

Reflections on Family Science Education: The Importance of Technology, Experience, and Diversity in the Classroom

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ABSTRACT. Reflecting on our unique journeys and shared experiences as family science educators, as well as empirical and pedagogical literature, we review three salient issues that in our experiences impact family science classrooms: (1) integration of technology, (2) how experience does not equate expertise, and (3) the importance of representing diversity. For each issue, we identify potential strengths and challenges as well as offer possible solutions to challenges based on relevant literature and our own experiences. We also draw connections to how these issues relate directly to student outcomes as they pertain to our students' preparedness to enter family science oriented fields. Ultimately, our reflections serve two purposes: (1) they allows us to critically examine what we know, uncovering multiple truths in the process and (2) they may prove helpful to other family science educators seeking to become more effective in their teaching endeavors.

Keywords: family science, teaching, career trajectories

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In this paper we focus our reflection on issues in family science classrooms, based on our journeys as family science educators. The four authors' paths as family science educators intersected at the University of Arizona, but our prior education and career paths since have varied. We are family science educators at four different universities across the U.S. and hold different positions (e.g., assistant professor, associate professor, director of online HDFS degree programs). Despite our varied experiences in different family science programs, we uncovered common multiple truths as we collectively engaged in reflective conversations. These truths focused on the following three issues impacting family science classrooms: 1) integration of technology, 2) how experience does not equal expertise, and 3) diversity: representing minorities in the classroom. We recognize that there are many other important issues in family science education classrooms, but we focus our reflection here on those which we have found to be most salient in our shared personal experiences, supplementing our experiences with relevant pedagogical literature and offering both empirically and experientially-based suggestions for effective family science education.

We begin by focusing on the issue of integrating technology into classrooms. Here, we consider the strengths and challenges regarding a breadth of topics, such as the use of technology to integrate different types of media into class discussions, online course management systems, and the recognition that students come with differing experiences and confidence in using technology. Next, we discuss the issue of helping family science students understand that while their experiences are valuable, they do not necessarily capture the scope, theory, and empirical evidence produced by the field. Conversely, we recognize and acknowledge the benefits self-disclosing one's experiences can have for student learning. We provide ideas for how to most effectively self-disclose as well as the benefits of popular films, in lieu of self-disclosure, as both have been found to aid in student learning. We conclude with a focus on the importance of diversity in the classroom and offer empirically based suggestions for ways family science educators can represent diversity as an integral classroom element.

Integration of Technology

Incorporating technology into the classroom is becoming more common and expected by many students (Young, 2004). Further, technology skills have been identified by family science professionals as an important competency for undergraduates (Schvaneveldt, Payne, Hubler, & Merrill, 2013). Students now gather general information using their phones, touchpads, laptops, desktops, videogame consoles, and wireless televisions (Parker, Lenhart, & Moore, 2011), and indeed many use technology to increasingly glean information specific to their studies (Flanagin & Metzger, 2001).

Outside of the classroom, creating a user friendly webpage can be advantageous for student engagement and learning. Online course management systems (e.g., Desire to Learn, Blackboard Learn, ANGEL) are available at most universities. Even for face-to-face courses, using these companion sites provides centralized locations for all topics related to the course (e.g., syllabus, articles, outside readings), easy access for students to the gradebook, and

immediate feedback on exams and course assignments. For example, Ballard (2002) found that for students in three family studies classrooms, the top three rated features of the class Blackboard page were the gradebook, course documents, and announcements.

Ballard (2002) also reported that students in these family studies classes were interested in the availability of online practice quizzes, a feature she was not currently offering to students at the time of her research. Further, other researchers have reported the popularity and effectiveness of such activities (Sanders & Morrison-Shetlar, 2001; Wernet, Olliges, & Delicath, 2000). One of the authors of the present paper (Totenhagen) has integrated this practice into her courses, particularly for material that students have had difficulty understanding. In addition to traditional lecture and class discussions, students have the opportunity to participate in practice quizzes online for these topics, listen to narrated scenarios and select what construct the scenarios are exemplifying, and complete matching activities. These additional activities can be valuable for providing another option to practice and apply course content. Another author of this paper (Corkery) has integrated “Check Yourself” activities into online learning modules as well. These activities serve a similar end as practice quizzes, narrated scenarios, and matching activities; however, these are not supplementary, but required of all students as they progress through course material.

Further, students are not primed to sit and listen to a lecture for 50 minutes or more (Middendorf & Kalish, 1996). Instead, educators are encouraged to explore ways to make the material engaging and relevant for students, which can often be done with the use of technology. Successful strategies we have used include incorporating pop culture references, stories from the internet and/or newspapers, and showing videos and/or playing songs that are relevant for the topic being discussed using media and technologies available in the classroom. For example, we have used excerpts from the TV show “Modern Family” to illustrate tenets of family systems, news stories about women who have been kidnapped and found (e.g., Jaycee Lee Dugard, Elizabeth Smart) to illustrate tenets from ambiguous loss, and even pins from Pinterest (a sign reading “Sharks have been spotted at this pool; they come out when they smell pee”) to provide a humorous way to apply tenets of program evaluation. The goal of such exercises is to help students see academic concepts as they are represented in their world.

Instructors can also hold online chats and discussions, a feature offered through most online course management systems. Chats allow for real-time (synchronous) interaction outside of the classroom, which can be especially useful in strictly online courses (Johnson, 2006). Discussions are an asynchronous method allowing for more detail oriented engagement with the course material, often in a more casual manner (Johnson, 2006). For example, we have asked students to post relevant pop culture examples and then explain how their example relates to course material. In doing so, students often begin discussing additional ideas and connections amongst themselves.

In addition, one author of the present paper (Corkery) includes hyperlinks across the course content pages of online courses. These hyperlinks engage the students in several ways. First, hyperlinks embedded within content allow students to easily and instantly navigate to previously covered content when it is mentioned in the context of new material. For example, in a lesson about assessing validity of results, the content may read "If the sample was selected

using simple random sampling it is less likely to be biased than if a non-probability sampling method was used. Overall, [probability sampling](#) methods will tend to have better external validity than [non-probability](#) methods." Here, the phrases "probability sampling" and "nonprobability" are included as clickable hyperlinks. When students click these indicated phrases, they are immediately redirected to where they first learned about these concepts within previous lessons. This allows for student-learning to become less linear and more connective across course topics.

By building in the necessary connections through the use of hyperlink technology, students may be inclined to become more connective and integrative in their thinking about course material. Similarly, hyperlinks help to create instant study strategies whereby individual learning objectives that will be assessed by a particular evaluation can appear as hyperlinks that redirect students to precisely where that material was presented previously. Finally, hyperlinks can be integrated to direct students to external, supplemental learning resources. For instance, in an effort to expose students to the most up to date on specific topics (e.g., legalization of same-sex marriages across states), embedded hyperlinks can be used to direct students to the primary resources which house up-to-date resources. Our personal experiences have found these technology-enhanced activities to be valuable in helping online and distance students connect to material with additional depth.

Of course, the usage of technology needs to be thoughtful and purposive, and it is not without potential pitfalls. The more technology an instructor uses the more room there is for students to become distracted (Young, 2004). As such, family science educators need to select technologies that will ultimately enhance learning which often requires careful thought and consideration about the value the technology will add. Lastly, the use of technology may introduce obstacles for some students. Not all students come into the classroom with the same resources (i.e., ownership of laptops or smartphones) or experience (i.e., knowledge of how to navigate certain websites or technologies; Smith & Caruso, 2010). Thus, when incorporating technology, care should be taken to ensure the educational benefit. Students must have access to the material and understand the technology being used.

Experience Does Not Equal Expertise

A second issue in family science classrooms we often face is the issue that experience does not equal expertise. That is, students come into our classes with their own experiences, which they consider meaningful and important. That being said, we strive to teach students that their personal experiences are not necessarily indicative of broader patterns demonstrated by theory and empirical research in the social sciences. This reliance on personal experiences often becomes apparent on assignments and exams wherein students make blanket statements without referencing theoretical or empirical evidence. Addressing this assumption can prove challenging, as students identify "N of 1" examples that they see as debunking science. One of our jobs as family science educators is to teach students the patterns, and not focus on the exceptions. We each have spent time in the classroom explaining how the field of family science is based on theory and empirical research, and how assessment of learning in family science will be evaluated (e.g., theory and research, rather than personal experiences). While we encourage

students to share their experiences and connect/apply course concepts, we must carefully navigate such discussions.

Conversely, students sharing their own experiences can be advantageous as it fosters interesting and lively classroom discussions. We are teaching about relationships, families, and human development, in which all students have experience. When given the opportunity, and in the proper context, students enjoy sharing their experiences with others, as many times this creates an inviting and interactive classroom environment that keeps students interested and boosts student outcomes (Keefe & Jenkins, 2000). However, such self-disclosure need not be limited to students. Researchers have examined the influence of teacher self-disclosure and found that self-disclosure of information is helpful to students when it is perceived as intentional, relevant to the topic being discussed, and positive in nature (Cayanus & Martin, 2008; Lannutti & Strauman, 2006). For example, when lecturing on same-sex families and the debate over marriage equality, one author of this paper (Muraco) discusses the additional legal forms he and his same-sex partner had to complete in order to guarantee the same rights as married couples. He does this to help ground students in the reality that while marriage may be “just a piece of paper” to some, society places value on the institution of marriage and it grants specific rights and privileges that are currently not afforded to all members of society. Thus, self-disclosure can be useful to foster discussion in the classroom and has been found to, when delivered appropriately, help students learn.

The idea of using students’ experiences to help them understand and relate the material we teach is based on existing research. The concept of ‘funds of knowledge’ posits that people are competent, have knowledge, and that knowledge comes from their life experiences (Gonzalez, Moll, & Amanti, 2006). Educators can benefit if they utilize the knowledge students bring to the classroom with the aim of helping students understand and connect ideas and concepts from the field. However, a key component to successful implementation of this approach is reciprocity, in which we establish a social relationship and also share our relevant and appropriate experiences and knowledge (Moll, Amanti, Neff, & Gonzalez, 1992).

In addition to using personal experiences to aid in the educational process, family science educators have increasingly utilized popular films to help exemplify various ideas and concepts. Researchers have found that popular films, compared to educational films, are better at introducing and integrating multiple complexities within a relationship, which supports the relationships people experience in the “real world” (Bluestone, 2000). Other researchers have found that the use of film in the classroom helps create a shared language that subsequently increases class discussion (Leon & Angst, 2005), enhances active learning and the development of critical thinking skills (Marshall, 2003), and is a valuable tool in teaching new concepts, perspective taking, diversity, and the effects of historical time period on family life (Adams & Hall, 2009).

Diversity: Representing Minorities

The final issue we discuss relates to diversity in the classroom with respect to race and ethnicity, political and religious views, social class, sex, and value diversity (Pascarella, 2006). Representing diversity in family forms, lived experiences, and individuals is arguably a mindful

decision many family science educators make. Further, it is an implicit, if not explicit, expectation within many family science and human development departments. Often such diversity is represented by devoting entire courses (e.g., cross cultural human development), sections of courses (e.g., a section on sexuality and gender), or lectures (e.g., a lecture on immigrant families) to discussing diversity and the importance of inclusion. While we agree that diversity is an integral part of any comprehensive family science curriculum, we also believe subtle ways of introducing diversity into one's classes can be just as impactful.

The need to infuse courses with diversity arises for a number of reasons. First, the United States has and will continue to see an increase in the numbers of families from different backgrounds, ethnicities, socioeconomic statuses, family structures, religions, and languages (Doucet & Hamon, 2007). In addition, it is important to take the time to incorporate various individuals and families into our classrooms as an increasing percentage of undergraduate students no longer fit the "traditional" model (e.g., White, middle or upper-class, aged 18 to 22, attending a four-year institution full time, living on campus, not working, etc.; Pascarella, 2006). Further, many students will continue their careers and work with families in diverse settings and from diverse backgrounds, and the ability to communicate and interact effectively in diverse groups and settings is increasingly becoming a fundamental priority in higher education (Lee, Davis, Khaw, & Nittolo, 2014).

Feminist perspective and critical race theory are two frameworks family science educators can employ to help them incorporate discussions of diversity into their curriculums. The feminist perspective has been posited as being effective in helping students "move past the 'tourist' or etic understanding to a more reflective or emic understanding" (Roy & Campbell, 2012, p. 44). This perspective requires the instructor to identify his or her bias and subjectivities, promote equality and respect in the classroom by reducing hierarchies, empowering students to understand how their bias and actions affect others, and caring for students throughout the learning process (Allen, 2009; Blaisure & Koivunen, 2003). Specific to their utilization of feminist perspective to teach diversity, Roy and Campbell (2012) encourage instructors to promote dialogue, encourage respect, and create a classroom environment wherein students feel safe enough to disagree.

Critical race theorists posit that race is a social construction that permeates all aspects of social life and that race-based ideology is threaded throughout society (Ortiz & Jani, 2010). To better understand the lived experiences of individuals and families, family science educators must examine the societal norms regarding race that are associated with different experiences for individuals. Critical race theorists are also social justice-oriented, locating and giving voice to those who have been marginalized (Delgado & Stefancic, 2001). While Ortiz and Jani (2010) offer specific suggestions for how best to incorporate diversity within the curriculum for social workers, there is little reason to suspect such an approach would not also be successful within family science curriculum. Specifically, Ortiz and Jani (2010) posit that to be effective at understanding the experiences of others one must include institutional and structural arrangements, recognize the intersectionality of multiple identities, and integrate an explicit social justice orientation. Such an approach can help family science students better understand the realities of those who are unlike themselves.

Either of the above theoretical approaches can be coupled with various teaching strategies to create effective learning environments for family science students to learn about diverse individuals and families. For example, Wright (2013) outlines how family science educators can use family case studies to expose students to diverse families and family experiences, citing Koropecj-Cox, Cain, and Coran (2006) as educators who have created family case studies comprised of families of various demographic makeups, family structures, race/ethnicities, and incomes. Other strategies include showing positive images of different types of families (e.g., interracial, same-sex, multigenerational families) in lecture, even when the lecture is not explicitly about them. Regardless of the approach taken, representing diversity in our classes can have positive cognitive (Antonio, 2004; Gurin, Dey, Hurtado, & Gurin, 2002; Hu & Kuh, 2003; Milem, 2003), affective (Bowman, 2010), and social (Goodman, 2008) effects. As such, as family science educators we should strive to be inclusive in the materials we present and discuss.

We have provided information about our own personal practices and experiences, as well as highlighted strategies both outside and within the field of family science specific to educational strategies for family science. We also note that several volumes have been entirely dedicated to the treatment and inclusion of diversity in family science more generally and recommend these titles as further reading (e.g., Ballard & Taylor, 2002; Demo, Allen, & Fine, 2000; Sherif Trask & Hamon, 2007).

Concluding Remarks

Like any subject, there are challenges and advantages to the teaching of family science. We have highlighted what we believe to be the most salient issues facing family science educators through shared critical reflection of our own experiences as family science educators. We have also offered practices that we believe are useful and aid in the teaching of family science based on the literature and our individual experiences. We have undertaken this reflective practice as a means to make ourselves better family science educators. We hope we have provided some insight for other family science educators in the process.

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References

- Adams, R. A., & Hall, S. S. (2009). Teaching relationship concepts using media clips. *Family Science Review, 14*, 93-104.
- Allen, K. R. (2009). Keeping the feminist in our teaching: Daring to make a difference. In S. A. Lloyd, A. L. Few, & K. R. Allen (Eds.), *Handbook of feminist family studies* (pp. 351-359). Thousand Oaks, CA: Sage.
- Antonio, A. L. (2004). The influence of friendship groups on intellectual self-confidence and educational aspirations in college. *Journal of Higher Education, 75*, 446-472.
- Ballard, S. M. (2002). The use of course web sites in traditional face-to-face instruction. *Journal of Teaching in Marriage and Family, 2*, 179-200.
- Ballard, S. M., & Taylor, A. C. (2011). *Family Life Education with diverse populations*. Thousand Oakes, CA: Sage Publications.
- Blaisure, K. R., & Koivunen, J. M. (2003). Family science faculty members' experiences with teaching from a feminist perspective. *Family Relations, 52*, 22-32.
- Bluestone, C. (2000). Feature films as teaching tools. *College Teaching, 48*, 141-147.
- Bowman, N. A. (2010). Assessing learning and development among diverse college students. In S. Herzog (Ed.), *Special Issue: Diversity and Educational Benefits* (pp. 53-71). *New Directions in Institutional Research, 145*. San Francisco, CA: Jossey-Bass.
- Cayanus, J. L. & Martin, M. M. (2008). Teacher self-disclosure: Amount, relevance, and negativity. *Communication Quarterly, 56*, 325-341.
- Delgado, R., & Stefancic, J. (2001). *Critical race theory: An introduction*. New York, NY: New York University Press.
- Demo, D. H., Allen, K. R., & Fine, M. A. (2000). *Handbook of family diversity*. New York, NY: Oxford University Press.
- Doucet, F., & Hamon, R. R. (2007). A nation of diversity: Demographics of the United States of America and their implications for families. In B. S. Trask & R. R. Hamon (Eds.), *Cultural diversity and families: Expanding perspectives* (pp. 20-43). Thousand Oaks, CA: Sage.
- Flanagin, A. J., & Metzger, M. J. (2001). Internet use in the contemporary media environment. *Human Communication Research, 27*, 153-181.

- Gonzalez, N., Moll, L. C., & Amanti, C. (2006). *Funds of knowledge: Theorizing, practices in households, communities, and classrooms*. Mahwah, NJ: Lawrence Erlbaum Associates, Publishers.
- Goodman, C. C. (2008). Retaining diversity in the classroom: Strategies for maximizing the benefits that flow from a diverse student body. *Pepperdine Law Review*, 35, 663–704.
- Gurin, P., Dey, E., Hurtado, S., & Gurin, G. (2002). Diversity and higher education: Theory and impact on educational outcomes. *Harvard Educational Review*, 72, 330–366.
- Hu, S., & Kuh, G. D. (2003). Diversity experiences and college student learning and personal development. *Journal of College Student Development*, 44(3), 320–334.
- Keefe, J. W., & Jenkins, J. M. (2000). *Personalized instruction: Changing classroom practice*. West Larchmont, NY: Eye on Education.
- Koropecyk-Cox, T., Cain, C., & Coran, J. (2006). Small-group learning and hypothetical families in a large introductory course. *Marriage & Family Review*, 38, 21-39.
- Johnson, G. (2006). Synchronous and asynchronous text-based cmc in educational contexts: A review of recent research. *TechTrends*, 50, 46-53.
- Lannutti, P. J. & Strauman, E. C. (2006). Classroom communication: The influence of instructor self-disclosure on student evaluations. *Communication Quarterly*, 54, 89-99.
- Lee, S., Davis, B., Khaw, L., & Nittolo, A. (2014). Diversity education for future family science professionals: Interactive and reflective teaching implications based on Hollinger's Model. *Family and Environment Research*, 52, 111-125.
- Leon, K., & Angst, E. (2005). Portrayals of stepfamilies in film: Using media images in remarriage education. *Family Relations*, 54, 3-23.
- Marshall, E. O. (2003). Making the most of a good story: Effective use of film as a teaching resource for ethics. *Teaching Theology and Religion*, 6, 93-98.
- Middendorf, J., & Kalish, A. (1996). The “change-up” in lectures. *National Teacher Learning Forum*, 5, 1-5.
- Milem, J. (2003). The educational benefits of diversity: Evidence from multiple sectors. In M. Chang, D. Witt, J. Jones, & K. Hakuta (Eds.), *Compelling interest: Examining the evidence on racial dynamics in higher education* (pp. 126-169). Stanford, CA: Stanford University Press.
- Moll, L. C., Amanti, C., Neff, D., & Gonzalez, N. (1992). Funds of knowledge for teaching: Using a qualitative approach to connect homes and classrooms. *Theory into Practice*, 31, 132-141.

- Ortiz, L., & Jani, J. (2010). Critical race theory: A transformational model for teaching diversity. *Journal of Social Work Education, 46*, 175-193.
- Pascarella, E. T. (2006). How college affects students: Ten directions for future research. *Journal of College Student Development, 47*, 508-520.
- Parker, K., Lenhart, A., & Moore, K. (2011, August 28). The digital revolution and higher education: College presidents, public differ on value of online learning. Retrieved from www.pewsocialtrends.org/files/2011/08/online-learning.pdf
- Roy, R. R. N., & Campbell, K. (2012). Applying feminist perspectives to teaching diversity: The experiences of two female professors. *Family Science Review, 17*, 44-53.
- Sanders, D. W., & Morrison-Shetlar, A. I. (2001). Student attitudes toward Web-enhanced instruction in an introductory Biology course. *Journal of Research on Computing in Education, 33*, 251-263.
- Schvaneveldt, P. L., Payne, P. B., Hubler, D. S., & Merrill, C. D. (2013). Undergraduate competencies in Family Science: An exploratory study. *Family Science Review, 18*, 61-76.
- Sherif Trask, B., & Hamon, R. R. (2007). *Cultural diversity and families: Expanding perspectives*. Thousand Oaks, CA: Sage Publications.
- Smith, S. D., & Caruso, J. B. (2010). The ECAR study of undergraduate students and information technology, 2010. *EDUCAUSE, October 2010*, 1-13.
- Wernet, S. P., Olliges, R. H., & Delicath, T. A. (2000). Postcourse evaluations of WebCT classes by Social Work students. *Research on Social Work Practice, 10*, 487-505.
- Wright, A. C. (2013). Teaching about diverse families through case studies and authentic performance assessment. *Family Science Review, 1*, 1-22.
- Young, J. R. (2004). When good technology means bad teaching. *Chronicle of Higher Education, 51*, A31. Available online at: <http://chronicle.com/free/v51/i12/12a03101.htm>.