

Teacher Perceptions of Gender Bias in Education
and Recommendations for
Teacher Training

by

Heidi Scott Kretz

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Alan A Block

Dr. Alan Block

The Graduate School

University of Wisconsin-Stout

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**The Graduate School
University of Wisconsin-Stout
Menomonie, WI**

Author: Kretz, Heidi S.

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ABSTRACT

The persistence of inequity based on gender, and gender's changing nature, make it imperative that pre-service teachers become knowledgeable and equipped to monitor their own practice so that they do not perpetuate this inequity. The primary question is as follows: What do teachers know about gender equity and bias in education today? Additional questions include the following: To what extent do schools of education prepare teachers for recognizing and eliminating gender bias? What resources do teachers have for dealing with and monitoring gender equity within their classrooms?

This study on gender equity involved a qualitative approach. The first portion of the research was purely designed to activate teachers' prior knowledge of trends in education concerning gender equity and gender disparity: subjects were given the *SIQ-III Test* (Appendix A) developed by Cassidy, Garcia, and Boggs, an updated version of

Cassidy's original 1977 *The SIQ Test*, or the "Sexist Intelligence Quotient," that tests respondents' knowledge of current gender equity issues (Cassidy, Garcia, & Boggs, 2005, p. 142). This "test" was used as an entry point for beginning discussions of gender equity in the second phase of the research. Although answers were discussed, this test has not been tested for validity; it is a means to a discussion. The interviewer opened the focus groups with a discussion of the results of the test. Transcripts of the focus group discussions were analyzed to determine to what extent gender is a topic of conversation for pre-service teachers and to illuminate common threads and themes concerning teacher perceptions of gender equity revealed through the focus group discussions.

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Chapter I: Introduction

Statement of the Problem

Although we have made tremendous strides forward in gender equity since Title IX, gender equity is, in reality, still inequity. In a recent study, Zittleman recorded personal accounts of middle school students to shed light on current gender equity issues. Zittleman (2006) found that, "Their words suggest that much of the gender equity movement has fallen far short of its goals, and that both girls and boys experience a world that is more similar than different to the one that existed a generation ago (p. 2). Boys today are still constrained by sex-stereotypical roles and the confines of a homophobic society: "Boys of all ages are keenly aware of the strict behavioral boundaries set by the masculine ideal and the high price that is exacted from them for playing 'out of bounds'" with punishments ranging from name calling to physical violence (Zittleman, 2006, p. 39). Girls, too, are still hemmed in by sex-stereotypical models for femininity; the girls in the study revealed that "Girls were not expected to do well in school, but if they did succeed, they were expected to hide their achievements for fear of being called a nerd" (Zittleman, 2006, p. 33). Many educators, however, may not be aware of this disparity: "Commentators now proclaim on the airwaves that gender bias no longer exists, except for men who are victimized by women" (Sadker, 1999, p. 22). Researchers debate whether education today is cheating boys or girls. Connell (1996) notes that "The media love to turn the issue into a pro-girl versus pro-boy (or pro-feminist versus antifeminist) shootout" (p. 207). The researcher goes on to address the complexity of the issue asking, "How real is the formal equality provided by coeducation? Are girls benefited in some ways, boys in others?" (Connell, 1996, p. 207); these are the questions

that need to be addressed in schools of education today. By examining what teachers know about this complex issue and how they were trained to deal with gender equity, the researcher hopes to illuminate a clear starting point for attacking gender disparity in education.

One area in which gender inequity is still evident is in standardized test scores. Even as we have made progress in girls' enrollment in honors and advanced placement math and science courses (The College Board, 2007), disparity in outcomes remains. "Tests continue to reflect a gender gap, particularly in high-stakes tests like the SAT" (Sadker, 1999, p. 25; The College Board, 2007). Sadker (1999) notes, "Males continue to outscore females on both the math and the verbal sections of the SAT" (Sadker, 1999, p. 25; The College Board, 2007), showing that disparity is still evident. Even as more girls are electing advanced placement courses and exams, the American Association of University Women (1998) identified that, "boys earn higher advanced placement scores and are more likely to receive college credit" (Sadker, 1999, p. 25). This leads one to question why it is that girls are not performing to the level of their male counterparts; what is it that produces a disparate education between the sexes?

Additionally, there are ways in which education is failing our boys as well. One area to look at is how gender affects literacy. "Increasingly in the United States, young boys are saying that school is stupid and they don't like to read" (Sax, 2007, p. 42). Sax (2007) cites factors such as ADHD medicines and video games as contributors to boys' decreased literacy; the author also notes that a decline in role models for boys is another significant factor. The Nation's Report Card for Reading (2003) documents the literacy gap with girls outperforming boys at all levels, and the gap grew as students progressed

into higher grade levels (p. 35). The reality of the impact on boys' performance in literacy reinforces that more can and needs to be done to prepare tomorrow's teachers to face the inequities based on gender in education.

The persistence of inequity based on gender for both boys and girls makes it imperative that pre-service teachers become knowledgeable about the existence of this disparity and equipped to monitor their own practice so that they do not perpetuate this inequity for both boys and girls.

Purpose of the Study

Gender inequity is a hurdle not yet overcome in education. "Twenty-five years after Title IX, we must celebrate our progress and recommit ourselves to finishing the job" (Sadker, 1999, p. 26). This topic is relevant as it is imperative that teachers do not perpetuate gender stereotypes, advocate for traditional careers for women and men, or practice bias in teacher attention and feedback or in choices of instructional materials or even through their actions. Teacher training programs across the country leave teachers unprepared to identify or even to eliminate bias in their own teaching. "Two-thirds of education professors spent less than two hours teaching about gender equity and... they rarely provided practical classroom strategies to neutralize bias" (Campbell & Sanders, 1997, as cited in Sadker, 1999, p. 26). Gender bias is largely an unidentified and unmentioned facet of school life that educators must learn to see and eradicate. Connell (1996) notes, "Teachers are the work force of educational reform; if anything large is to happen in schools, teachers must be engaged in making it happen" (p. 229). Teachers must be given the tools to scrutinize their own methods to eliminate bias and move

towards gender equity; Sanders (2002) notes, "Teacher educators need a concise program of instruction and materials to jumpstart their new expertise, and a way must be found to give it to them. This is called 'education' and it should not be beyond the capabilities of educational institutions to provide it" (p. 243). A more reflective approach to teaching and making pedagogical choices is necessary for teachers to become aware of their own practice in order to see how gender systems work within and through their teaching.

Assumptions of the Study

The researcher holds several assumptions about the topic based on her experience. First it is assumed teachers show gender bias in areas such as attention and feedback unconsciously. The second assumption is that teacher education programs fail to properly prepare pre-service teachers for becoming cognizant of this tendency. Finally, teachers would monitor their own practice to eliminate bias in attention and feedback, curriculum choices, and stereotyping gender roles if they were made aware of these inequities.

It would be remiss to ignore the power dynamics within schools. From our pedagogical stances to our curricular choices, teaching is a political act:

The selected knowledge of any curriculum represents not only things to know, but a view of knowledge that implicitly defines the knower's capacities as it legitimates the persons who deem that knowledge important. This capacity to privilege particular accounts over others is based upon relations of power. Consequently, every curriculum authorizes relations of power, whether it be those of the textbook industry and

demographics, established scholars, business and industry, specific traditions of knowledge, or theories of cognition and human development. (Britzman, 2003, p. 39).

Our educational choices, however small or seemingly insignificant, are flush with political ideologies. When considering curricular choice, “To counter the dominant view of knowledge as neutral and capable of ‘speaking for itself,’ knowledge must be approached as problematic in its social construction, and the problem of representation, interpretation, and meaning –that is, the question, how do we know what we know –must become a central theme in disciplinary studies and in school classrooms” (Britzman, 2003, p.58). Britzman speaks here to the necessity to examine what it is we teach, how we view the creation and dissemination of knowledge, and also how the “canon” must be made problematic in terms of what is valued and included and what is excluded and unvalued. Teachers, and pre-service teachers, must make problematic their own practice and choices in order to understand the ideologies underlying their teaching. For the purposes of this study, I will adopt Britzman’s view that all our educational choices and decisions are open to examination in order to understand how we, as teachers, impact the experience of students in our classrooms and gender systems at work.

Definition of Terms

For the purposes of this study, the term *teacher attention* will be applied to any of the ways in which a teacher can give individual attention to students be it through calling on the student, disciplining the student, or through one-on-one instruction. *Teacher feedback* is the response a teacher gives to a student for his/her assertions to class

discussion. *Gender bias* refers to any partiality in teacher attention or feedback based on gender. Sanders, 2002, gave this definition of *gender*: "what we learn about the proper ways for the sexes to behave" (p. 242), versus *sex* which is an innate biological characteristic. For the purposes of this study, I will borrow Chodorow's (1978) definition of *gender system* as a system that organizes women, men, sex, and reproduction. Her definition encompasses the way in which the unequal division of labor and reproduction divide life into public and domestic spheres in which women are largely subsumed beneath the rights of men within heterosexual marriage. Chodorow (1978) states that the division of labor and heterosexual marriage "Together organize and reproduce gender as an unequal social relation" (p. 10). In this study, the term *gender system* will be used to encompass social relations in which gender dynamics produce inequality.

Methodology

This researcher used a convenience sample to garner participants. Fifteen teachers from an American middle/high school in Germany volunteered to participate in one of three focus group discussions. Participants received a quiz covering current gender equity issues in literacy and education prior to participating in the focus group discussions; the purpose of the quiz was to activate participants' prior knowledge of gender equity and gender disparity topics. Each discussion lasted approximately 45 minutes to one hour. Focus group interviews were audio-recorded using ProTools software. Transcripts were analyzed for recurrent threads of meaning.

Chapter II: Literature Review

Introduction

Despite the fact that Title IX was passed over thirty years ago, we are still on the road towards gender equity, making little measurable headway. Yet it is well documented that disparity exists between the achievement of boys and girls, their future success, and feelings of self worth (Zittleman, 2006; Connell, 1996; Orenstein 1994; AAUW, 1994). What is less clear, however, are the ways this is being addressed within teacher education training programs. Quinn and Oberchain (1999) were disturbed to note the “subtle, often subconscious nature of the gender assumptions” (p. 18) made by pre-service teachers. Quinn and Oberchain revealed secondary methods students’ assumptions about such topics as vocational career paths (boys) and extracurricular involvement in sports (boys) through students’ gender assumptions when given a gender-neutral case. Similarly, Campbell and Sanders (1997) noted, “Lacking preparation in issues of gender equity, teachers may teach boys more effectively than girls, without meaning to and virtually without realizing it” (p. 70). Inequitable teacher attention and feedback, inadequate representations of women and minorities in curricular choices, and propagation of sex-stereotypical beliefs are ways in which teachers’ pedagogical choices may impact students differently. In addition to the lack of preparation to deal with gender equity within the classroom, teachers are also confronted by a backlash against feminism. Zittleman and Sadker (2002) note, “In recent years, a backlash by conservative political organizations has blamed the academic problems of boys on efforts to ensure equal educational opportunities for girls” (p. 172). Sanders (2002) emphasized, “Gender equity is a *human* issue, not a women's issue” (p. 242), and we ought not let disparities exist for

boys or girls. By looking at the historical context of gender equity, research on teacher attention and feedback, research on confidence and self-esteem, gender bias and boys, and adequacy of teacher training with regards to gender bias, this researcher will draw a clearer picture of the current status of gender equity and education.

Gender Equity

Although we have made tremendous strides forward in gender equity since Title IX, gender inequity is still the reality. "Women make up 18% of the U.S. Senate and 13% of the U.S. House of Representatives. According to a recent study, women fill just 11% of the seats on the boards of directors of 'Fortune 500' companies, with 14% of the companies having no female board members at all" (Sanders, 2003, p. 26); that is just 18 women of 100 Senators and 57 women out of 435 Representatives. Additionally, there are approximately 1,000 Fortune 500 companies, and women make up a very small percentage of people in power in those companies. Sanders (2002), reported that "The average 11th-grade boy writes at the same level as the average eighth-grade girls, and boys read worse than girls at all grade levels. Moreover, these data have been unchanged for the past 30 years" (p. 241). That gaps persist in literacy between boys and girls and that inequity is still rampant in the world of work attest to the fact that we have not yet reached gender equality in the United States. Standardized test scores, stereotypical tracking and career choices, girls' low self-esteem, and the persistence of gender stereotypes evince disparity between boys and girls.

Standardized test scores also attest to the continued gender gap. Although girls surpass boys for most literacy measures like state testing, boys outperform girls on high-

stakes tests like the SAT. Boys continue to outscore girls on the Critical Reading (previously the verbal portion) and the Mathematics portions of the SAT (The College Board, 2007). Girls, however, outperform boys on the writing section (added in 2006). When comparing Advance Placement coursework, more girls are taking Advance Placement English courses, 61% compared to only 39% of boys, and more Advanced Placement math courses, 54% of girls and 46% of boys (The College Board, 2007, p. 10). Girls are also taking more science AP or honors courses than boys, 56% of girls and 44% of boys reported enrollment in AP or honors science courses (p. 11). Even though girls now outnumber boys in Advanced Placement courses, their mere presence in the courses are somehow not translating to equivalent scores.

Despite the long-standing performance gap in reading and writing, “Females’ higher achievement in reading and writing on the NAEP assessments did not translate into higher achievement on Advanced Placement (AP) examinations in English” (Freeman, 2004, ¶ 26). This fact illustrates the reality that boys and girls may receive dramatically different educations while sitting in the same classroom. For girls, the entrance into more challenging and rigorous courses of study is not enough to ensure they receive an equitable education comparable to the boys within the same classroom.

Inequities that develop in schools are also revealed by the sex stereotypical choices students make in majors and later in careers. Sadker (1999) explains “The majority of females major in English, French, Spanish, music, drama, and dance, whereas males populate computer science, physics, and engineering programs” (p. 23). Connell (1996) acknowledges the gendered tracking, either intentional or unconscious, in which schools collude: “The competitive academic curriculum, combined with tracking,

streaming, or selective entry, is a powerful social mechanism that defines some pupils as successes and others as failures, broadly along social-class lines" (p. 218). Connell (1996) further notes that this stereotypical guidance is not unfelt by the students: "There are strong reactions among pupils to this compulsory sorting-and-sifting, whose gender dimension has been visible (though not always noticed) since the early days of school ethnographies" (p. 218). An example of this sorting is the students' own classification of "smart" classes and "dumb" classes; students quickly infer which courses are for students who are perceived as likely to succeed and which courses are for students who are perceived as less likely to succeed. Sadker (1999) notes that, "Boys enter school with more computer experience than girls, and girls know it" (p. 25). Children come into school with certain advantages, disadvantages, and stereotypical beliefs; however, schools play a part in continuing the gender stereotypes surrounding these career paths rather than working to eliminate them. "Girls are more likely to enroll in word processing and clerical courses, whereas boys are more likely to enroll in advanced computer science and computer design courses" (Sadker, 1999, p. 25). Recognizing that this enrollment choice is perhaps influenced by parents, counselors, or the students themselves, teachers can still work to help students choose courses based on aptitude and interest rather than stereotypical gender roles. Zittleman and Sadker (2002) found that the "Hypersegregation [that] characterizes schools and colleges, contributes to salary discrepancies in adulthood" (p. 173). When and where stereotypical beliefs go unchallenged in schools, the result is that children follow traditional career paths.

Orenstein (1994) admonishes, "In spite of the changes in women's roles in society, in spite of the changes in their own mothers' lives, many of today's girls fall into

traditional patterns of low self-image, self-doubt, and self-censorship of their creative and intellectual potential" (p. xx). Zittleman (2006) found that still today, "Both sexes had more positive things to say about being a boy than being a girl" (p.11). Zittleman (2006) found that "Male advantages focused on physical and athletic prowess, career choices, intelligence, and the absence of things female" (p. 11). The researcher noted that, "Students easily described male entitlements, the special privileges that come to boys just for being boys" (p. 11); they were "Listened to more, allowed to do more, had dominate role in marriage, received greater respect, and... male sports received greater funding and more attention" (p. 11). In the study, students were asked to complete the phrase, "The best thing about being a girl is..." (Zittleman, 2006, p. 15); the number one response was "appearance" followed by "nothing." Although it is now thirty years after the feminist movement began, there remains much work to be done to ensure that all children view themselves as capable.

Schools are a major contributor to girls' low self-esteem and their belief in gender stereotypes. That girls continue to face harassment at school is a contributing factor in the drop in self-esteem: "Research in secondary schools in several countries has found widespread verbal harassment of girls by boys" (Connell, 1996, p. 219). In a recent study, Zittleman (2006) found that girls are able to articulate the societal limitations of being a girl: "Girls also noted their deliberate efforts to take easier courses, perform poorly on tests and assignments, and 'act dumb' to gain popularity or have a boyfriend" (p. 12).

Schools inculcate girls in a culture of low ambition and low self-esteem:

Unintentionally, schools collude in the process by systematically cheating girls of classroom attention, by stressing competitive –rather than

cooperative –learning, by presenting texts and lessons devoid of women as role models, and by reinforcing negative stereotypes about girls’ abilities.

(AAUW, 1994, p. 5)

In this country, children spend thirteen years in primary and secondary school; these years coincide with puberty and are thus spent developing physically, intellectually, and emotionally. As students begin the process of identity formation in adolescence, the messages they receive from teachers are highly influential in the people they become. Parker-Price and Claxton (1996) point out, "Because teachers' attitudes, beliefs, and perceptions of gender differences may impact the formation of students' confidence in academic subjects and school in general, the perceptions that educators have of real or imagined gender differences can be used as one indicator of the conditions that may influence elementary and secondary school students" (p. 2). When gender bias is part of the unspoken learning through coded messages students receive, then as a society, we are continuing gender inequity rather than combating it.

As the United States becomes increasingly global in terms of commerce, education, and humanitarian efforts, it is essential that we are best preparing *all* students to remain competitive at home and abroad. The American Association of University Women (1994) urges, “As we prepare for a new century in which women will account for almost half of our work force, we must provide a first-class education for girls today” (p.14).

Unfortunately, boys and girls in America can sit in the same classrooms and receive very different educations due to disparities in teacher expectations, attention and feedback, and the persistence of gender stereotypes (Kosmerl, 2003; Nordby 1997; Craft 1993; Parker-Price & Claxton, 1996). If we are to be competitive on the global economy, America

must stop slighting its female students. “Despite popular beliefs that peer groups and peer pressure dominate the actions, values, and goals of teenagers...school and family have a greater impact on adolescents, especially girls ” (AAUW, 1994, p. 14). Teachers are at a unique crossroads in adolescent identity development to encourage girls’ self-esteem and consequently their perceptions of themselves as equally capable and equally motivated for success in non-traditional fields.

Teacher Attention and Feedback

It is during the formative years of adolescence that gender equity issues could be targeted, but instead gender bias is perpetuated, albeit unconsciously, by teachers. This inequity is especially prevalent in teacher attention and feedback for students. A report from the American Association of University Women (1994) found that “Girls receive less attention, less praise, less effective feedback, and less detailed instructions from teachers than do boys” (p. 14). Myra and David Sadker elaborate on the subtle variations in praise and feedback that lend to the disparity felt by students: “Teachers tend to ask boys more complex, abstract, and open-ended questions, providing better opportunities for active learning” and “Teachers tend to praise boys more often than girls for the intellectual content and quality of their work” (as cited in AAUW, 1994, p. 14) over superficial aspects such as presentation. Questioning or redirection may be used as a means for controlling boys’ behavior; this may, in part, account for the disparity in attention and feedback. Additionally, girls’ “good” behavior may be taken as a sign of understanding, and girls may receive less attention and feedback consequently. Teacher instruction and feedback are intangible forms of learning; often unaccounted for, these disparities can have significant consequences for the type of education that boys and girls

receive. Kosmerl (2003) found that girls receive more attention than boys due to their appearance: "Teachers compliment their outfits and hairstyles" (p. 3). Conversely, "When teachers talk with boys about appearance, the exchanges are a brief recognition and then onto something else. When teachers talk to girls about their appearance, the conversations are usually longer, and the focus stays on how pretty the girl looks" (p. 3). Unconsciously, teachers are sending a message to girls that what matters is not their intelligence or ability, but their appearance, a message reinforced in advertising and mass media.

Schools can and do play a significant role in influencing the lives of students. Nordby (1997) stated, "The gender role attitudes of children can be greatly influenced by their school environment" (p. 2). Teachers must acknowledge the power they have to address the disparity in attention and feedback or they risk failing to address that girls become merely passive observers in the classroom; if this is not addressed, teachers may become unconscious of the progress that one half their students are making or not making (Orenstein, 1999, p. 24). Girls are rewarded for passivity; therefore, they are discouraged from participation in risk-taking behaviors that actually increase learning (Orenstein, 1999, p. 36). Connell (1996) acknowledged schools' participation in shaping masculinities: "Coeducational schools, then, typically operate with an informal but powerful ideology of gender difference, and do put pressure on boys to conform to it" (p. 216). By rewarding boys for "masculine" behaviors, perhaps teachers are unconsciously shaping ways in which boys participate in the classroom. By contrast, boys are more likely to participate in risk-taking behaviors such as acting out, answering questions, and asking questions within the classroom. These activities demonstrate an active role in the

learning process (AAUW, 1994, p. 8). Even through acting out, boys are receiving an unfair amount of the teacher's attention; this results in enhanced learning, despite what appears to be a negative interaction, as boys have increased teacher attention. When boys act out, teachers are more likely to provide additional support to keep these boys on track.

Even more dramatic than the amount of teacher attention is the inequity in the quality of teacher attention. Boys receive more communication with teachers (AAUW, 1994, p. 14), but it is not just the quantity but also the quality of that attention. Teachers provide an inequitable education for their students through the types of questions and praise students receive. In general, boys are asked, "More complex, abstract, and open-ended questions" (AAUW, 1994, p. 14) by teachers. These questions represent more complex learning according to Bloom's Taxonomy, commonly used in high school curriculum; higher levels of questioning promote more critical thinking.

Praise is an area of disparity within teacher feedback and attention. Teachers praise boys for quality of work and girls for presentation aspects, such as neatness (AAUW, 1994, p. 14). The feedback students receive for their work also influences the reasons students assign for their success and failure, whether they believe the cause to be internal or external. The AAUW (1994) report found that boys are more likely to attribute failure to a lack of effort; this is a controllable reason (p. 14). Girls, on the other hand, attributed failure to their ability (AAUW, 1994, p. 14). Ability is not within one's locus of control; therefore, students would be less likely to put forth increased effort. While teacher praise and attention would not be the only factor in a student's assessment of failure and success, that it does have some influence is apparent.

Tracking, too, is influenced by teacher attention and feedback. The American Association of University Women (1994) found that teachers and counselors also exhibit sexism in tracking of students based on gender (p. 14). The AAUW in its 1994 study found that “All too often, teachers and counselors track girls away from courses of study that lead to high-skilled, high-paying, high-technology careers” (p. 14) such as engineering or computer technology. The connection between a student’s affinity to math and science is also a predictor of confidence and future goal attainment (AAUW, 1994, p. 16).

Confidence and Self-Esteem

Tracking and feedback that students receive from adults in the field of education conspire to negatively impact girls’ confidence and self-esteem. According to the American Association of University Women’s report (1994), the “[g]ender gap in self-esteem increases with age” (p. 7). As girls go through school, they lose self-esteem. Freeman (2004) reported that, “High school seniors’ attitude toward school becomes increasingly negative, particularly among females” (¶ 20). The study found that only 29% of females reported that they “liked school a lot” in 2001 compared to 50% in 1980 (Freeman, 2004). This loss may be due in part due to social and physiological changes that come along with puberty, viewed negatively by girls (AAUW, 1994).

The disparity in teacher education and feedback creates an environment in which girls are second-class citizens and students within the school (Orenstein, 1994, p. xxxii). Feelings of low self-esteem contribute to girls’ passive roles within the classroom; low self-esteem inhibits action (AAUW, 1994, p. 8). This, in turn, decreases feelings of self

worth; girls are on a circuitous path of decreasing self-esteem and confidence to become active agents within their own education. The messages girls receive from teachers couple with girls' own feelings of inadequacy due to the changes of adolescence, weakening self-esteem and confidence.

Girls view physical changes of adolescence negatively (AAUW, 1994, p.8). This negative reaction has future repercussions: "Girls will enter adulthood at a deficit: they will be less able to fulfill their potential, less willing to take on challenges, less willing to defy tradition in their career choices, which means sacrificing economic equity" (Orenstein, 1994, p. xxxii). The lack of self-esteem and confidence that many girls experience becomes a self-fulfilling prophecy in that, "The confidence drop precedes the competence drop" (Orenstein, 1994, p. 18). Teachers are one important subgroup of individuals who can impact the lives of girls; accordingly, teacher education must include strategies and discussions to help mitigate the effects of the confidence drop in girls.

High self-esteem, on the other hand, increases students' success in education. Orenstein (1994) explains that high self-esteem permits women to "Take up space in the world" (p. xxiii). This feeling of confidence increases risk-taking behaviors such as responding to questions and asking questions within class, both of which increase the quality of the education a student receives. In reality, boys tend to have higher self-esteem and hold a positive view of the physical changes during puberty (AAUW, 1994, p. 8).

Self-esteem also affects students' future aspirations. Girls begin with lower aspirations than boys (AAUW, 1994, p. 9). Students with high self-esteem and who like math are more likely to follow through on career aspiration (AAUW, 1994, p. 12).

Zittleman (2006) found that students continue to face sex stereotypes in future career options and earnings: "Students described how men earn more money than women, are corporate leaders, and can become the president of the United States" (p. 13). However, sexism within tracking funnels girls away from rigorous math and science classes necessary for many careers. These early messages, once internalized, result in consequences in later life. Freeman (2004) found that "Advanced degrees conferred still tend to follow traditional patterns, with women accounting for the majority of the master's and doctor's degree recipients in education and health, and men accounting for the majority of recipients in computer and information sciences and engineering" (¶ 60). The relationship between self-esteem and future aspirations must be further examined as it is evident that women and men are continuing to follow sex-stereotypical career paths.

Sex-Role Stereotypes

Girls and boys are inculcated early in life to the gender roles society has drawn for them. One of the earliest forms of genderization is through the stories we teach our children. Craft (1993) noted, "Books at an early age become acceptable to children. What they see and hear in these works will affect what they say and do in real life" (p. 8). Further, "The literature has served not only to down play [girls'] capabilities, but limit their choices," (Craft, 1993, p. 7) through representations of female characters. Conversely, "Traditionally, males have not only been the main characters, but heros [sic] as well" (Craft, 1993, p. 7). For instance, fairy tales, now popular cartoon movies for children, portray women as passive and in need of a male hero's intervention even when the female character is the protagonist, such as Cinderella in the fairy tale of the same

name or Ariel in *The Little Mermaid*.

Parker-Price and Claxton (1996) studied teachers' attitudes and perceptions of gender and uncovered a preponderance of sex-stereotypical beliefs. The researchers found:

Teachers agreed with the sex-typed myth on the following items: learn well by reasoning (boys), learn better when trying to please someone (girls), learn better when trying to obtain a reward (boys), more likely to copy an admired female (when the person is performing a gender neutral activity) (girls), more likely to copy an admired male (when the person is performing a gender neutral activity) (boys), more interested in people than objects (girls), more interested in objects than people (boys), impulsive (boys), and empathetic (girls).

(Parker-Price & Claxton, 1996, p. 5).

Furthermore, the researchers uncovered that "Teachers perceived girls as more likely to have advantage in verbal skills" (Parker-Price & Claxton, 1996, p.5). "This agreed, in part, with the meta-analysis which found that before age 3 and after age 11 girls do show such advantages, however, since most of the teachers taught in elementary schools, their agreement with this finding is puzzling" (Parker-Price & Claxton, 1996, p.5) the researchers noted. Despite the prevalence of sex-stereotypical beliefs, the teachers' assertions are not grounded on real gender differences. "In a comprehensive meta-analysis of psychological research investigating gender differences, Maccoby and Jacklin (1974) demonstrated that studies showing no differences between males and females often outnumbered those that reported differences but that these null effects were

frequently overlooked" (as cited in Parker-Price & Claxton, 1996, p. 3). Thus sex differences are more often perceived rather than truly experienced.

Parker-Price & Claxton (1996) emphasize the danger of teachers' sex-stereotypical beliefs when they go unchecked: "Sex stereotyping attitudes and behaviors of educators have been cited as [a] particularly important influence on the development of gender differences in childhood and adolescence" (p.2). Understanding ways in which teachers impact the attitudes and beliefs of their students should be an integral part of teacher education. Teachers are pivotal in working to either perpetuate or eliminate sex stereotyping through their beliefs and curricular and pedagogical choices.

Gender Bias and Boys

It is important to note that gender disparities also negatively impact boys. In a recent study, Zittleman (2006) found that "Students (male and female) consistently reported that girls get easier treatment in school, are the better students, and are less likely to get into trouble" (p. 11). The anxiety focused on the behavior of boys can be seen as a contributing factor in the increased attention boys receive in class. Discipline is an area that highlights ways in which schools participate in masculinizing boys: "Teachers from infants to secondary level may use gender as a means of control, for instance, shaming boys by saying they are 'acting like a girl'" (p.217). The researcher also reported, "Nonviolent punishments still bear down more heavily on boys" (Connell, 1996, p. 217). These disparities are evidence of gender disparities that must be questioned, analyzed, and discussed by educators in order for remediation to begin.

Concern should be raised as the aggressive behaviors instilled in boys are both rewarded, as in sports, and punished, as in classroom disruptions. Connell (1996) points

to sport as a powerful instrument in constructing masculinity and stereotypical sex roles in schools. The researcher notes that football "Directly defines a pattern of aggressive and dominating performance as the most admired form of masculinity, and indirectly marginalizes others" (Connell, 1996, p .217). In this way, boys are both rewarded and punished for sex-stereotypical behaviors, behaviors that are not conducive to cooperation and interdependency required for learning in schools.

Myhill and Jones, in a 2006 study, focused attention on the students' perceptions concerning inequity based on gender in the school setting; the researchers simply asked, "Do you think boys and girls are treated the same?" (p. 8). The majority of students (61%) responded that boys were treated more unfavorably than girls; the subtle difference is in the students' gendered perception of that difference: "The boys tend to frame this in terms of injustice, whereas the girls are more inclined to blame the different treatment on boys' poor behaviour" (p. 9). The researchers state that "The emphasis on the underachievement of boys might result in focusing so exclusively on the needs of boys whilst overlooking or underestimating the needs of girls, resulting in the marginalizing of girls within the classroom" (Myhill & Jones, 2006, p.13). However, the researchers assert that "Listening to the voices of pupils, however suggests that the gendered expectations of teachers may have resulted both in rendering the needs of girls invisible whilst at the same time, negative expectations and an anxiety about the behaviour, attitudes and achievements of boys may have been translated into a self-fulfilling prophecy that we call 'the underachieving boy'" (p. 13). Teacher education should include discussions to analyze and complicate the expectations they hold for boys' and girls' behavior.

Gender disparities are also prevalent when one considers literacy. Sax (2007) writes that school curriculum may not be suitable to meet the needs for boys' literacy: "Girls' and boys' brains develop differently, and for many boys, it's simply not developmentally appropriate to ask them to learn to read at age five" (p. 43). Couple this with other factors that Sax (2007) feels contribute to boys' poor performance in reading, such as the lure of video games, ADHD medications, and poor masculine role models in the popular culture; and the gender gap becomes clearer.

Teacher Training & Gender Bias

The persistence of gender disparity and sex-role stereotypes attests to the inadequacy of teacher preparation. Sanders (2003) revealed, "Certainly, we would reason, because awareness of gender issues has been on a front burner in society for three decades, gender equity must be a hot topic in the preparation of teachers. But if we made these assumptions about this situation, we would be wrong" (p. 26). In Sander's 2003 study, the researcher found that "Even though three-fourths of the respondents said they considered gender equity to be important, most of them taught it less than two hours a semester" (p. 27), highlighting the lack of gender equity training for pre-service teachers.

Most teacher training programs lack any discussion of gender bias (Sadker, 1999, p. 25). According to Campbell and Sanders (1997), "Two-thirds of education professors spent less than two hours teaching about gender equity" -(as cited in Sadker, 1999, p. 26). Additionally, Sadker (1999) found that teacher training "Rarely provided practical classroom strategies to neutralize bias" (p. 26). In conjunction, Sanders (2003) found that teacher training programs, if they included gender equity discussions, "Focused almost

exclusively on such problems as biased classroom interactions and spent very little time on exploring such solutions as gender-fair pedagogical techniques" (p. 27). In a 2001 study, Tatar and Emmanuel found that only 15% of the subjects used in their study had taken coursework that discussed issues of gender equity (p. 222). Campbell and Sanders (1997) surveyed education professors who taught pre-service teachers. While most of the professors surveyed responded that gender equity was an important topic, "Two thirds (68%) spend 2 hours or less per semester; a third spent 1 hour or less" discussing gender equity issues (Campbell & Sanders, 1997, p. 71). Further, these professors discussed the problems of gender equity but failed to discuss or help students plan for solutions to these problems (Campbell & Sanders, 1997, p. 71). The professors surveyed in this study reported the following barriers to teaching about gender equity: "A lack of personal qualifications (57%), a lack of resources (50%), and a perception of gender equity as a marginal topic (40%)" (Campbell & Sanders, 1997, p. 72). This missing dialogue about gender equity prevents teachers from using their influence to change students' perceptions of gender stereotypes. "While teacher educators very much want to learn about gender equity so they can teach it to their students, they understandably aren't about to embark on time-consuming self-education on top of their work" (Sanders, 2003, p. 29), thus making the need for real training for pre-service teachers so imperative.

In conjunction with a lack of gender equity dialogue within teacher education programs, teacher education texts, too, have been found to be lacking in significant coverage of gender equity issues. On the topic of sexism, "Today, the average text coverage is 3.3%", up only 2.3% in the last twenty years (Zittleman & Sadker, 2002, p. 170). Other findings included that the topic of gender comprised only 1.3% of the total

content of methods textbooks studied; other textbooks failed to include any mention of gender issues (Zittleman & Sadker, 2002, p. 170). In perhaps an effort to mitigate the absence of women or gender issues from the texts, Zittleman and Sadker (2002) found that women were twice as likely to be in the photographs than men (p. 170).

When schools of education fail to educate pre-service teachers as to the complexities and discourses available on gender equity, practice teachers are left blind to inequity and bias and unprepared to tackle these issues in their classrooms and are thus perpetuating gender stereotypes and inequities rather than working to dispel them (Sadker, 1999, p. 22). Additionally, feminism has negative connotations today; this backlash is working counter to gender equity (Sadker, 1999, p. 22, 26). With educational texts and programs lacking sufficient information and with the current climate against feminist thought, teachers enter the world of education ill prepared to critically examine the gender complexities at play in their classrooms.

Teachers are highly influential in student self-esteem and self-perception. The American Association of University Women (1994) found, “For girls, feelings about academic performance correlate strongly with relationships with teachers” (p. 10). The report also found that, surprisingly, family and teachers are more influential on adolescents than their peer groups (AAUW, 1994, p. 14). Because teachers have the influence necessary to impact girls’ feelings of self-esteem, confidence, and ability, it is remarkable how few have been properly trained themselves to handle complex issues of gender equity.

A recent study found that professional development may positively mitigate gender disparities when teachers are trained to deal with these issues. Rushing (2006)

remarked, "Educating teachers and administrators on the fact that gender bias does exist and does occur in American schools is essential" (p. 37). The researcher emphasizes that in-service training and professional development are channels through which this can be addressed and mitigated. Students showed gains in reading, math, and science with the action research intervention of teacher professional development. The researcher used a Read 180 test as the reading instrument and a standardized assessment produced by McDougal Littell as part of their *MathThematics* text as the mathematics instrument to measure student achievement growth. Rushing (2006) noted, "The improvement can expand from increasing teacher's [sic] awareness and recognizing there are conscious steps to eliminate practices and patterns of instruction that lead to inequities in the classroom" (p. 134). Further research is necessary to determine the usefulness of professional development to mitigate gender disparities.

Sanders (2002) advised, "Colleges, schools, and departments of education must decide whether they believe that gender equity has a legitimate place in the curriculum of preservice teacher education" (p. 243). The researcher recommends a systematic inclusion of gender equity training throughout pre-service teachers' experience, in methods, student teaching, and observation. Sanders (2002) advised, "It doesn't work to rely on the efforts of a personally committed faculty member" (p. 243). If gender equity is the work of one person in the department, Sanders acknowledged that that person could retire or transfer, thus eliminating any gender equity training altogether. When schools of education acknowledge the need for interventions for this timely topic, then we can begin to tackle the disparities of gender bias in a systematic way in our schools.

Teacher Training and Identity Formation

Although promise exists to make gender systems more problematic and a topic of professional discourse through professional development for experienced teachers, it seems reasonable to suggest that schools of education are perhaps the most feasible channel through which real work towards gender equity can begin as teachers there are yet malleable and in the process of uncovering their possibilities as teachers. Britzman (2003) writes, “Learning to teach –like teaching itself –is always the process of becoming: a time of formation and transformation, of scrutiny into what one is doing, and who one can become” (p. 31). Schools of education can capitalize on this time of possibility to battle gender disparity.

Chapter III: Methodology

Introduction

The researcher first sought and obtained permission through the University of Wisconsin-Stout and through the school district from which participants would be selected. This study on gender equity used qualitative methods. Participants were administered a gender equity inventory quiz to activate prior knowledge. The second stage of the research involved a qualitative investigation of teacher beliefs about gender equity with particular attention paid to feedback and teacher attention and current availability of resources for teachers to eliminate gender bias; this inquiry was conducted as focus group interviews using secondary teachers from an American middle/high school in Germany as the subjects.

The primary question was as follows: What do teachers know about gender equity and bias in education? Additional questions included the following: What courses do schools of education around the United States offer to prepare teachers for recognizing and eliminating gender bias? What resources do teachers have for dealing with and monitoring gender equity within their classrooms? The researcher allowed participants to build off each other's comments and ask each other follow-up questions in addition to those asked by the researcher. Thus the conversation unfolded and built naturally despite the formal setting.

Selection and Description of the Sample

The discussion group participants were secondary teachers and educational technologists at an American school in Germany. The secondary school is comprised of approximately 300 students in grades 7 through 12. The researcher used a convenience sample for this study; participants were colleagues of the researcher and volunteered to participate in the study. Groups were formed based on participants' convenience and availability.

Instrumentation

There was no formal, standardized instrument used in this study. Instead, the researcher designed a series of discussion questions to be used in the focus group interviews. Three groups of five teachers were asked the questions in succession, allowing the participants to respond to one another; their responses were audio recorded using a professional microphone, laptop, and ProTools software. The interviewer asked follow-up questions and redirected the group as appropriate. The focus of the group discussion was designed to elicit information about teacher training, gender equity knowledge, and current methods and resources used to combat gender equity within these teachers' classes.

The questions are as follows:

Where and when did you receive your teacher certification training?

What activities and courses most prepared you for teaching?

To what extent was equity addressed in your teacher training? Explain.

Do you feel you were given ample training in dealing with equity issues, including gender equity, through your teacher training? Explain.

What resources do you have access to that help you address gender equity issues within your school or classroom? (i.e. training, websites, text resources, etc.)

What other area do you think would have been beneficial to you as a teacher that was not included in your pre-service training?

Data Collection

To gather the data for the qualitative section of the research, the discussion groups were audio recorded for content analysis using ProTools software, a laptop, and a professional microphone. Participants' responses to the SIQ-III quiz were not collected, nor were the results tabulated. The quiz was used as a means to a discussion only, activating participants' prior knowledge of gender equity issues.

Data Analysis

The data has been analyzed qualitatively, rather than using any statistical measure. Transcription analysis focuses on identification of recurrent threads of meaning in response to the following questions: What do teachers know about gender equity and bias in education today? To what extent do schools of education prepare teachers for recognizing and eliminating gender bias? What resources do teachers have for dealing with and monitoring gender equity within their classrooms? Specific threads of meaning

identified included multiculturalism, teacher training, gender equity progress, gender disparity, other disparity, resource noted, and recommendations.

Limitations

A limitation to this study is the ability for teachers to objectively analyze their own practice. Teachers may not be aware of the subtle ways in which disparities in teacher attention and feedback influence learning in the classroom. Additionally, teachers are socially aware of the “correct” responses to questions about inequities; as such, teachers may describe their own observations and experiences in more equitable terms rather than provide an open and honest analysis of their practice. Furthermore, the participants’ experience ranged from less than one year of teaching to more than thirty years, as such, for some participants, their teacher training experience would be further away from their current experience and recall may have been difficult.

The study is also limited in scope. While teachers in this school come from varied backgrounds, many have spent the majority of their careers overseas. Experiences here may not be appropriate to generalize to public schools within the continental United States. Additionally, the sample size is limited by the limited number of teachers at the school site; such a small population makes generalizing problematic.

Chapter IV: Results

Item Analysis

Question 1: Where and when did you receive your teacher certification training?

Fifteen secondary teachers participated in the study; that number included one information specialist and one educational technologist/language teacher.

Teacher experience ranged from less than one year to thirty-five years of uninterrupted teaching. There were 5 teachers who had taught between 0-5 years. Six teachers had taught 5-15 years, and 4 teachers had taught 15 plus years. Six teachers had received a Bachelor's Degree as their highest level of education; seven had earned a Masters Degree; one teacher had earned her Doctoral Degree and one other teacher had completed all but the dissertation for her Doctoral Degree.

Teachers had attended schools throughout the United States, from Maryland to Texas to Nebraska. Regional differences and variations of schools of education were not compared.

Table 1
Teachers (N=15) **Sample Demographics**

Demographic Variable	Frequency	Percent of Sample
Gender		
Male	4	27%
Female	11	73%
Highest Level of Education		
B.A.	6	40%
M.A.	7	47%
Ph.D.	2	13%
No. of Years in Education		
0-5 years	5	33%
5-15 years	6	40%
15 + years	4	27%

Question 2: What activities and courses most prepared you for teaching?

Teachers' varied responses included the following items:

- Field experience and observation
- Content knowledge/ Undergraduate coursework
- Hands-on experience
- Practicum experience
- Classroom management
- Methods course
- Previous observation of own teachers
- Teaching experience
- Continuing Education/In-service workshops
- Videotaping and analyzing own teaching
- Peer observation and feedback/Professional dialogue

Teachers predominately responded that hands-on teaching experience most prepared them for teaching. This viewpoint illuminates the myth of experience, as identified by Britzman (2003) who notes that “The myth that experience makes the teacher, and hence that experience is telling in and of itself, valorizes student teaching as the authentic moment in teacher education and the real ground of knowledge production” (p. 30). When experience itself is made most significant, absent are considerations of ideologies and pedagogies that underlay our experience. “Missing in this valorization of experience is an interrogation into how the dynamics of social expression –the discourses that bear upon the conceptual ordering we give to construct experience as meaningful – produce accompanying discursive practices that constitute experience as already filled

with essential and unitary meanings” (Britzman, 2003, p. 30). In order to encourage reflective practice in teachers, pedagogy and experience must not be sundered according to the researcher. Many participants in this study cited teacher-training courses as too theoretical for actual preparation benefit. Their feelings mirror a problem of “teacher training” as described by Britzman (2003) who noted that:

The historic separation of knowledge from practice in the university centered around liberal arts prevents the student from formally learning about the pedagogy and academic content in tandem. Indeed, knowledge and practice are presented as a dualism. This separation tends to mystify the actual and potential relations between the “how” and the “what,” and limits pedagogy to a mechanical problem of transmission. (p. 53)

The participants in this study revealed their rejection resulting from this false dualism, simply believing the coursework they had during their pre-service education had been “too theoretical” and therefore unimportant to their lives as practicing teachers. A close second was the importance of subject area coursework and really knowing your content as beneficial for teacher preparation.

Additionally interesting is the response of one participant who noted that observations of her own teachers had best prepared her to teach, albeit with some “updates.” This comment highlights Britzman’s (2003) concern with the difficulty of identity formation for pre-service teachers who face a paradoxical situation “Between tradition and change –because when student teachers step into the teacher’s role they are confronted not only with the traditions associated with those of past teachers and those of past and present classroom lives, but with the personal desire to carve out one’s own

territory, develop one's own style, and make a difference in the education of students" (p. 41). If experience is not a subject of analysis and consideration, practice teachers may have difficulty finding ways in which to overcome the status quo within schools.

Question 3: To what extent was equity addressed in your teacher training? Explain.

Teacher responses varied as to the extent and depth of gender equity inclusion in their teacher training. Only two teachers responded that they had taken at least one course on gender as part of their education training; two of the teachers responded that gender equity may have been discussed as a topic in another course. Five teachers reported that gender equity had not been covered in their teacher training at all. Two teachers responded that gender equity had been addressed at their first teaching position, not in their teacher training, with principals or mentor teachers asking them to monitor who they were calling on in class.

Teachers also reported having taken courses dealing with racial equity, special needs students, and/or multiculturalism. Eight teachers identified that they had taken at least one multicultural course during their training. Three teachers had taken coursework for special needs students.

This question elicited further questions from the participants. One participant stated, "I don't know if, don't see it as useful to learn more about genders... like...almost... in my mind, it doesn't exist, but I know it does exist, like, I mean, rationally I know it exists because I see the test scores, I see everything that comes up, but, as far as in my experience, I don't see the need for it." Building on this initial statement, others voiced the concern about not wanting to treat students differently based

on gender for fear of creating disparity. In Britzman's (2003) ethnographic research with practice teachers, she uncovered that, "Value is set on treating everyone the same and this value works against the idea of differential treatment to redress past and present constraints" (p. 234). Within this research study, the participant's comment above highlights how teachers may distance themselves from the reality of disparity by merely treating everyone the same, thus perpetuating the disparity that exists. Similarly, Britzman (2003) found that practice teachers attributed variations in classroom participation (gendered) upon students' individual personalities and preferences rather than the more difficult and complex gender systems operating within the classroom (p. 234). Teachers' ability to rationalize or ignore the complex social dynamics functioning within their classroom underscores the necessity to open dialogues about gender with both pre-service and veteran teachers.

Question 4: Do you feel you were given ample training in dealing with equity issues, including gender equity, through your teacher training? Explain.

Eight teachers emphatically answered that they felt they had not been given enough training, or sometimes none at all, in dealing with equity issues, including gender equity, they faced as teachers. Three teachers reported that they would have benefited from more gender equity training; two teachers recognized a need for more modification and accommodation strategies for their special needs students; one teacher reported that additional training for learning styles would have been beneficial.

Question 5: What resources do you have access to that help you address gender equity issues within your school or classroom? (i.e. training, websites, text resources, etc.)

Teachers identified the following resources they could access to help them deal with gender equity issues within their school or classroom:

- Book: *How to Help Girls in Mathematics and Science*
- Internet
- School guidance counselors
- *Teaching Tolerance* series
- Workshops
- Role models/Biographies of role models
- Colleagues
- Listservs
- Professional Journals
- Professional Associations

Other teachers responded that they had not considered this question previously or that they did not have a response.

Question 6: What other area do you think would have been beneficial to you as a teacher that was not included in your pre-service training?

Teachers were quick to respond to this question; they had strong beliefs about what could benefit teachers coming into the education setting:

- Classroom management skills
- Hands-on experience and role-play
- Time management skills
- Mentorship between incoming and experienced teachers
- Professionalism guidance

- Research-based studies on gender differences
- Information on single-sex classrooms
- Gender equity training
- Gender roles information
- More practicum experience
- Observation and feedback of teaching
- Immersion in classrooms sooner and throughout teacher training experience

Chapter V: Discussion

Limitations

The remote school district in which the participants teach makes their responses and perceptions perhaps limited to their own experience. Additionally, the small size of the school and community population makes their environment uniquely apt to deal with individual student needs. Because this is an American school within Germany, the faculty, students, and community are intertwined and close-knit.

Beyond the nature of the district, the study is also limited by teachers' ability to self evaluate. While the teachers were open and honest with their opinions, it may be human nature to answer with the perceived "correct" answer when dealing with controversial topics such as gender equity. Certainly, the feminist movement has made us aware of the importance of refraining from making sexist or biased comments.

To improve and extend the findings from this study, it would have been beneficial to build classroom observation and individual post-focus group discussion interviews to determine whether focus group discussions impacted the participants. One participant reported discussing gender equity issues with her seminar students as an outcome of the discussion raised during the study.

Conclusions

Teachers in this study were effectively able to relate knowledge of current gender equity issues. Teachers reported awareness of a variety of gender equity issues, including girls' gender gap in math and science, boys' literacy gap, sex-stereotypes concerning

literacy and visual media, portrayals of female characters as passive in movies, cartoons, and literature, to name a few. Teachers were also able to address each other's biases through the interviews. When a teacher told an anecdote concerning a male student she had encouraged to read a "girl" book, another participant pointed out that the teacher still recognized when the student broke a sex-stereotypical pattern. The fact that she noticed was telling. Some biased comments, however, went by without notice: one participant discussed a course on gender and referred to other students in the course as "feminazi types." Despite participants' knowledge of gender equity issues, many voiced bias unconsciously, underscoring the multiplicity of ways in which gender and bias work within individuals.

This study revealed similar findings to those of Kosmerl in that researcher's 2003 study on teachers' perceptions concerning gender equity. Kosmerl (2003) reported, "37.6% of respondents wished they had had more training in dealing with gender equity; 30.3% felt neutral, and 23.8% reported that they had received a satisfactory amount of training" (p. 62-3). One participant noted, "See, sitting here makes me think about how the program might have been lacking," in reference to her own teacher training experience. Another participant said, "If I went back to school right now, I would know what questions to ask to find out what I need to know." The act of opening the dialogue about gender issues within this study helped participants begin to deconstruct their own experience.

Kosmerl (2003) additionally found that "Most teachers did not feel that a mandatory course for teacher certification was necessary, but could be implemented as part of other teacher preparation courses" (p. 62-3). Similarly, one participant in this

study put the issue succinctly by stating, “When I go into a classroom, I’m gonna have everybody in my classroom; I’m not just gonna have a classroom full of girls or a classroom full of boys, unless if I teach at an all-boys school or all-girls school,” stressing the need for meaningful teacher preparation courses that help teachers learn best practices for a multitude of student needs.

The inclusion or improvement of gender equity education for pre-service teachers should not be limited to one course or another, but should be interwoven into all aspects of teacher education, from methods coursework to examinations of one’s own experience. Britzman (2003) cautions that “Prospective teachers want and expect to receive practical things, automatic and generic methods for immediate classroom application,” (p. 63) which seems to sideline theory in favor of tools that work. However, gender dimensions are complex and should be understood thus; rather than seeking methods to “fix” gender inequity, teachers must learn how to identify and examine gender dynamics within their schools and classrooms and have resources and other professionals with whom they can open the dialogue on gender equity.

Recommendations

The focus group discussions revealed that there must be an increase in meaningful and relevant equity training in schools of education and professional development at schools. The majority of teachers reported that they did not receive sufficient or relevant training in dealing with gender equity issues. The training reported was focused mainly on teacher attention and feedback issues, verifying the findings of Sanders (2003) that gender equity, if covered in schools of education, “Focused almost exclusively on such

problems as biased classroom interactions and spent very little time on exploring such solutions as gender-fair pedagogical techniques" (p. 27). The participants in this study reported being instructed to count the number of times they called on girls versus boys in their teaching; while this is an area of concern, it is only one small portion of the issues that plague classrooms today.

It became apparent through the focus group interviews that many of the teachers in this study had not considered resources available to them to help inform and mitigate gender inequity in their classrooms. As such, it is important for schools of education and individual schools to inform teachers of resources available. Teachers in this study emphasized time constraints that accompany teaching: a lack of time for paperwork, planning, grading, professional development, and so on. Their concern reiterates the importance of a systematic inclusion of gender equity training in schools of education as teachers have very little time to seek out this information independently (Sanders, 2003). Thorough education will enlighten teachers not only about the current issues facing them, but also provide them with resources to mitigate these issues.

Those participants in this study who had taken a gender equity-specific course revealed dissatisfaction with the relevancy of the course. Their responses agree with the findings of Sanders (2002) who found that "When gender equity (or multicultural education for that matter) is delivered in the form of a required course it becomes balkanized -a sidebar for students to the 'real' work of education -and leaves other faculty members ignorant of important gender equity dimensions in educational foundations, methods courses, and field experience" (p. 243). Rather than a separate course, gender equity discussions must be meaningfully incorporated into all aspects of teacher training

(Sanders, 2002). One teacher participant stated, “As a math person, it was at the time that the big studies all started to come out; that girls weren’t as good at math, blah, blah, blah, so we had to take a class that really focused on, um, making girls more successful in math. It wasn’t focused at boys; it was strictly talking about how to bring girls into math.” This participant’s comment, “blah, blah, blah,” highlights that the course was perhaps artificial or unimportant. Without building gender equity into all aspects of teacher training, schools of education risk these topics being rejected as less important to students.

Additionally, the participants in this study remarked repeatedly that they had enjoyed the opportunity and the excuse for meaningful professional dialogue with their colleagues that this study established. This researcher feels that it is imperative to encourage collaboration and discussion among teachers in dealing with a variety of issues from team-teaching to discipline to gender equity solutions. The focus group interviews led teachers to ask pertinent questions such as whether interventions produce disparity between the sexes or whether disparities might be tied to teacher expectations of inequity.

Suggestions for further research include an updated examination of individual schools of education for gender equity training. As stated previously, studies such as this one would be helped by adding post-focus group individual interviews and classroom observations to determine whether or not professional dialogue over gender equity issues encourages participants to take action to mitigate gender bias in their own thinking or classrooms.

Myhill and Jones (2006) emphasized that:

Gender identity is no longer perceived as a given, but as belonging to a social context. Schools are one of the social contexts in which gender appropriate behaviour is defined and constructed. Schools can either reproduce the dominant gender ideology of the wider society or be a potential site for developing non-traditional gender identities.

(Myhill & Jones, 2006, p. 2).

Schools are important sites for the deconstruction of sex-stereotypes and gender bias in teacher attention and feedback, curricula choices, and tracking. As such, it is important that teachers are prepared to take on the very important task we as a society put to them.

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APPENDIX A
THE SIQ-III TEST QUESTIONS¹

For each question determine whether the statement is TRUE or FALSE; mark “T” or “F” on the line next to the question.

- | | |
|--|---|
| <p>_____ 1. There is some evidence that the word woman may be derived from woe-man (woe to man).</p> <p>_____ 2. Teachers pay more classroom attention to boys and give them more encouragement than they do girls.</p> <p>_____ 3. More males have received Newbery and Caldecott Awards than females have.</p> <p>_____ 4. Male protagonists dramatically outnumber females in children’s literature.</p> <p>_____ 5. Boys are more likely than girls to receive assistance through remedial reading classes.</p> <p>_____ 6. In the United States, Germany, Sweden, and England, fourth-grade girls have higher average achievement than fourth-grade boys do.</p> <p>_____ 7. More girls than boys take Advanced Placement examinations.</p> <p>_____ 8. Girls have higher educational goals than boys do.</p> <p>_____ 9. Boys see their mothers read more newspapers than their fathers read.</p> <p>_____ 10. In upper elementary, middle school, and high school, peer-led literature discussions often reinforce sexist stereotypes.</p> <p>_____ 11. When asked to picture their future occupations, girls are more likely than boys to select more sex-stereotypical jobs.</p> <p>_____ 12. Both boys and girls tend to depict active characters in their class writing as males.</p> <p>_____ 13. Boys are attracted to visual media more so than girls.</p> | <p>_____ 14. Girls are more likely than boys to be portrayed as readers in the illustrations in children’s books.</p> <p>_____ 15. Boys are 20% more likely to repeat a grade than girls are.</p> <p>_____ 16. Gender gaps in reading, writing, math, and science are all slowly narrowing.</p> <p>_____ 17. Girls are more likely than boys to have learning or reading disabilities.</p> <p>_____ 18. Boys think of literacy as a feminine activity.</p> <p>_____ 19. Both boys and girls are more inclined to read informational text than fiction.</p> <p>_____ 20. Girls are more likely than boys to receive books as presents.</p> <p>_____ 21. Books that teachers read aloud to elementary students tend to be dominated by male protagonists.</p> <p>_____ 22. Female authors of children’s literature tend to portray more gender-stereotypical behaviors in their characters than do male authors.</p> <p>_____ 23. When asked to imagine and describe life as the opposite sex, both males and females perceive this situation negatively.</p> <p>_____ 24. Girls have consistently outscored boys on the verbal sections of the Scholastic Aptitude Test (SAT) in the United States, while boys have consistently outscored girls on the mathematics sections.</p> <p>_____ 25. Sex and its influence on reading is relatively unimportant.</p> |
|--|---|

¹ Cassidy, J., Garcia, R., & Boggs, M. (2005). The SIQ-III Test: Gender issues in literacy. *Journal of Adolescent & Adult Literacy* 29(2), 142-148.

THE SIQ-III ANSWERS¹

Correct your own SIQ-III Test. Which answers surprised you? Were there any subjects that you are well aware of already?

1. True. Shipley (1984) made such a connection in his work, *The Origin of English Words*.
2. False. According to research studies on classroom interaction reviewed by Kleinfeld (1998, 1999), there does not seem to be any pattern of consistent teacher favoritism toward either boys or girls. While boys do tend to receive more attention in elementary schools, it is usually for disciplinary reasons.
3. False. While this is true for the Caldecott Award, the Newbery Award had been awarded to more females than males. Since 1922, the Newbery Award has been given to 53 females and 30 males (American Library Association, 2004b). The Caldecott Award has been given to 40 males and 18 females since it was first awarded in 1938 (American Library Association, 2004a).
4. True. Ernst (1995) did an analysis of titles of children's books and found male names represented nearly twice as often as female names. She also found that even in books with female or gender-neutral name in their titles, the story still revolved around a male character.
5. True. Research consistently has shown that boys significantly outnumber girls in corrective and remedial reading programs (Connell, 1996; Flynn & Rahbar, 1994).
6. True. In a study conducted by the Progress in International Reading Literacy Study (PIRLS), 35 countries were surveyed to determine student achievement. In all of them, fourth-grade girls had significantly higher average achievement than boys had (Mullis, Martin, Gonzalez, & Kennedy, 2003). This statistic was somewhat different from the 1950s when fourth-grade and sixth-grade boys in West Germany were more likely than West German girls to score higher in reading achievement (Preston, 1962).
7. True. Across all racial and ethnic groups, more females than males take Advanced Placement examinations. For all groups, female representation among Advanced Placement test takers has increased over the past decade (Coley, 2001).
8. True. According to a report from the Educational Testing service by Coley (2001), girls have higher aspirations and are more likely to enroll in and graduate from college.
9. False. Boys see their fathers read more newspapers than their mothers read (Pottorf, Phelps-Zientarski, & Skovera, 1996). Unfortunately for boys, they tend not to see their fathers reading anything else. Pottorf et al. stated that boys see mothers more often than fathers reading books and magazines and reading to young children. The lack of a visible male role model reading at home can significantly affect a boy's perceptions about reading.
10. True. Case study analysis by Alvermann, Anders, and Evans (1998) suggested that the talk during peer-led literature discussions often reinforces sexist stereotypes.
11. False. Thompson and Zerbinos (1997) found that only 54% of girls identified stereotypical female jobs for themselves in the future, such as nurse or teacher. Boys, on the other hand, selected male stereotypical jobs, such as firefighter, police officer, or athlete 77% of the time.
12. True. A study by Gray-Schlegel and Gray-Schlegel (1995/1996) revealed that both sexes tend to place male characters in active roles. When females were written into active roles, girls wrote them in significantly more than boys.
13. True. According to Newkirk (2000, 2001) and the Kaiser Family Foundation (2001), girls are less attracted to visual media than boys are. The study found that boys were involved for 29 more minutes per day than girls were with all forms of media. That's a total of 7 days, 8 hours, and 25 minutes per year.
14. True. Research by Millard (1997) concluded that females are more likely to

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THE SIQ-III TEST ANSWERS (CONTINUED)¹

- be portrayed in the illustrations of children's books.
15. False. The sad truth is that boys are actually 50% more likely to repeat a grade. Boys also represent two thirds of all students placed in special education and consistently have lower reading scores than girls (Ravitch, 1999).
 16. False. In an evaluation of the National Assessment of Educational Programs, Sommers (2000) found that 17-year-old boys outperformed girls by 5 points in math and 8 points in science, and the girls outperformed the boys by 14 points in reading and 17 points in writing. While the girls are catching up in math and science, the boys continue to lag in reading and writing.
 17. False. According to the National Center for Education Statistics (2000), boys are three to five times more likely than girls to have learning or reading disabilities placement in schools. Willcutt and Pennington (2000) also stated that boys with reading disabilities are more likely to have attention-deficit hyperactivity disorder than girls with reading disabilities.
 18. True. According To Dutro (2002), boys see literacy as feminized, and because males define their maleness as "not female," literacy must be rejected. Boys realize early in life that "things associated with girls and women are devalued in society and, thus, it is important that they define themselves against these things" (Dutro, p. 377).
 19. False. In *Reading Don't Fix No Chevys* (2002), Smith and Wilhelm reviewed key research on gender issues and found that boys and girls express interest in reading different things. Boys are more likely to read informational text, while girls prefer to read more fiction (Hall & Coles, 1999).
 20. True. Millard (1997) wrote that girls are more likely to receive books as presents than are boys. Girls are also more active than boys in borrowing books from the school or local library (Organization for Economic Co-operation and Development, 2001).
 21. True. In studies in which hundreds of elementary school teachers were asked to list their favorite books for reading aloud to students, it was found that male protagonists predominate in their selections (Smith et al., 1987; Wright, Shroyer, Borchers, & Smith, 1991/1992).
 22. False. Turner-Bowker (1996) found that female and male authors do not differ in their presentations of female and male characters. She added, "both fall into the trap of gender stereotyping when describing the behavior and attributes of girls/women and boys/men" (p. 480).
 23. False. According to a study by Wright et al. (1991/1992), exactly the opposite is true. When 362 6th through 12th graders were asked to write a response to the question "How would your life be different if you woke up tomorrow as the opposite sex?" the majority of the males responding viewed this change as negative. Girls were more likely to view the change positively or as no different.
 24. False. According to the *2003 College Bound Seniors National Report* (The College Board, 2003), boys outscored girls in the verbal *and* mathematical sections of the U.S. Scholastic Aptitude Test between the years 1972 and 2003. These data are quite different from the K-12 achievement data, which generally suggests girls outscore boys.
 25. True or False. You decide.

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Table 1¹
Your SIQ-III intervention program

Assessment Standards (number wrong)	Recommended intervention
0	You're an expert. You should probably write an article for a professional journal about sex-role stereotyping.
1 or 2	You know quite a bit. You should probably consider giving a talk at a professional meeting.
3, 4, 5	You should not spend too much time reading this article or any of the references. You have the necessary "survival skills" for comprehending our sexist society.
6, 7, 8	You are at your instructional level.
9, 10, 11	You should read this article carefully. Also, a personal improvement plan is needed. Read the references cited and read the book <i>Boys and Literacy: Exploring the Issues</i> (Maynard, 2002).
12, 13, 14	Definite intervention is needed. In addition to reading this article, read the references cited and the books <i>Boys and Literacy: Exploring the Issues</i> (Maynard, 2002) and <i>To Be a Boy, To Be a Reader</i> (Brozo, 2002). In addition, take a literacy course at a local university and ask to do a paper on gender issues and literacy.
15 or more	You have an SLD ("sexist" learning disability). Remember that scores on the SIQ Test are not the final word and that this "siqness" is curable.

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APPENDIX B: Focus Group Interview Questions

SIQ-III Results Discussion Questions:

- Which answers surprised you?
- Were there any subjects that you are well aware of already?

Focus Group Discussion Questions:

- Where and when did you receive your teacher certification training?
- What activities and courses most prepared you for teaching?
- To what extent was equity addressed in your teacher training? Explain.
- Do you feel you were given ample training in dealing with equity issues, including gender equity, through your teacher training? Explain.
- What resources do you have access to that help you address gender equity issues within your school or classroom? (i.e. training, websites, text resources, etc.)
- What other area do you think would have been beneficial to you as a teacher that was not included in your pre-service training?

APPENDIX C: IRB Research Approval



152 Voc Rehab Building

University of Wisconsin-Stout
P.O. Box 790
Menomonie, WI 54751-0790

715/232-1126
715/232-1749 (fax)
<http://www.uwstout.edu/rs/>

Date: April 4, 2007

To: Heidi Kretz

Cc: Dr. Alan Block

From: Sue Foxwell, Research Administrator and Human Protections Administrator, UW-Stout Institutional Review Board for the Protection of Human Subjects in Research (IRB)

Subject: **Protection of Human Subjects**

Your project, "*Teacher Perceptions of Gender Bias in Teacher Attention and Feedback*," has been approved by the IRB through the expedited review process. The measures you have taken to protect human subjects are adequate to protect everyone involved, including subjects and researchers.

Please copy and paste the following message to the top of your survey form before dissemination:

This research has been approved by the UW-Stout IRB as required by the Code of Federal Regulations Title 45 Part 46.

This project is approved through April 3, 2008. Modifications to this approved protocol need to be approved by the IRB. Research not completed by this date must be submitted again outlining changes, expansions, etc. Federal guidelines require annual review and approval by the IRB.

Thank you for your cooperation with the IRB and best wishes with your project.

***NOTE: This is the only notice you will receive – no paper copy will be sent.**

SF:dd

APPENDIX D: Consent Form

Consent to Participate In UW-Stout Approved Research

Title: Teacher perceptions of gender bias in teacher attention and feedback

Investigator:

Heidi Kretz
Teacher
Baumholder High School
Unit 23816 Box 30
APO AE 09034
kretzh@uwstout.edu
+49 (0) 6855 184812 (phone)

Sponsor:

Dr. Alan Block
Professor of Education
University of Wisconsin –Stout
Menomonie, WI 54751
blocka@uwstout.edu
715.232.2496 (phone)

Description: For this research, participants will be asked to take a true and false test and participate in a focus group discussion session. Discussions will be audio recorded and transcribed for content analysis.

Risks and Benefits: Via group discussion, I hope to illuminate sound educational practices that are gender equitable. You will receive a list of further reading and resources for your personal information and use at the end of the session.

Time Commitment: Participants will take the test and discuss the results: approximately 45 minutes. Participants will then be asked a series of questions for discussion in the focus groups: approximately 60 minutes. Total time commitment is under two hours.

Confidentiality: This researcher will work to maintain your confidentiality throughout the research. Your name will not be included on any documents or transcription. I do not believe that you can be identified from any of the information given.

The Right to Withdraw: Please remember that your participation in this study is entirely voluntary. If you should choose not to participate, there will be no adverse consequences.

IRB Approval: This study has been reviewed and approved by The University of Wisconsin-Stout's Institutional Review Board (IRB). The IRB has determined that this study meets the ethical obligations required by federal law and University policies. If you have questions or concerns regarding this study please contact the Investigator or Advisor. If you have any questions, concerns, or reports regarding your rights as a research subject, please contact the IRB Administrator.

Statement of Consent: By signing this consent form you agree to participate in the project entitled, Teacher perceptions of gender bias in teacher attention and feedback.

Signature

Date