critical thinking skills. *Creativity* entails innovation and exploring new ideas. *Cultural Diversity Competency* involves the ability to appreciate and interact with diverse populations within one's own country of residence. *International Cultural Competency* involves the ability to appreciate and interact with diverse international populations. *Personal Growth* refers to the ability to change, develop, and reach one's potential. *Ethics* entails an understanding and practice of ethical behaviors both personally and professionally. *Multidisciplinary Knowledge* deals with a breadth of knowledge across the university curriculum. *Subject Mastery* deals with competence and depth of knowledge within the discipline of Family Science. *Quantitative Skills* refers to proficiency in math, statistics, and research. The ability of *Application of Knowledge* deals with using and applying theoretical information into practice or everyday use. *Life-Long Learning* includes a desire and ability to continue learning after university educational experiences. *Civic Engagement* refers to involvement in one's community and enacting change to better the community. *Interpersonal Competence* refers to teamwork skills, group dynamics, and relationship skills. *Intrapersonal Competence* includes emotional intelligence and the ability to manage stress. *Flexibility and Adaptability* involves the ability to adapt to a rapidly changing world. *Technology Skills* refers to the ability to use and learn new technologies. Participants were provided both the competencies and the definitions in the survey.

Results

        Results from the survey provided some foundational information regarding the ranking of competencies in order of importance, and comparisons were made to identify any potential differences based on a number of demographic factors identified within the sample. The ranking of competencies are listed in ascending order in Table 1. The least important competencies were Quantitative Skills, International Cultural Competency, and Creativity. The most important competencies were Ethics, Critical Thinking, and Cultural Diversity.

        To further explore how respondents viewed competencies for undergraduate students in Family Science, several *t*-test analyses were performed by gender, age, education level, and workplace affiliation (see Tables 2-3). Results identified that men were more likely to rate *Oral Communication Skills* as more important than women. However, women were more likely to rate *Cultural Diversity* competencies more highly than men. No other gender differences were significantly different. A comparison of respondents affiliated with research universities

compared to those affiliated with teaching universities identified three significant differences. Those who self-identified themselves as being affiliated with primarily research focused universities rated *Quantitative Skills, Written Communication Skills,* and *Critical Thinking Skills* more highly than those affiliated with a teaching focused university.

Comparisons were made by age and by educational level and no significant differences were identified by age and only one significant difference was noted by educational level. There was a significant difference between those with a doctoral level of education (M = 9.10) and those with lower levels of education (M = 8.49) with regards to the importance oral communication skills ($t = 2.05$, $p < .05$).

Discussion

The overall purpose of this research project was to explore the perceptions and ratings of competencies in Family Science for undergraduate students. The study evaluated the perceptions of professionals and instructors in the Family Science field who have a vested interested in fostering the development of core Family Science competencies in undergraduate student populations. By better understanding which competencies are rated as more important and how these ratings may vary by institution, gender, age, or education level, the scholarship of teaching and learning in Family Science can better prepare students for success within the profession.

A sample of 113 professionals in Family Science responded to an online questionnaire and rated their perceived importance of 18 competencies for undergraduate students in the discipline. The most important competencies, as rated by the respondents, included *Ethics, Critical Thinking, Cultural Diversity Competency, Subject Mastery,* and *Written Communication Skills*. The competencies rated lowest included *Quantitative Skills, International Cultural Competency, Creativity, Civic Engagement*, and *Technology Skills*. Thus, it appears that for those who mentor undergraduate students, the ability to behave ethically is of highest importance. The ability to critically analyze information, problem solve, and to be a sophisticated consumer of information is viewed highly. Students who are capable of higher levels of thought and problem solving are in all likelihood better prepared to meet the challenges of rapidly changing society. Furthermore, undergraduate Family Science students who are able to effectively collaborate with and appreciate people of diverse backgrounds including ethnicity, race, religion, lifestyle, family structure, or other dimensions of diversity, is of high value. A mastery of the theory and application of Family Science is also valued for undergraduate students. Finally, written communication skills were also rated highly by professionals in Family Science.

Quantitative Skills were least valued as a core competency for Family Science undergraduate students. Perhaps quantitative skills are viewed as being more important for graduate students and less important for those working in family life education settings. Many of the jobs for undergraduate students in Family Science focus on working directly with people, as opposed to work requiring advanced computational skills. It was somewhat surprising that *International Cultural Competency* was rated relatively lower in the ranking given rapid rates of

globalization and worldwide migration. While this competency may be rated relatively low at this time, it is likely that future generations of Family Science scholars will place greater importance on the appreciation of and ability to effectively work with diverse international populations. *Creativity* and *Civic Engagement* were also rated lower. This was also somewhat surprising given that problem solving and critical thinking often require creative solutions and perspectives. Additionally, engagement and being involved in communities would likely foster an appreciation for diversity and competency in this area. While these competencies were all rated relatively lower than other competencies, they were still valued highly by the majority of the respondents.

Some variations were identified in how men and women rate these competencies. It is important to be cognizant of the differences between men and women since the field of Family Science is predominantly female (NCFR, 2013b). Men rated *Oral Communication skills* more highly than women did (see Table 2). This may reflect differing communication styles between men and women, (Canary & Emmers-Sommer, 1997; Tannen, 1994) where men tend to engage in more direct and assertive communication strategies and women in more rapport building communication approaches. Given these differing approaches to communication and that women in the United States may be more prone to express their feelings and emotions (Ingoldsby, Horlacher, Schvaneveldt, & Mathews, 2005), men may see more need to develop *Oral Communication Skills*. Similarly, those with higher levels of education (doctorate degree) were more likely to rate *Oral Communication Skills* as important compared to those with lower levels of education. Perhaps those with doctorate degrees are more likely to present information to larger groups of people and see a greater need for this competency.

Another gender difference was that women rated *Cultural Diversity Competency* more highly compared to men. This finding was not expected and additional research is needed to explain this gender difference. It should be noted that there is variation within each gender and overall the vast majority of men highly valued a competency in cultural diversity.

Finally, differences were noted between those who identified themselves as being affiliated with primarily research based institutions (i.e., research universities) and those who viewed themselves as being affiliated with primarily teaching based institutions (i.e. teaching universities, community colleges). Those affiliated with primarily research institutions rated *Quantitative, Written Communication,* and *Critical Thinking* skills more highly than those from primarily teaching institutions. This may reflect the higher emphasis placed on research and publication activities at such institutions; however, all respondents rated these skills as important regardless of their professional affiliation.

Implications for Preparing Competent Family Science Undergraduate Students

It can be assumed a gap exists between *valuing* a competency and the *mastery* of a given competency for undergraduate students. The challenge placed before the discipline of Family Science and those professionals who engage in mentoring and teaching students, is to develop pedagogies, curriculum, and assessment strategies that include mastery of those competencies deemed most important. Many undergraduate Family Science programs are approved through

the National Council on Family Relations in preparing students to be provisionally Certified Family Life Educators (CFLE) (NCFR, 2013a). These programs must submit an application that is reviewed by a team of scholars and professionals to determine if their curricula provide educational experiences to develop the subject mastery and skills necessary for becoming a CFLE. This is a critical benchmark in unifying the curricula of Family Science which historically has varied widely (Burr & Leigh, 1983).

The gap between factual knowledge in a given area and the actual skills to effectively execute a task has been referred to as the knowledge translation issue or the knowing-doing gap (Cochrane, Olson, Murray, Dupuis, Tooman, & Hayes, 2007; Lang, Wyer, & Haynes, 2007; Rimal, 2000; Samuelowicz, 2001). In other words, while a student may have knowledge of a theory, the ability to effectively apply it may be lacking. Likewise, while ethics was rated as the most important competency in this study, the question remains how can we teach and develop ethics in a way that leads to ethical behaviors and practices? It is important, therefore, that we implement teaching pedagogies that engage students in active learning, the application of theory and knowledge; incorporating service learning experiences and other engaged learning strategies leading to the mastery of core competencies (Meyers & Jones, 1993). Historically, many university instructional pedagogies have relied heavily on the traditional lecture format. While this may be marginally effective with some undergraduate students, it may not impact most students. As a result, it does not lead to the optimal development of abilities in the many key competencies identified in this study (i.e., ethics, cultural diversity competency, interpersonal competence, oral communication skills, and civic engagement). Thus, those who teach undergraduate students must utilize teaching pedagogies that engage students as active participants in the learning process rather than as passive consumers of lectures only to be regurgitated for multiple choice exams.

Finally, teaching professionals in Family Science need to carefully design and implement assessment strategies to identify students who have developed core competencies. Specifically, evaluation or assessment refers to identifying the competencies outlined in a learning experience and provides the basis for recognizing competencies (Maclean, Wilson, & Chinien, 2009). The American Association for Higher Education (AAHE) (1992) identified principles of good practice for assessment and student learning. These principles are briefly summarized as encouraging recognition of educational values, that evaluation is multifaceted, outcomes should be clear, and that evaluation should be experience based, ongoing, collaborative and interdisciplinary. Furthermore, evaluation should promote change, growth, and ultimately meet the needs of students and society. Thus, evaluation must be seen as a multidimensional process. Consequently, if the discipline of Family Science chooses to follow the AAHE recommendations, it must embrace ongoing assessment and evaluation to determine if students are actually developing competencies rather than assuming or hoping students developed these during their undergraduate experience.

Limitations and Future Research Implications

The current research project has limitations. Since this was an exploratory study, the sample was not representative of Family Scientists and therapists. Future research needs to

consist of a more representative sample of Family Science professionals and therapists.   It should also examine which competencies are most important for future employers. For example, which skills and attributes are viewed as most important from the point of view of a human service agency administrator? The National Association of Colleges and Employers (NACE, 2013) survey asked employers what they deemed to be important job related skills and qualities. Results of their study found the following skills to be rated as very or extremely important: 1) the ability to work in a team structure, 2) to make decisions and solve problems, 3) to plan, organize and prioritize work, 4) to verbally communicate with persons, 5) to obtain and process information, 6) to analyze quantitative data, and 7) to possess technical knowledge related to the job. Future research could see how these preferred skills and qualities coincide with professionals in the field of Family Science. Future research could also explore the competencies that students deem valuable. Also, future studies could include a qualitative research measure with open-ended perspectives to capture other domains that may have been overlooked. Seeking the opinions of current and former students on their views of competencies could yield important insights into the teaching and learning process.

Paul L. Schvaneveldt, Ph.D., CFLE is Professor and Chair of the Department of Child and Family Studies at Weber State University in Ogden, UT 84408-1301.

Pamela B. Payne, Ph.D. is an assistant professor in the Department of Child and Family Studies at Weber State University in Ogden, UT 84408-1301.

Daniel S. Hubler, Ph.D. is an assistant professor in the Department of Child and Family Studies at Weber State University in Ogden, UT 84408-1301.

Chloe D. Merrill, Ph.D., CFLE is Professor of Child and Family Studies in the Department of Child and Family Studies and Associate Dean of the Moyes College of Education at Weber State University in Ogden, UT 84408-1301.

References

Achtenhagen, F. (2001). Criteria for the development of complex teaching-learning environments. *Instructional Science, 29*, 361-381.

Adams, R.A., Dollahite, D.C., Gilbert, K.R., & Keim, R.E. (2001). The development and teaching of the ethical principles and guidelines for family scientists. *Family Relations, 50*, 41-48.

Arguelles, A., & Gonczi, A.E., (2000). *Competency based education and training: A world perspective*. Mexico City: Grupo Noriego Editores.

American Association of Family and Consumer Sciences (2013). *AAFCS code of ethics. Retrieved from http://www.aafcs.org/aboutus/codeethics.asp*

American Association for Higher Education (1992). *Nine principles of good practice for assessing student learning.* Retrieved from: http://www.dartmouth.edu/~oir/assessmenteval/tools/9principles.html

Barnett, R. (1994). *The limits of competence: Knowledge, higher education, and society*. Buckingham, UK: Open University Press.

Benson, M.J., Allen, K.R., Few, A.L., Roberto, K.A., Blieszner, R., Meszaros, P.S., Henderson, T.L. (2006). Transforming the master's degree in human development and family science. *Family Relations, 55*, 44-55. DOI: 10.1111/j.1741-3729.2006.00355.x

Beutler, I.F., Burr, W.R., Bahr, K.S., & Herrin, D.S. (1989). The family realm: Theoretical contributions for understand its uniqueness. *Journal of Marriage and the Family, 51*, 805-816.

Buck, J., Campbell, C., Chatelain, R., Higginson, R., & Merrill, C. (1999). *Competencies for family life educators.* Minneapolis: National Council on Family Relations

Burr, W. (1992). Family science. In Peterson's Guides (Ed.). *Peterson's guide to graduate programs in the humanities and social sciences 1993* (Vol. 2, 27th ed, pp. 437-438). Princeton, NJ: Peterson's Guides.

Burr, W.R., Day, R.D., & Bahr, K.S. (Eds.) (1993). *Research and theory in family science*. Pacific Grove, CA: Brooks/Cole.

Burr, W.R., & Leigh, G.K. (1983). Famology: A new discipline. *Journal of Marriage and the Family, 45*, 467-480.

Canary, D.J., & Emmers-Sommer, T.M. (1997). *Sex and gender differences in personal relationships.* New York, NY: The Guilford Press.

Cochrane, L. J., Olson, C. A., Murray, S., Dupuis, M., Tooman, T., & Hayes, S. (2007). Gaps between knowing and doing: Understanding and assessing the barriers to optimal health care. *Journal of Continuing Education in the Health Professions, 27(2)*, 94-102.

Day, R., Quick, D., Leigh, G., & McKenry, P. (1988). Professional training in family science: A review of undergraduate and graduate programs. *Family Science Review, 1,* 313-348

Eiklenborg, L.L., Bayley, B., Cassidy, D., Davis, J.C., Hamon, R.R., Forence-Houk, & Tymes, V. (2004). *Family science: Professional development and career opportunities*. Minneapolis: National Council on Family Relations.

Enkenberg, J. (2001). Instructional design and emerging teaching models in higher education. *Computers in Human Behavior, 17,* 495-506.

Hamon, R. R., & Smith, S.R. (2014). The discipline of family science and the continuing need for innovation. *Family Relations.*

Hans, J.D. (2013, November). Naming the family field: Family science, family studies, or something else? Paper presented at the National Council on Family Relations Conference, San Antonio, TX.

Hans, J.D. (2005). *Graduate and undergraduate study in marriage and family* (2nd ed.). Minneapolis: National Council on Family Relations.

Hatcher, R.L., Fouad, N.A., Campbell, L.F., McCutcheon, S.R., Grus, C.L., & Leahy, K.L. (2013). Competency-based education for professional psychology: Moving from concept to practice. *Training and Education in Professional Psychology, 7,* 225-234. DOI: 10.1037/a0033765

Hollinger, M.A. (2002). Family science: Historical roots, theoretical foundations, and disciplinary identity. *Journal of Teaching in Marriage and Family, 2*, 299-328.

Hoogveld, A.W.M., Paas, F., & Jochems, W.M.G. (2005). Training higher education teachers for instructional design of competency-based education: Product-oriented versus process-oriented worked examples. *Teaching and Teacher Education, 21*, 287-297.

Ingoldsby, B. B., Horlacher, G. T., Schvaneveldt, P. L., & Matthews, M. (2005). Emotional expressiveness and marital adjustment in Ecuador. *Marriage and Family Review, 38*, 25-44.

Kaslow, N.J., Celano, M.P., & Stanton, M. (2005). Training in Family Psychology: A competencies-based approach. *Family Process, 44*, 337-353.

Kerr, S. T., (1996). Visions of sugarplums: The future of technology, education and the schools. In S. T. Kerr (Ed.), *Ninety-fifth Yearbook of the National Society for the Study of Education: Part II. Technology and the future of schooling* (pp. 1-27). Chicago: National Society for the Study of Education.

Koblinsky, S.A., Kuvalanka, K.A., & McClintock-Comeaux, M. (2006). Preparing future faculty and family professionals. *Family Relations, 55*, 29-43.

Lang, E.S, Wyer, E.S., & Haynes, B. (2007). Knowledge translation: Closing the evidence-to-practice gap. *Annals of Emergency Medicine, 49(3),* 355-363.

Levesque, K., Lauen, D., Teitelbaum, P., Alt, M., Librera, S. & MPR Associates Inc. (2000). *Vocational education in the United States: Toward the year 2000 (029).* Washington, DC: US Department of Education, Office of Educational Research and Improvement.

Maclean, R., Wilson, D., & Chinien, C. (editors). (2009). International handbook of education for the changing world of work: Bridging academic and vocational learning - Volume 1. New York, NY: Springer.

Meyers, C. & Jones, T.B. (1993). *Promoting active learning: Strategies for the college classroom.* San Francisco: Jossey-Bass.

National Association of Colleges and Employers (NACE) (2013). *The candidate skills/qualities employers want.* Retrieved from: https://www.naceweb.org/about-us/press/skills-qualities-employers-want.aspx

National Council on Family Relations (NCFR) (2013a). *Certified Family Life Education Certification for academic institutions.* Retrieved from: http://www.ncfr.org/cfle-certification/academic-institutions

National Council on Family Relations (NCFR) (2013b). *Unpublished member attribute report.* National Council on Family Relations, Minneapolis, MN.

National Education Association (NEA) (2013). Retrieved from http:www.nea.org NCFR Task Force on the Development of a Family Discipline (1988). What is family science? *Family Science Review, 1,* 87-101.

Powell, L.H., & Cassidy, D. (2001). *Family life education: An introduction.* Mountain View, CA: Mayfield Publishing.

Pratt, D. (1998). *Five perspectives on teaching in adult and higher education.* Malabar, FL: Krieger Publishing Company.

Rimal, R. N. (2000). Closing the knowledge-behavior gap in health promotion: The mediating role of self-efficacy. *Health Communication, 12(3)*, 219-237.

Samuelowicz, K. (2001). Revisiting academics' beliefs about teaching and learning. *Higher Education, 41,* 299-325.

Schvaneveldt, P. (2013, June). *An educated Family Studies student.* Paper presented at the Teaching Family Science Conference, Annapolis, MD.

Tannen, D. (1994). *Gender and discourse.* New York, NY: Oxford University Press.

Tudge, J., & Scrimsher, S. (2003). Lev S. Vygotsky on education: A cultural-historical, interpersonal, and individual approach to development. In B.J. Zimmerman & D.H. Schunk (Eds.), *Education psychology: A century of contributions* (pp. 207-228). Mahwah: NJ: Erlbaum.

Van Der Horst, H., & McDonald, R. (1997). *OBE: A teacher's manual.* Pretoria, Kagiso.

Vermunt, J.D., & Verloop, N. (1999). Congruence and friction between learning and teaching. *Learning and Instruction, 9*, 257-280.

Vygotsky, L.S. (1978). *Mind in society: The development of higher psychological process.* (M. Cole, V. John-Steiner, S. Scribner, & E. Souberman, Trans.). Cambridge, MA: Harvard University Press.

Table 1

Mean Values in Ascending Order of the Perception of Importance of Competencies for Family Science Undergraduate Students (n=113)

Competency	Mean (range 1-10)	Sd
Quantitative Skills	7.40	1.42
International Cultural Competency	7.67	1.78
Creativity	8.04	1.47
Civic Engagement	8.07	1.62
Technology Skills	8.18	1.29
Multidisciplinary Knowledge	8.52	1.32
Personal Growth	8.58	1.41
Life-Long Learning	8.59	1.55
Intrapersonal Competence	8.81	1.26
Oral Communication Skills	8.87	1.41
Flexibility	8.89	1.30
Interpersonal Competence	9.01	.99
Application of Knowledge	9.08	1.05
Written Communication Skills	9.13	1.23
Subject Mastery	9.13	1.12
Cultural Diversity	9.13	1.07
Critical Thinking	9.34	.92
Ethics	9.57	.74

Table 2

Comparison of Male and Female Respondents on Ranking of Importance on Undergraduate Family Science Student Competencies (n=113)

Item	Mean (Men parentheses)	sd (Men in parentheses)	t-value
Quantitative Skills	7.34 (7.60)	1.42 (1.41)	.81
International Competency	7.20 (7.81)	2.33 (1.58)	1.23
Creativity	8.07 (7.96)	1.45 (1.57)	.31
Civic Engagement	8.05 (8.16)	1.69 (1.41)	.34
Technology Skills	8.30 (7.76)	1.29 (1.20)	1.93
Multidisciplinary Knowledge	8.63 (8.16)	1.20 (1.68)	1.30
Personal Growth	8.61 (8.44)	1.26 (1.85)	.44
Life-Long Learning	8.59 (8.60)	1.49 (1.77)	.24
Intrapersonal Competence	8.86 (8.64)	1.09 (1.73)	.61
Oral Communication Skills	8.75 (9.28)	1.50 (.84)	2.27*
Flexibility	8.97 (8.64)	1.16 (1.71)	.90
Interpersonal Competence	9.02 (8.96)	.99 (.98)	.28
Application of Knowledge	9.05 (9.20)	1.08 (.91)	.72
Written Communication Skills	9.05 (9.44)	1.30 (.87)	1.77
Subject Mastery	9.07 (9.36)	1.16 (.95)	1.28
Cultural Diversity	9.31 (8.52)	.906 (1.36)	2.74**
Critical Thinking	9.31 (9.44)	.95 (.82)	.69
Ethics	9.58 (9.52)	.72 (.82)	.33

* p < .05

Table 3

Comparison of Research University and Teaching University Respondents on Ranking of Importance on Undergraduate Family Science Student Competencies (n=100)

Item	Mean (Teaching in parentheses)	sd (Teaching in parentheses)	t-value
Quantitative Skills	7.63 (7.08)	1.33 (1.38)	1.91*
International Competency	7.84 (7.50)	1.68 (1.88)	.91
Creativity	7.95 (8.17)	1.44 (1.46)	-.70
Civic Engagement	8.02 (8.28)	1.60 (1.52)	-.81
Technology Skills	8.03 (8.31)	1.23 (1.31)	-1.03
Multidisciplinary Knowledge	8.61 (8.22)	1.26 (1.42)	1.37
Personal Growth	8.59 (8.56)	1.24 (1.59)	.12
Life-Long Learning	8.63 (8.69)	1.40 (1.39)	-.24
Intrapersonal Competence	8.89 (8.53)	1.06 (1.61)	1.21
Oral Communication Skills	8.92 (8.89)	1.46 (1.35)	.11
Flexibility	8.95 (8.72)	1.06 (1.72)	.73
Interpersonal Competence	8.98 (9.17)	.95 (1.00)	-.89
Application of Knowledge	9.23 (9.06)	.96 (.96)	.90
Written Communication Skills	9.42 (8.75)	.91 (1.50)	2.45*
Subject Mastery	9.30 (9.03)	1.00 (1.11)	1.21
Cultural Diversity	9.27 (8.94)	1.10 (1.06)	1.43
Critical Thinking	9.52 (8.97)	.73 (1.16)	2.54*
Ethics	9.67 (9.50)	.64 (.81)	1.09

*$p < .05$