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# Examining the gender gap in educational outcomes in public education: involving pre-service school counsellors and teachers in cross-cultural and interdisciplinary research

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Examining the Gender Gap in Educational Outcomes in Public Education:  
Involving Pre-Service School Counsellors and Teachers in Cross-Cultural and  
Interdisciplinary Research

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Abstract

International educational statistics have reported a gender gap in educational outcomes, with boys falling behind girls in regard to grades, high school graduation and university enrollment and retention. This study involved pre-service teachers and school counsellors in Colleges of Education at three universities on three continents carrying out focus groups with public school students, interviews with educators, and examining national and international quantitative data to investigate this issue from a local and a cross cultural perspective. Common themes were found in each country and implications for addressing the problem considered.

Keywords: achievement gap, gender, educational attainment, cross-cultural

The gender gap with regard to educational achievement in public education has become an international issue over the past decade, with male students lagging behind their female counterparts on a number of important indicators of school success (Burns & Bracey, 2001; Clark, Oakley & Adams, 2006; Kafer, 2004). The topic of male underachievement has in recent years received national media attention in the United States and considerable examination in other countries worldwide.

#### Extent of the Issue: Examining National and International Data

The past generation has seen an emphasis on providing more encouragement, support, and equal opportunities for girls with regard to education and career development. However, internationally, boys are having more academic difficulties and are achieving at lower levels across most school subjects as shown by test scores, grades and drop out rates (Australian Council for Educational Research, 1997; Gray, Peng, Steward, and Thomas, 2004; U. S. Department of Education [D.O.E.], 2004). Further, they have a significantly higher incidence of Attention Deficit Hyperactivity Disorder (ADHD), special education referrals and placements, behavioral issues, and school discipline referrals (Kafer, 2004; National Center for Educational Statistics [NCES], 2006; West, 1999). Women have surpassed men not only in high school graduation rates, but in university enrollment and degree completion (NCES, 2006; U.S. D.O.E., 2004). Internationally, fourth grade girls significantly outperformed boys in every G8 country (Canada, France, Germany, Great Britain, Italy, Japan, Russia, and the United States) that participated in the 2001 Progress in International Literacy Study (PIRLS) (NCES, 2004). Fifteen year old girls outperformed boys among the 25 Organization for Economic Cooperation and Development (OECD) countries participating in both the 2000 and 2003

Program for International Student Assessment (PISA) (NCES, 2006). In twenty-one of these countries, the number of women graduating from university exceeded the number of men (Whitmire, 2006).

Undergraduate enrollment in the United States of women to men is currently about 134:100 (NCES, 2005) with many major universities enrolling 60% or more female students. The college enrollment gender gap is projected to increase through 2015 and beyond. More women than men are enrolling in graduate schools, and the percentage in many professional schools such as medicine and law has increased greatly in recent years (NCES, 2006).

In the United Kingdom and Australia, there are similar achievement data. In Australia, research shows that boys do not perform as well as girls in each aspect of literacy; reading, writing listening, and speaking, although there do not appear to be significant differences in mathematics achievement by gender in Australia (Parliament of Australia, 2002a). Approximately 80% of suspensions and expulsions from school are boys, and they comprise about 2/3 of the “school leavers,” students who do not complete secondary education (Parliament of Australia, 2002b). Over 56% of students enrolled in higher education are female (Parliament of Australia, 2002c).

Longitudinal studies in the United Kingdom indicate that girls make better progress than boys in reading, mathematics, and verbal and non-verbal reasoning (UNESCO, 2004). Data collected from national assessments at the age of seven demonstrate that girls have a lead early on in reading and such a gain is maintained at ages 11 and 14. Furthermore, approximately 15% more girls than boys obtained high grades in English examinations at age 16 (U. K. Government, 2006).

In addition to achievement data, there are attitudinal and motivational data that indicate boys as a group do not seem to think school is as important in their lives as do girls (Clark et al., 2006). In a recent national survey of U.S. 12th-graders over the course of a decade, male students consistently reported, at a much higher rate than female students, that they ‘fooled around’ in class, failed to complete assignments and seldom tried to do their best work (NCES, 2005). This study also reported that girls found coursework more meaningful and interesting than the boys did and more often saw the importance of their schoolwork as related to their futures (NCES, 2005).

The purpose of this present study was to engage pre-service school counsellors and pre-service teachers across three cultures to examine the issue of male underachievement, possible contributing factors, and implications for their future practice as professional educators. Working collaboratively with their own university class as well as with university classes from other countries and becoming involved in an action research project were additional goals for the three principal investigators. We wanted the students to be involved in a multidisciplinary approach to encourage them as school counsellors and teachers in training to compare and reflect on their considerations and findings across disciplines that could influence their future practices as professionals.

#### Background of the Study

The three principal investigators, knew each other from international work on the application of multiple intelligences in school settings and decided to collaborate on the shared theme of gender differences in educational outcomes as an action research project involving students from our three disciplines in the field of education. The total of 48 students at three universities on three continents involved in the study were enrolled in a

required core course with a research component. The course at each university differed from the others, but they contained a common component to enable the students to carry out complementary research projects. Students were involved in a seminar in their respective courses in which the professor at each university presented them with the issue of gender differences in educational attainment, along with related literature and other resources. The students adopted a broad perspective to take into account national/state educational policies, male and female behaviors, teacher training and classroom management, curriculum, motivation, parental attitudes, and role modeling. WebCT (an online tool for teaching and collaborative sharing) was established as the means for communication and for sharing resources among the students and professors within each university as well as among all three universities. The authors believed it was important for the students to examine and synthesize information from a variety of resources to help them explore the possible existence and complexity of the issue of a possible academic achievement gap between males and females as groups. We wanted them to think about their individual impact as future school counsellors and teachers, as well as the systemic impact of schools and the societies in which the schools exist. It was the intent to examine similarities and differences in the experiences of the various pre-service educators in their investigation of the male underachievement issue. From our perspective, it was important for the students to think about possible interventions at both local and systemic levels. The focus was on what school counsellors and teachers can do to address male underachievement, if it exists.

## Method

### *Participants*

The participants in this study included 15 students at a flagship state university in the southeastern United States who were pursuing their masters' and specialist degrees in school counseling, 14 students at a university in the United Kingdom (U.K.) who were pursuing degrees in secondary teacher education, and 19 students at a university in New South Wales in Australia who were working on degrees in primary education. Seventy five percent of these students were female and 25% were male. The term times differed one from another, so that the U.K. students were involved in the research in the Fall (September-December) term, while the U.S. students undertook the research in the Spring (January-April). The Australian students' term overlapped with the U.S. term but started and ended later. Other participants included school-based staff members who were interviewed by the pre-service educators identified above. Additionally, secondary public school students participated in focus groups with the pre-service educators to contribute their views on male and female achievement patterns.

Students in all three university programs were given preliminary readings (see later) and had seminar discussions on the issue of male underachievement across cultures. Statistics were shared and literature was introduced that examined a variety of educational, sociological and psychological factors that could contribute to the phenomenon. A reference/resource list of representative international research studies and websites that could provide educational achievement and attainment data were provided to the university students in their respective seminar classes and on WebCT in the first stage of the study. Issues such as social context as an influence on masculine or feminine behavior (Frank, Kehler, Lovell, & Davison, 2003; Newman, 2005), school and

study culture (Van Houtte, 2004), gender stereotypes in the classroom (Gray & Leith, 2004), and single-gender classrooms (Mulholland, Hansen, & Kaminski, 2004) were topics for discussion. Additionally, learning disabilities (Rutter, Caspi, Fergusson, Horwood, Goodman, Maughan, Moffitt, Meltzer & Carroll, 2004), impact of socioeconomic status (SES) on the gender gap (Childs & McKay 2001; Gorard, Rees & Salisbury, 2001), and possible teacher/counsellor interventions (Clark et al., 2006; Kniveton, 1998; Moss, 2000) were discussed in the classes as background information for the action research. Themes for interview and focus group questions were developed and shared by the university students via a WebCT format to which they all had access. The following common research questions emerged from the first phase of the study.

- 1) To what degree is male underachievement present in our public schools?
- 2) Does an achievement gap between boys and girls seem to be manifested at the elementary, middle, high school levels (primary/secondary)?
- 3) What factors seem to be contributing to gender differences in educational attainment?
- 4) What attitudinal factors seem to be affecting male and female achievement?

#### *Data Analysis*

The study employed both quantitative and qualitative methods (Cresswell, 2002) to address the research questions about male underachievement and gender differences in educational attainment. The university students along with the assistance of the professors and supervisors examined existing quantitative data on student grades, test/exam scores, discipline referrals, special education placements, SES, and graduation/drop out rates (at the secondary level). Thus, it was possible to see trends with regard to gender in the

school(s) in which the students were engaged. Group data was shared with their counterparts in the other countries. They were able to access national/international data from websites and readings as identified in their classes. The pre-service educators in the U.S. and the U.K. first discussed these issues, then generated themes, research questions, and interview questions in their respective classes. These interview questions were then used with focus groups of secondary students (ages 11-18) in local schools. Interview notes were taken, and compiled into an interview summary written by a recorder in each focus group. At the end of each focus group the university students who participated went over the content and reached agreement on the common themes found in the focus group discussion. This form of member checking was used in order to establish the reliability of the research findings (Lincoln and Guba, 1985). The results for the focus groups were shared and common themes were found and discussed via WEBCT postings among the international groups.

The Australian students were involved in self designed small group research projects in primary schools after discussing the research questions as a class and did not conduct focus groups. Additionally, some of the pre-service educators interviewed a teacher, a principal (or “head”), or school counsellor in a semi-structured interview format regarding the male underachievement issue.

Within the class at each university, students were divided into small groups to carry out the research at the local level. Ethical standards and the various institutional review board protocols regarding human subjects were followed.

The Pre-service educators (counselors and teachers) on the three campuses were placed in triads with one student from each country to communicate their results through

WebCT. A message board allowed them to share resources, data and comments about the experience with the larger group.

### *Results*

#### *United States*

Fifteen pre-service school counsellors at the southeastern university in the U.S. conducted focus groups with secondary school students from a local middle school and a high school in the spring of 2006. The theme of the group discussions was “student success.” Questions were asked to stimulate discussion around success factors for boys and for girls.

The high school focus groups were held on the university campus as part of an organized field trip to assist the high school students in thinking about the future and learning of post secondary educational opportunities. The high school group of 12 students consisted of eight females and four males and was identified as being first generation potential college students. That is, previous generations in their families had not gone on to higher education.

Middle school focus groups were held at a local school as a part of a field experience for the pre-service school counsellors. These 12 and 13 year old seventh graders, who were enrolled in a technology program for talented students, were divided into five small groups of four or five, with three of the graduate students assigned to each group. The sessions were held in the language arts classroom. The class consisted of 14 females and 11 males. Two, thirty minute sessions over two successive weeks were held.

Immediately after each of the focus groups met, a “debriefing” was held, in which discussion of common themes and findings occurred. Each small group of pre-service

school counsellors summarized their findings and posted them on WebCT so the Australian and U.K. groups could peruse them. Several major themes emerged that related to school success skills as related to gender. These themes included a continuum of effort shown, organization, attitude towards grades, an orientation to the future, classroom attention and behavior, and handling a variety of responsibilities.

A reoccurring theme among the focus groups that was expressed by both boys and girls at both the middle and high school levels was that of putting forth effort with regard to school work and studying. The majority of students perceived boys as less organized, spending less time studying, more careless with their assignments and taking less time to make papers and projects “look attractive” thereby losing marks on their work. Boys were seen as more likely than girls to procrastinate and do their work “at the last minute.” With regard to attitude toward school work, both boys and girls expressed that boys do not care as much about grades and are less likely to view their academic work as important. Boys expressed the feeling that they were more likely to be teased than girls for speaking up in class about academic matters, or for completing their work; that when they do speak out in class, they usually give shorter answers, or may blurt out a response without thinking about it.

Both boys and girls thought that boys get “in trouble” more often in class than girls for disruptions, though some of the boys believed they are “more easily caught for various offences” than are girls. That is, both genders see girls as being more covert in their activities in class than boys. The majority of students thought girls are more organized than boys and that this is reflected in the organization of their folders, binders

and backpacks; they perform better on “notebook checks” while boys tend to shove their papers and schoolwork in their book bags in a “very sloppy manner.”

Several 7<sup>th</sup> grade boys mentioned that the classes in which they were most successful were those that had ‘hands-on’ activities, such as computer classes. They also stated that having a teacher, usually male, who allowed them to move around the classroom, was helpful for them. Additionally, they mentioned they believed they have more in common with male teachers regarding “things to talk about.”

A theme that was mentioned frequently by both males and females was that females are “better at multitasking.” Girls were perceived as being more likely to take on several activities and assignments at one time and likewise could juggle multiple school related responsibilities. Furthermore, girls were perceived by both genders to be more “future oriented.” That is, they look to the future, plan for it, and do what is necessary to be successful. Specifically, they may think and talk about career choices and the education required for attaining specific goals. In contrast, both boys and girls perceived boys to be more oriented in the “here and now” and less likely to consider future consequences.

In both the middle and high school groups, the idea that women have more opportunities than they did in the past was discussed with both genders expressing that girls may be working harder because they want to take advantage of these increased career opportunities. Most boys seemed to think they would succeed in the future, but did not want to think too far ahead about what they would have to do to be successful. Studying at the last minute and “going with the flow” seemed to be more characteristic of male students.

Quantitative data on grade point average (GPA), disciplinary referrals, absentee rates, and exceptional education placements for the local school district was accessed by the pre-service counsellors. The results mirrored national statistics, with middle and high school girls accounting for 60% of GPAs above 3.0 and a significantly higher number of boys accounting for GPAs below 2.0. Approximately two thirds of special education placements were male students, and there were significantly higher absentee and drop out rates for boys. About 75% of the honor graduates, those earning the highest GPAs, for the county in 2005 were females.

#### *United Kingdom*

Fourteen pre-service secondary teachers, training to teach English, conducted research in their placement schools, during the Fall term of 2005. They carried out interviews with their teacher mentors and conducted small focus groups of students across the secondary age range (i.e., Years 7-13, corresponding approximately to the ages of middle and high school students (11-18) in the United States). Thus, Year-7 refers to 11 year olds, and year 13 corresponds to 18 year old students.

Several pre-service teachers compared a range of statistical evidence about gender in their placement schools with national figures. Although a positive correlation was identified with exam performance and standards of literacy being higher for girls, there were some anomalies and exceptions, leading the pre-service teachers in certain cases to conclude that the stereotypical view of girls outperforming boys in all ways at every level was an unhelpful caricature. In one school, for example, a group of 225 Year-9 boys had scored marginally higher than girls in national reading tests and significantly higher in national writing tests. Nevertheless, in most of the placement schools, girls did

outperform boys academically, particularly in the subject of English, which all of the student teachers were training to teach.

The fourteen pre-service teachers had agreed with their university tutor before the research process began that they would use a “statement game” as the basis for focus group discussion. Between six and ten provocative statements about aspects of gender in English teaching were presented to a group of students as the basis for conversations of between twenty and thirty minutes; e.g., “girls are more interested in reading about romance than boys” and “boys are better at spelling than girls.” The statements were not factual and were balanced in terms of assigning positive or negative attributes to either gender. The pre-service teachers reshaped the agreed upon common statements into sets that would be age appropriate for each of the focus groups. Each focus group discussion that took place in schools was recorded on a digital voice-recorder. Key points were then summarized, synthesized and coded across the whole group. The following common ideas and themes emerged on (a) the subject of English, (b) creative writing, and (c) reading choices.

There was general agreement among most school students interviewed that girls are superior English students when compared to boys. Many boys (and one of the teacher mentors who was interviewed) believed that girls are better than boys at talking about literature and at “creative thinking.” Few of the boys interviewed were prepared to say in public that they enjoyed English. One or two admitted under pressure that they sometimes enjoyed poetry and several boys said that they enjoyed reading. Very few of the boys and girls interviewed had ever had a male teacher for English and some felt that female teachers may not be a motivating factor to encourage boys to read, especially if

they did not connect with boys' specific interests. This factor could make the subject less motivating for boys, especially when female staff seemed to lack the sympathy to get into the mind set of boys' interests. Several boys saw the subject quite instrumentally, as a subject necessary to get a job. However, there was one particular school in which several boys explicitly rejected the idea of English as a "feminized" subject only suited to girls. In this school, Year-11 pupils of both genders in one particular focus group were skeptical about a suggestion that poetry or creative writing would be enjoyed more by girls than boys.

Creative writing was discussed as a specific issue in four of the focus groups. Several girls in these groups said that they loved writing creatively and some also did so frequently at home of their own accord. They believed that doing so made them more likely to achieve well in English. Most boys interviewed in these groups lacked a particular interest in creative writing. One Year-9 boy commented, "Boys can't be bothered to write," and suggested that this attitude would explain his own underachievement in English. In one focus group, Year-8 girls talked about the ways in which they take time to make their finished work more attractive with pictures and different fonts. They felt that this effort could subconsciously affect their overall grades. This comment was associated with a related observation that many girls like to make fashion statements with their school bags and equipment and tend to be well prepared for lessons. Many boys, on the other hand, like to carry their pens in coat or trouser pockets or "crammed into rucksacks with sports gear."

There was significant disagreement between girls and boys in focus group discussions about reading choices. In general, boys tended to say that they were most

interested in horror and fantasy novels, whereas girls tended to opt for romance or books about social issues and relationships. There was general consensus that there was such a thing as a 'girly' or 'boyish' read. However, many of those interviewed thought that many works of fiction studied during English lessons were not aimed at either gender. Several Year-8 girls resented the fact that many boys appear to believe that girls only enjoy romance genres, arguing that they thoroughly enjoy horror and fantasy as well. Some Year-7 boys explained their dislike of 'romance' books as being related to their age as opposed to their gender. Because they lacked interest in "unfolding relationships," they avoided them, finding sports and adventure books easier to read because they were more closely related to their own experience.

All of the pre-service teachers conducted questionnaire surveys of pupil reading preferences in their placement schools. These generally showed that girls read more fiction than boys but that boys have a greater interest in comics, magazines and various kinds of non-fiction. A statistical survey in one school showed that boys were significantly more likely than girls to find sports books enjoyable, with 39% of boys choosing this type of book compared with just 6% of girls.

Views of classroom behavior tended to vary according to gender. While many boys felt that teachers treated them differently in class, several girls believed that differential treatment was justified because boys did tend to behave more unacceptably than girls. One pre-service teacher noticed that Year-10 and -11 girls in her school who had behavior problems sought to build rapport with female English staff and tended to be treated more sympathetically than boys. Disruptive boys in the same year groups were more likely to enter into confrontations with staff and were less likely to seek advice,

which resulted in their becoming more isolated from female staff support. A group of Year-9 girls maintained that “boys are lazy and shout out answers in class rather than listening carefully or waiting patiently” and that “although boys think that they know the answers, they are usually wrong.”

Boys tended to be regarded by both genders as more disruptive in class. Peer pressure was regarded as a major factor in this respect because many boys seemed to like to impress their friends and “have a laugh.” A group of Year-8 girls said that boys in their class tended to “fidget too much and lose concentration, thereby missing important instructions and explanations for classroom tasks and activities.” Several groups of boys maintained that girls were more academic than they were. A teacher mentor in one school suggested that the problem of boys’ underachievement might be exacerbated by the fact that boys are very aware of the fact that they are underachieving and that they might want to play up to the stereotype as a defense measure. Girls across the age range in several schools expressed anger and a sense of unfairness that “lazy” or “naughty” boys should get extra support when there were many children with serious learning difficulties who would benefit more from this attention.

### *Australia*

The 19 Australian pre-service primary teachers were divided into six small groups of three or four students to carry out their self-designed research projects relating to the issue of male underachievement in public education. The format of their projects was based on a ‘Problem Based Learning’ approach (Vialle, Gibson, Clark & Thompson, 2006), a contextualized learning and research model in which pre-service teachers study a specific educational problem as a means to connect theory with practice and to

understand the context in which it occurs. A similar concept in American education would be action research (Mertler, 2006), which has a similar purpose and basis.

Group one studied classroom teacher-student interactions by gender in four primary classrooms (kindergarten and Year-1) to examine possible gender differences. The findings showed that 70% percent of verbal teacher-student interactions were with boys while 30% were with girls. The ratio of teacher initiation to student initiation was virtually identical for boys and girls; 92% of the interactions with boys were initiated by teachers and 91% of the interactions with girls were teacher initiated. Forty-eight percent of the total number of interactions were related to behavior issues, and of these, 85% were with boys. Fifty two percent of the teacher-student interactions were school work related, and 57% of these were made with boys, while 43% were made with girls. A survey was administered to eight parents of these students. Findings included that parents supported “disciplining boys” much more often than “disciplining girls.” They also expressed the belief that teachers expected more of girls than they did of boys.

Group two administered a survey to 101 pre-service teachers from the College of Education concerning their attitudes and beliefs about male underachievement. The group obtained mixed results when they asked a question regarding the belief that males achieve less than females. Thirty seven percent of the pre-service teachers agreed with that perception, 34% disagreed and 19% were unsure. However, 64% of respondents agreed that females are higher achieving with regard to literacy. For items relating to teachers’ actions towards students, 85% of pre-service teachers expressed the belief that teachers treat students equally and do not hold different expectations by gender. The group found a large number of “unsure” responses to various questions (between 20%-

50%, depending on the item), which suggested to the student researchers that pre-service teachers may not have given much thought to the issue of gender and achievement.

However, possible reasons given by the respondents for a gender achievement gap were, in order of frequency (a) individual learning styles, (b) peer influences, (c) parent expectations, (d) assessment strategies, and (e) female teachers.

Group three held interviews with 20 primary school teachers and observed their classrooms regarding gender differences in achievement. The themes that emerged from these experiences were that (a) boys seem to be less successful in negotiating and participating in literacy activities in the classroom; (b) boys demonstrate a general lack of interest in print-based reading and writing activities; (c) boys seemed to lack purpose and saw less relevance in school work; (d) boys made minimal efforts to complete and present literacy tasks for school, (e) boys were more disruptive, more easily distracted and difficult to motivate, and (f) they seemed to lack self-esteem and confidence as learners.

Group four conducted a study of single sex (male) classes in Years-7 and -8 (ages 11-12). They administered surveys to 150 students. Sixty eight percent of the boys reported that they liked English and 78% indicated that they would enjoy it more if they could choose their own reading material; 90% of the boys believed English was an important subject; and 70% reported reading material at home that is not related to school assignments. Fifty four percent indicated that they wrote at home as well. The teachers in interviews revealed the belief that single sex classes promoted greater engagement, participation and motivation of boys. Teachers said they altered their reading selections for their students according to gender. Seventy-five percent of the boys preferred mixed

classrooms, but older boys reported paying more attention, participating more and working harder in single sex classes. Students did not report any differences according to teacher gender, but teachers believed that a lack of male role models had an impact on the behavior and attitudes of boys.

Group five investigated the learning style preferences of 12 Year-3 (8 year old) boys. They administered a 'Learning Styles Inventory' to the students and also asked them one open-ended question to ascertain the boys' outside interests. Their results showed that 49% of the boys preferred direct experience, 26% preferred a listening learning style, 18% viewed themselves as visual learners, and 7% preferred reading. The outside interests included computer/video games (28%), sports (28%), musical instruments (12%), riding bikes (12%), and other involvements (20%). This group used this information to formulate specific classroom lesson plans with accompanying activities that corresponded with the various learning styles.

Group six studied the text (reading) choices of 74 primary-aged students. They also investigated teachers' beliefs about their students' text choices. Teachers expressed the belief that primary students had different reading preferences by gender. The method of this study involved analyzing literature to determine text types as suggested by research. Examples of each text type were included in a box of books presented to the students from which they could make choices of reading materials. Results showed that girls and boys were more similar than dissimilar in their choices. There was no statistical difference between boys and girls in preference for non-fiction vs. fiction. The two top choices of materials were the same for boys and girls. The highest ranked reading materials were books on popular themes that could be talked about with friends. The

second highest ranked materials were magazines. The reasons given by the students for these two categories were similar; “it is what kids like;” “it makes me laugh;” and “I can talk about it with my friends.” Their study of young children did not show significant gender differences in reading preferences.

#### Cross-Cultural Implications for School Counsellors, Teachers and Administrators

In a project evaluation questionnaire administered to all 48 pre-service educator participants (counselors and teachers) in this study, 85% agreed or strongly agreed that the project has helped them think about the similarities and differences between themselves and people from other countries. There were a number of reflections made by participants concerning their cross cultural learning. Based on the communication among the participants from three cultures, the comment was made by an Australian pre-service teacher that “It sounds like male underachievement is just starting to be recognized as a problem in the United States. Over here, we have been aware of it for a long time.” Several commented that they were surprised to “realize that male underachievement relative to females was a problem across cultures.”

The majority of participants from all three universities expressed that the research projects that they conducted within their university small groups were highly beneficial and stimulated their thinking regarding future professional practice. They expressed appreciation for the process of working in small groups within a larger class and sharing their findings. Doing live research in a school setting helped them see a “bigger picture” and context of an important educational issue as well as observing the day-to-day interactions of teachers, school counsellors and principals/heads. As an Australian pre-service teacher noted, “Interacting with the school community as a researcher rather than

a “learning” teacher has been fantastic, although scary at first! It has given me confidence in my knowledge base and a further appreciation of those involved in education”.

A theme that emerged from the participants was that many educators have not thought critically about male underachievement and, therefore, have not addressed gender differences in their classrooms. A pre-service school counsellor observed that “It was interesting that male underachievement was not a topic at staff meetings at our school. Faculty reported that they focused more on socioeconomic status and racial aspects of underachievement even though they did observe a gender gap in their school.” A pre-service teacher wrote, “It seemed that by interviewing teachers they may have begun to think more critically about the issue of male underachievement. Maybe we have assisted in stimulating an important conversation among staff members.” It was clear to the authors that the small group within large group research on male underachievement was a meaningful experience for the pre-service students; one that involved collaboration, reflection, and insights for future professional practice. Looking at a common concern across cultures also assisted them in taking a broader view of a significant educational issue; one that applies to both subsets of students.

Several major themes that emerged from this research project have implications for practice by pre-service and in-service school counsellors, teachers, and administrators when considering the gender of their students. These points included increasing the awareness level of educators regarding gender issues and learning, the expansion of a network of male role models, assisting male students in practical organization and study skills, offering choices in assignments and reading materials that may take learning styles

and energy levels into account, and making a direct effort to help male students think about future educational and career planning.

As mentioned earlier, the pre-service educators perceived that school level faculty members in the study did not seem to have an awareness of the extent of gender differences with regard to performance in the classroom. Raising their awareness and offering training on gender issues, learning styles, and the environment of the classroom and school would be an important first step (Gray & Leith, 2004).

A large majority of educators are female as are the heads of single parent families around the world. In the United States, the percentage of male teachers is at a 40 year low (National Education Association, 2007). Although schools cannot change the demographic makeup of their staff and families, they can collaborate with a variety of stakeholders including parents, community agencies and local, state and national organizations to establish meaningful connections with their male students.

Collaborating with business partners in schools can assist in programs that feature mentoring and tutoring for all ages, as well as possible job shadowing and apprenticeship possibilities for older students. Career programs that will benefit both genders can be set up to introduce students to broadening experiences such as speakers, field trips, and future job possibilities. Many students do not gain exposure to community resources and current career information outside the home unless there is a direct, targeted intervention from the school. Programs that provide social support for youth have demonstrated that mentoring can enhance the academic accomplishments of students and raise the confidence level of most participants in such programs (Clark, Shreve & Stone, 2004). Measurable results such as increased test scores and teacher reports on positive behavior

changes, attitudes towards school, and self-image have been reported (Richman, Rosenfield & Bowen, 1998). Additionally, older male students may serve as positive role models for younger ones. Setting high academic expectations and encouraging males to enroll in advanced courses in middle and high school can set an achievement trajectory earlier in their academic careers. Additionally, increasing home and school communication about future planning to target male students may be necessary to increase their awareness and motivation for future opportunities.

Teachers and school counsellors collaboratively can help promote good study habits and organizational skills by coaching and modeling necessary behaviors. Working with individual and small groups of boys in the classroom setting can assist them in learning and practicing organizational and school success skills (Clark & Breman, in press). Giving brief, direct instructions may help boys “tune in” and persist in their academic endeavors. Building in a system of positive reinforcement can help encourage male students to see school success in small, progressive steps.

Literacy is an area in which boys fall behind girls across cultures as shown by the international statistics cited earlier in this article. Increasing boys’ interest in and motivation to read is an important concern for today’s educators. Offering choices in reading materials for both boys and girls (Moss, 2000; Mulholland et al, 2004), personalizing classroom or small group discussions, and using gender and culturally relevant materials may assist in raising interest and skill levels. School counsellors can collaborate with teachers on choices of materials taking into account gender that may offer life lessons in citizenship and character education. Taking learning styles into

consideration, to include more hands-on, kinesthetic experiences, may also be helpful in working with student energy level and the need for physical space.

The consideration of single-sex classes in public schools has been an ongoing educational issue internationally and studies have been carried out to examine possible learning gains by gender. Research on single sex schooling in the U.K., Australia and the U.S. has shown mixed results. Gains in learning by males and females in single gender environments have been demonstrated within a gender-relational context (Mulholland et al, 2004; Sax, 2007; Younger and Warrington, 2006). The results from our study show gender differences in attitudes towards school as well as needs and learning styles within the classroom setting. When doing group work and projects within a co-educational classroom and school, it may be beneficial to have single gender groupings, as well as choices of materials and projects, within the classroom unit to enhance student learning and communication styles for both genders. School counsellors, who have specific skills in group work, may serve as collaborative consultants with teaching staff regarding group organization and implementation. Many school counsellors themselves work with males and females separately in small group counselling in order to address specific needs by gender.

### Conclusion

The results of this study reiterate a gender gap with regard to educational attainment and progression to higher education. The data at all three levels, international, national and local, point to an educational culture where girls as a group are showing greater success than boys as a group, as shown by indicators such as grades, enrollment in rigorous academic coursework at the high school level, high school graduation,

enrollment and completion of college and even graduate school. Boys have significantly more discipline referrals, are disproportionately represented in special education placements, have higher high school drop out rates, and lower rates of college enrollment and completion than do girls. In Australia and the United Kingdom, there have been a number of interventions by the respective governments to assist males, particularly in the areas of literacy. Despite these attempts, the gap is persisting. In the United States, there has been more media attention in the last two years about the discrepancy between male and female achievement, but there have been very few studies that have identified and addressed the factors involved, even in academic areas where the gap is the greatest.

There appears to be a complex interplay among numerous factors that may all contribute to gender differences with regard to academic achievement, motivation, and future planning. As school counsellors, counsellor educators, teachers and administrators, we need to work together to meet the many needs of all students, boys and girls. Each discipline has special skill sets to contribute and will be stronger as a collaborative group than as individuals. There are societal implications for both genders, as well as the families they create, when there is a significant discrepancy in academic achievement and educational attainment between groups. The main themes found in this study, warrant further study and testing of interventions. Additional research focusing on case studies of classrooms, institutional systems, teaching and learning styles, curricular materials that are optimally motivating, and adult role models as related to gender is needed. Research on specific classroom and school-wide interventions that may be effective in raising achievement and educational attainment levels of male students is a recommendation that arose from this study. Finally, raising awareness among school faculties concerning

gender issues in educational achievement and collaborating in classroom and school-wide practices, is a vital step in helping all students reach their potential.

This study's limitations were the small size of the study, and the term times and time zones for students from three continents differed from one another, hindering communication in real time. The co-authors had hoped to conduct a videoconference for all of the pre-service educators, but were unable to find a time frame that fit all three groups due to a 14 hour time variation. The results cannot be generalized to all educators and all countries. However, it is interesting to note that the major themes found in this study mirrored national and international data and concerns about a gender gap in public education in Australia, the United Kingdom, and the United States.

This cross cultural research study, although small in scope, is important in examining gender differences and perceptions regarding educational attainment across three countries on three continents and comparing local, national and international data to examine commonalities and differences. Local and national quantitative data as well as local qualitative data provided insights into gender differences in public educational achievement and higher educational attainment. When examining cross cultural data it becomes clearer that male underachievement is not just applicable to one segment of society. As educators, we need to continue to explore which teaching, communication and counseling techniques may work best with boys (Clark et al., 2006), and how we can best collaborate to promote success for all students, regardless of gender. Educational achievement of young people affects all of us, our future generations and family structures. There are major societal implications when there are discrepancies in achievement between or among subgroups. Some basic questions needing to be explored

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are, “Do we push students to take on attributes that are not particularly natural for them but that contribute to educational success, or do we recognize and accommodate their learning and communication styles, as well as their reading interests? How can we try to provide appropriate role models for success? Do we have high expectations for which all of our young people can strive? How do parental expectations differ for their sons and daughters? What specific interventions can we make as educators that can positively affect the academic achievement and educational attainment of our youth?” These are further questions that need to be researched and addressed that affect all students, whether the variable is gender, culture or socioeconomic status.

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